

Are all types of capital flows driven by the same factors?

Evidence from Mexico^{*}

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Abstract:

We investigate the impact and persistence of shocks to global (push) and domestic (pull) factors on each component for the financial account for the Mexican Balance of Payments at the highest degree of disaggregation, including investment by foreign investors in Mexican public and private sector securities as well as by domestic investors in foreign securities. We estimate impulse response functions from vector autoregressive models for the period 1995-2015. We find that global risk, foreign interest rates and global liquidity play an important role to explain capital flows, especially portfolio investment by foreign investors. Interest rates have important effects on investments in public sector securities. The response of capital flows to US interest rates is highly persistent. An increase in global risk leads to lower portfolio investment in private sector securities and higher portfolio investment in public sector securities.

Keywords: Capital Flows; Push Factors; Pull Factors; Vector Autoregression.

JEL Classification: F21; F32; F41; F47

^{*} We thank Enrique Alberola, Nicolás Amoroso, Arturo Antón, Rodolfo Cermeño, Juan M. Contreras, Adrián de la Garza, Gerardo Hernandez-del-Valle, Juan R. Hernández, Marco Hernández, Othón Moreno, Ernesto Sepúlveda, David Strauss, Daniel Ventosa-Santaulària and the seminar participants at Banco de México and Centro de Investigación y Docencia Económicas for their constructive comments. Andrés Jurado and Andrea Miranda provided excellent research assistance. The authors gratefully acknowledge the financial support provided by CONACYT. The views on this article correspond to the authors and do not necessarily reflect those of Banco de México. All errors are our responsibility.

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1. Introduction

The rise in capital flows to emerging economies (EMEs) after the global financial crisis of 2008-2009 has renewed the debate on the determinants of capital flows. This has occurred as a result of their effects on the real economy, the exchange rate, and asset prices (Fratzscher 2012). Increased capital flows can impact developing economies in at least two ways. On the one hand, international borrowing allows a country to increase investment without sacrificing consumption; however, this in turn is associated with current account deficits, inflationary pressures and appreciation of the real exchange rates in the recipient country. As a result, a reduction in the trading sector is observed. Thus, the current account become more vulnerable to external shocks and reversals of capital flows.

The literature on capital flows has focused on two sets of factors that encourage investors to shift resources to emerging markets: external or push factors and internal or pull factors (Fernández-Arias, 1996). Push factors are beyond the control of EMEs. They include foreign interest rates, international liquidity and global risk conditions. Pull factors provide information about the prevailing economic conditions in each country, such as macroeconomic stability and financial vulnerability. A better understanding by government officials of these factors is useful for the design of macroeconomic, macroprudential and financial market policies.

Some empirical studies have highlighted the importance of push factors. For example, Calvo et al. (1996) and Fernández-Arias (1996) found that the reduction in foreign interest rates explained much of the capital inflows to Latin American countries, in the early nineties. More recently, Fratzscher (2012) concluded that push factors became the main drivers of capital flows during the 2008-2009 financial crisis, while pull factors were more important onwards. Overall, this author highlights that changes in global liquidity and risk conditions have a larger effect on capital flows, with heterogeneous responses across countries, caused by differing institutional quality. Milesi et al. (2011) report that the degree of international financial integration is a key factor to explain the flow of capital. Forbes & Warnock (2012) show that global factors -especially global risk- can cause extreme episodes of capital flows and note that macroeconomic features of the host country lose relative importance.

For the case of Mexico, Ying & Kim (2001) find that foreign output shocks can explain more than half of capital inflows during the period 1980-1996 using a structural vector autoregressive method. Similarly, De Vita & Kyaw (2008) observe that shocks to foreign output were a key determinant of capital flows in Mexico during the period 1976-2001. On the other hand, Bohn & Tesar (1996) and Chuhan et al. (1998) conclude that macroeconomic conditions and trade connections have been the most relevant determinants of the amount of capital flows.

Most of the literature analysing capital flows has used aggregate capital flows without distinguishing between Portfolio Investment (PI) and Foreign Direct Investment (FDI) flows (which are directly related to the real economy). Nevertheless, differentiating between the two, leads to a better understanding of their impact on the economy. For instance, changes in FDI could affect economic growth over the long run, whereas fluctuations in PI mainly affect financial transactions in the short run. Dooley (1988) suggests that the determinants of capital flows differ depending on the types of capital flows. FDI, which tends to be long term, depends on internal factors such as long-term growth, while PI, which is usually short-term, is mainly affected by external factors.

This paper contributes to the capital flows literature in two main aspects. First, we analyse the determinants of each component of the financial account at the highest degree of disaggregation. This is motivated by the findings of Forbes & Warnock (2012) who provide a detailed disaggregation of capital flows. The financial account can be decomposed into PI, Other Investment (OI) and FDI. These in turn include investment by foreign residents into Mexican public and private sector securities and by domestic residents in foreign securities.

Analysing the determinants at a high level of disaggregation is important because different components of the financial account might be driven by different types of factors. That is, PI and OI tend to be more liquid than FDI, thus they are likely to respond faster to changes in economic fundamentals. Moreover, at the high level of disaggregation of the financial account, PI by foreign agents might have a different response than PI by domestic agents, if there is a delay in incorporating the information available. This is, if foreign investors have timely information about the external economic conditions, they will likely respond faster to foreign shocks.

Second, this paper focuses on Mexico, which is an interesting case of study considering its large volume of capital inflows following the trade liberalization in the 1990s and, more recently in the aftermath of the 2008-2009 financial crisis. The sample used in this study covers the period 1995-2015, during which Mexico followed the adoption of flexible exchange rate regime. Our sample includes data during and after the global financial crisis, while most of the literature has focused on an earlier period. This period is of particular interest because of the dramatic increase in capital flows after the global financial crisis (Fratzcher 2012).

To analyse the determinants of capital flows in the short and medium term we employ a Vector Autoregressive (VAR) model. This is an important departure from literature on this subject that uses panel models. The panel models are useful to obtain average effects for a group of countries, but there could be important differences between those countries and heterogeneity in the timing of the response of capital flows to various shocks. In contrast, by using a VAR model, we can examine the dynamic impact on capital flows of push factors (global risk, global liquidity, global PIB and U.S. interest rate), as well as that of pull factors (domestic GDP, interest rate, inflation and exchange rate) in a particular economy of interest. In this way, we analyse the impulse response functions (IRF) of each component of the financial account to domestic and foreign shocks. Further, we compare these results with the information obtained from estimation using only net flows in the construction of the IRF.

We find that a shock to the global risk and the Federal Funds rate (FFR) have an impact on several items of PI and OI. The effects of FFR shocks on these items seem to be highly persistent. Domestic investors in PI tend to respond to shocks in global risk, U.S. GDP, and exchange rate. Foreign investors in PI only respond to shocks to global risk, global liquidity and the FFR. Thus, we can say that, for PI, foreign investors respond more to push factors, while domestic investors respond to both push and pull factors. In contrast, the FDI components seem to respond less to push factors, as their responses in general are not statistically significant.

We bring evidence to the literature that underlines benefits from analysing disaggregated flows, because in several cases at the interior of the net flows, only some of the components

present statistically significant responses. For instance, a shock to the FFR has important effects on PI in public sector securities by foreign residents. This can be explained because public securities are the closest substitutes to US Government bonds found in Mexican financial market.

In addition, we find that public sector securities show a positive response after a rise in global uncertainty, while private sector securities present an opposite response. This may take place if investors prefer low-risk securities after the shock in global uncertainty. Furthermore, our results indicate that only foreign investors respond to shocks in foreign interest rates and foreign liquidity, as opposed to domestic investors. This can occur if foreign investors have more information about the external economic fundamentals at the time of shock. Finally, we find that shocks to domestic and US interest rates have important effects on the demand for public sector securities. A possible explication is that domestic and foreign interest rates determine the returns and opportunity cost, respectively, for these types of securities.

The remainder of this paper is organised as follows. In section 2 the stylised facts of capital flows in Mexico are briefly reviewed. The model on the capital flows determinants, as well as the empirical results are presented in section 3. The last section concludes and discusses areas for future research.

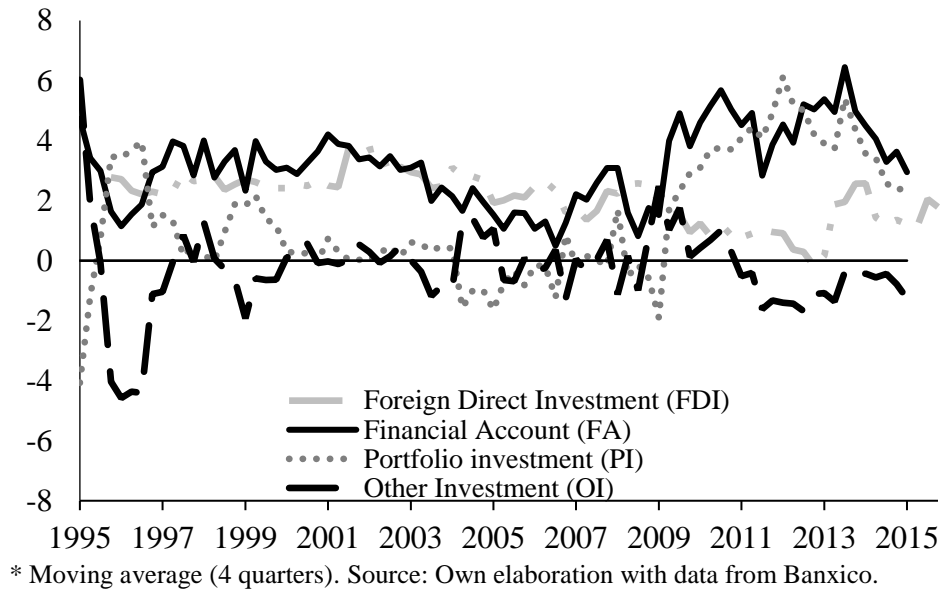
2. Stylised Facts of Capital Flows

In the last decade, episodes of significant increases in net capital flows to Mexico began with the recovery of global markets in mid-2009 and has continued, although intermittently, until the present. Figure 1 shows net inflows in the financial account as a share of Mexican GDP (four-quarter moving average). Notwithstanding the historic flows presently achieved by FDI,¹ PI flows have become comparatively more relevant in recent years.²

¹ FDI is a category of cross border investment made by a foreign investor in a domestic company, with the objective of establishing a lasting interest (IMF, 1993).

² PI is defined as cross-border transactions and positions involving foreign currency, securities, debt, equity interest, and other categories, that are not included in direct investment or reserve domestic investors. The data shows that PI flows are part of the financial portfolio of non-residents and can be found on the stock market or in the money market (as fixed income bonds of the private or public sector).

Figure 1
Financial Account, 1995-2015
As a proportion of the Mexican GDP (s.a)

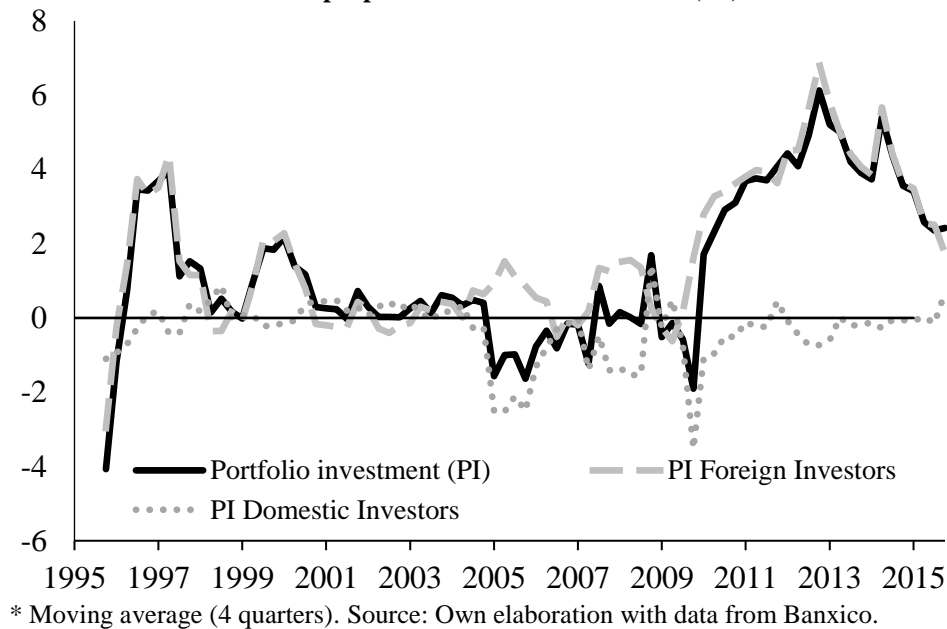


We notice clearly that FDI presents nearly a constant dynamics, while portfolio investment and other investments show a larger volatility and a negative correlation, especially after 2009. The financial account is mainly driven by portfolio investment. Therefore, we would expect that PI responds largely to shocks compared to OI or FDI.

Larger resources allocated to PI in relation to FDI reflect higher levels of investors' confidence in the Mexican economy in the short-term. For the case of Mexico, PI flows have been more volatile than FDI. Recent international evidence shows important net flows to emerging large economies and these have become generally more volatile.³ In Asia and Latin America, especially in 2010, net Flows have been above the pre-crisis average (see OECD International Direct Investment Statistics (2013)). This is explained by the growth of PI from 2010 onwards, as a result of increased uncertainty and risk in advanced economies following the crisis. The dynamics of the PI main components are depicted in Figure 2.

³ Net capital flows are defined as the sum of gross inflows and outflows, where the outflows have a negative sign (IMF, 1993).

Figure 2
Portfolio Investment, 1995-2015
As a proportion of the Mexican GDP (s.a)



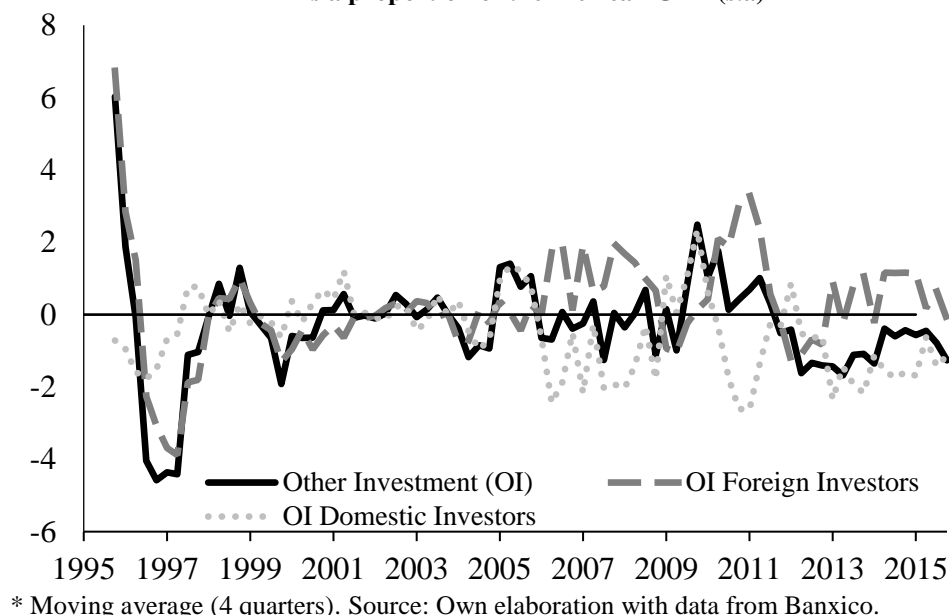
Since 2010, a positive trend is apparent in the data. Within PI, foreign investors' accounts show a similar trend. In 2013, PI was nearly twice as large as FDI to Mexico, which can be associated with confidence in Mexican bonds (UNCTAD, 2013). However, since 2014 PI flows show a downward trend. The increase in the purchase of government bonds by non-residents has increased foreign investors' accounts in domestic banks denominated in U.S. dollars, as the domestic bonds act as intermediaries of these transactions. Although this type of investment might imply a risk of external shocks, in the short term, Mexico has been able to mitigate those risks. In particular, the Flexible Credit Line for about US\$70 billion and the international reserves of around US\$174 billion have improved investors' confidence (Banxico, 2016).

Figure 3 displays the behaviour for OI,⁴ which consists of those components of the financial account such as capital flows into bank accounts (direct credits from commercial banks) or holdings of metals. As can be seen, the series exhibit an important degree of volatility. Specially, we observe that the behaviour of foreign investors and domestic investors present a negative correlation during the period of analysis. The net flow of other investments since

⁴ Other investment includes trade credits, currency and deposits not registered in PI and IED.

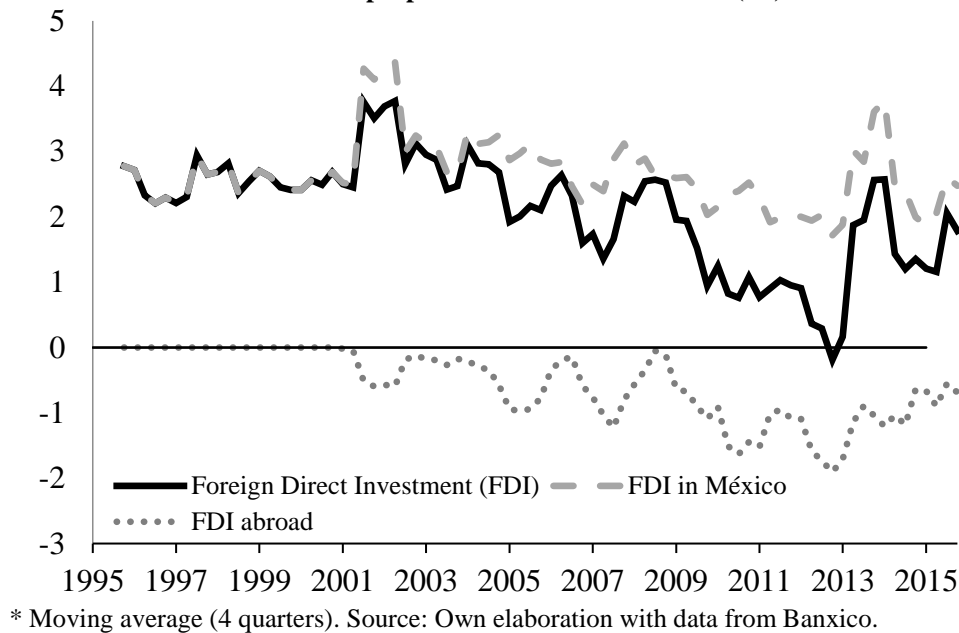
2010 shows a downward trend, which may be associated with higher risk aversion after the crisis.

Figure 3
Other Investment, 1995-2015
As a proportion of the Mexican GDP (s.a)



Mexican FDI dynamics are illustrated in Figure 4. The net balance of direct investment reflects more closely the behaviour presented by foreign investment in Mexico. At the end of 2009 a gap is present, which is a result of the negative trend observed in the FDI abroad. According to the World Investment Report of the United Nations Conference on Trade and Development (UNCTAD, 2015), the global corporate executives outlook for the best investment locations worldwide includes China, US, India, Brazil, Singapore, UK, Germany, Hong Kong and Mexico. According to the UNCTAD business survey forecast, Mexico will receive 6% of total global FDI flows for 2015-2017. As FDI is a long-term investment, it has lower volatility than other components of the financial account. In this sense, FDI generates long term funding relationships and transmission of technology as a result of profit maximization by the foreign enterprises. Thus, FDI typically refers to long-term capital investment, such as the purchase construction of machinery, buildings or manufacturing plants.

Figure 4
Foreign Direct Investment, 1995-2015
As a proportion of the Mexican GDP (s.a)



Summarising, capital flows to Mexico have increased as a result of internal and external factors. It seems that market participants have an improved perception on the sustainability and stability of Mexico. In this context, we might expect that capital flows to Mexico will continue in the longer term. In general, emerging countries are positioned as an attractive destination for international investors. In recent years, the main factors contributing to the flow of capital have been: the differential in growth rates in emerging economies compared to advanced economies; the interest rates differentials, which provide incentives to invest in emerging markets; expansive fiscal policy in the developed world; and a reduced risk perception in emerging markets. These elements affect yields, risk perception, uncertainty and availability of assets to trade. In the next subsection, we present the description of variables included in the model used to analyse the effects of the main determinants of capital flows in Mexico.

2.1 Description of Variables

The set of endogenous variables consists of those commonly used to model capital flows to emerging economies. The financial account is divided into direct investment, PI and other investment. In turn, each of these components is divided into foreign and domestic investors'

flows. The data includes the period comprising the first quarter of 1995 to the fourth quarter of 2015. Pull factors include domestic GDP, the overnight interest rate for Mexico, domestic inflation and the nominal peso-dollar exchange rate. Push factors include the VIX index, as a proxy for global uncertainty,⁵ the FFR in the United States (a proxy measure of monetary policy), US M1 as proxy for global liquidity and real US GDP as a proxy for foreign economic activity.⁶ We also include the oil price as an exogenous variable. Real GDP in Mexico is expressed in 2003 pesos, real US GDP and real capital flows are expressed in 2003 US dollars.

The data are obtained from the Federal Reserve Bank (the FFR and U.S. M1), Bureau of Economic Analysis (U.S. real GDP), Banco de México (real capital flows, the overnight interest rate for Mexico and the exchange rate), the National Institute of Statistics and Geography (real Mexican GDP and Consumer Price Index of Mexico) and Bloomberg (VIX and oil price).

3. Econometric Analysis

In order to analyse the determinants of capital flows to Mexico, a Vector Autoregression (VAR) model is estimated. This model has been widely used in the literature to analyse the impact of various factors on capital flows in emerging economies (e.g., Ying & Kim, 2001; Culha, 2006 and De Vita & Kyaw, 2008). Both external and internal shocks that affect capital flows are included in this model. Calvo, Leiderman & Reinhart (1992) and Fernández-Arias (1996) find that interest rates and economic activity in the United States are among the main external factors that influence capital flows. We also consider shocks to internal factors, such as shocks to output and domestic interest rates. The importance of those types of factors is explained in Calvo, Leiderman & Reinhart (1992) and Lensink & White (1998). Own shocks to capital flows are also included. These can occur due to a variety of reasons such as trade liberalization and portfolio rebalancing. Unlike a univariate model, the VAR model considers

⁵ The VIX is a measure of financial volatility on put options of the S&P 500 index.

⁶ We have also used alternative measures of global economic activity including the GDP for the Euro Area. The results are similar to those reported in this paper.

the feedback effects among the variables included in the system, i.e., our model captures the conditional effect of shocks on capital flows.

3.1 VAR Model

The reduced form representation of the model is:

$$\mathbf{y}_t = \mathbf{c} + \mathbf{A}(L)\mathbf{y}_{t-1} + \mathbf{B}(L)\mathbf{x}_t + \mathbf{u}_t$$

where, $\mathbf{y}_t = [\log VIX, \Delta \log M_t^*, \Delta \log Y_t^*, R_t^*, \Delta \log Y_t, R_t, \Delta_4 \log P_t, \Delta \log e_t, \log F_t]$; $\mathbf{x}_t = [\Delta \log P^{oil}_t]$; \mathbf{c} is a vector of constants; \mathbf{u} is a vector of residuals whose residual covariance matrix is $\mathbf{\Omega}$; and $\mathbf{A}(L)$ and $\mathbf{B}(L)$ are polynomial matrices in the lag operator L . The VIX Index is a proxy for global risk. M_t^*, Y_t^*, R_t^* represent real M1, real GDP, and the FFR in the United States, respectively; whereas Y_t, R_t, P_t, e_t, F_t represent real GDP, the overnight interest rate, the consumer price index, the peso-dollar FIX exchange rate⁷ and capital flows as proportion of Mexican GDP, respectively. The variables P_t, M_t^* are seasonally adjusted with the X12-ARIMA method. We take logs and first differences as necessary to achieve stationarity. The Bayesian information criterion (BIC) was used to assess the number of lags to be included in the model, in order to adequately capturing the dynamics of the system while remaining parsimonious. The optimal lag length turned out to be one.

The estimated residuals from the reduced form model are linear combinations of structural shocks. Thus, it is necessary to impose assumptions to identify the structural shocks. To that end, the residuals \mathbf{u} are orthogonalized using a Cholesky decomposition of the covariance matrix $\mathbf{\Omega}$ to produce structural innovations $\mathbf{\varepsilon}$, as follows:

$$\mathbf{C}\mathbf{\varepsilon}_t = \mathbf{u}_t$$

where, \mathbf{C} is the lower triangular Cholesky matrix, with ones in its main diagonal.⁸

⁷ The FIX exchange rate is an average of wholesale's market prices for operations payable in 48 hours and it is determined by Banco de Mexico.

⁸ The positive definite symmetric matrix $\mathbf{\Omega}$ can be decomposed into a lower triangular matrix \mathbf{C} and a diagonal \mathbf{D} such that $\mathbf{\Omega} = \mathbf{C}\mathbf{D}\mathbf{C}'$. This decomposition produces uncorrelated error terms by construction, i.e., $E[\mathbf{\varepsilon}_t\mathbf{\varepsilon}_t'] = \mathbf{D}$.

Thus, the mechanism used to identify the shocks is recursive. For the first variable in the VAR, the term of the structural shock is given by $\varepsilon_{1t} = u_{1t}$. For the variable $j > 1$, the corresponding structural shock is given by $\varepsilon_{jt} = u_{jt} - c_{j,1}\varepsilon_{1t} \dots - c_{j,j-1}\varepsilon_{j-1,t}$, where $c_{j,t}$ corresponds to the elements of the Cholesky matrix \mathbf{C} . In short, the variables are ordered according to their degree of exogeneity. Thus, foreign variables are contemporaneously affected only by shocks to foreign variables, while domestic variables are affected by both domestic and foreign shocks. These assumptions allow us to retrieve the structural shocks vector.

Using the recursive VAR to identify shocks has some major advantages. In addition, to take into account potential long-term relationships, we estimate a VAR model in levels. We find that the results are similar to those reported here. Moreover, we examine the sensitivity of the results to various orderings. We observe that, as the contemporaneous correlation between the residuals is small,⁹ our results are robust to different orderings. The impulse response functions to analyse the effects of push and pull factors on net capital flows and the disaggregated capital flows are presented in the next section.

3.2 Responses of Portfolio Investment, Foreign Direct Investment and Other Investment to Push and Pull factors

Using the VAR model explained in the previous section, the impulse-response functions are estimated to analyse the effects of push and pull factors on capital flows. The Monte Carlo method is employed to estimate the standard error of the impulse-response functions using 10,000 repetitions. Responses are presented for time horizons of 8 quarters with 90 percent confidence intervals. In all cases, the size of the shock is one standard deviation. As capital flows are expressed as proportion of Mexican GDP, the responses to one standard deviation shocks in push and pull factors represent the change of each flow as proportion of Mexican GDP to the corresponding shock. As the units of the responses are the same for all cases, they are sometimes omitted when describing the results. The estimated VAR models are stable as the inverse roots of the characteristic polynomial have modulus less than one and

⁹ The only correlation between the residuals that is greater than 0.5 occurs between the VIX and the exchange rate.

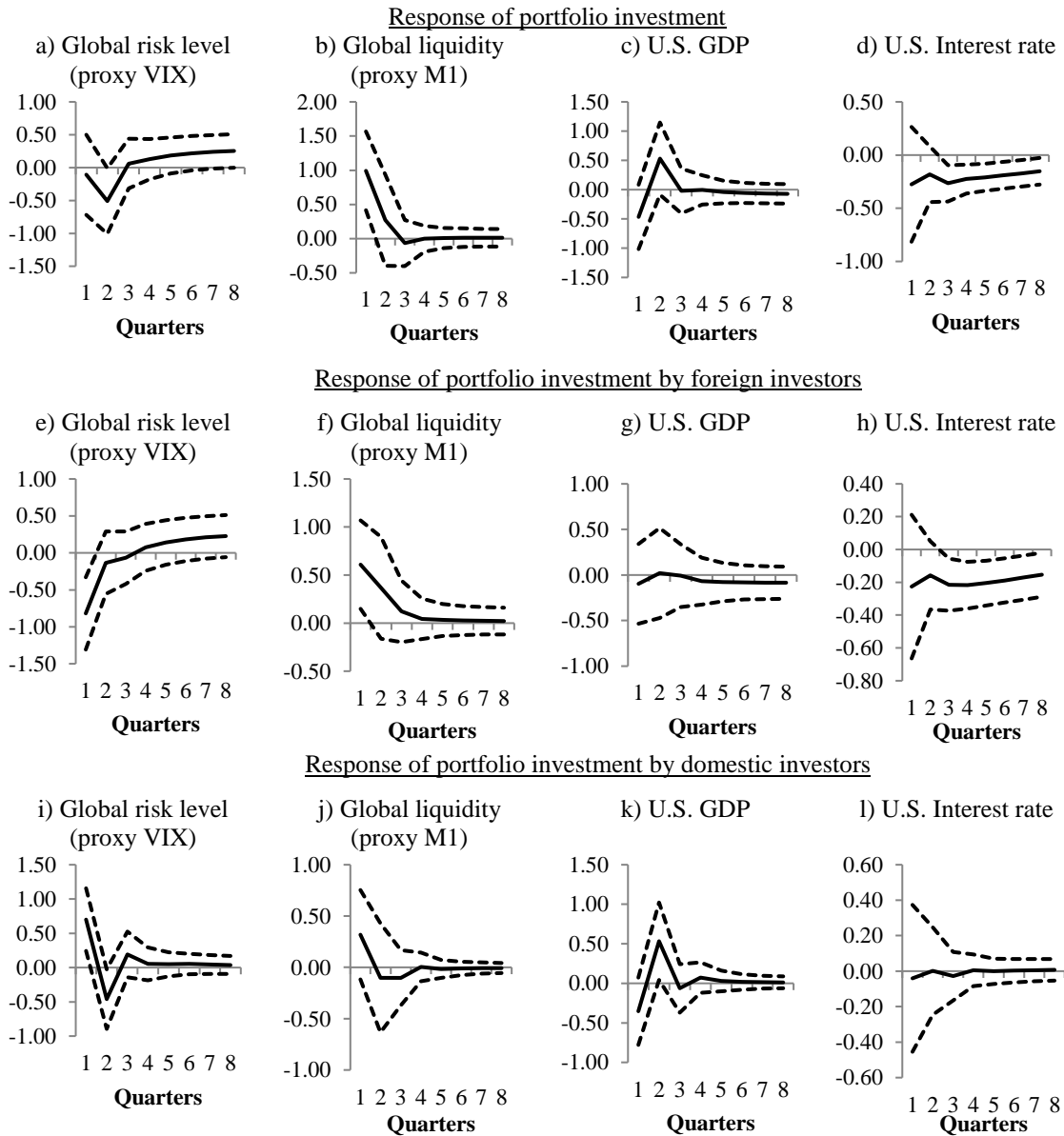
lie inside the unit circle. Furthermore, the null hypothesis of no serial correlation of the residuals cannot be rejected according to the LM test statistic for residual correlation up to order 8. Although the data start from the first quarter of 1995, the effective estimation sample starts in the second quarter of 1996 due to data transformations. The analysis is presented as follows. First, we show the IRF of PI to push and pull factors. Then, we present the same analysis for OI, and finally for FDI. The discussion is focused on the responses that are statistically significant at the 90% confidence level.

The effects of push factors on net PI, can be seen in Figure 5. In particular, this figure presents the impulse-response functions of net PI as proportion of Mexican GDP to one standard deviation shocks in the VIX index, global liquidity, U.S. GDP and the U.S. interest rate. A one standard deviation shock to the VIX index, representing an increase in global risk, is followed by a decrease of 0.51 percentage points of Mexican GDP (p.p. of GDP) in net PI, a quarter after the shock occurs. The same shock has a negative effect on the foreign investors' PI of around 0.82 p.p. of GDP, in the first period, as well as a positive effect of 0.70 on the domestic investors' PI at the same quarter of the shock.¹⁰ Also, this shock has a negative response of 0.46 on the domestic investors' PI, at the second quarter. This is consistent with Ahmed & Zlate (2012), who among other key findings highlight the importance of global risk as a determinant of capital flows.

The second analysed shock is US M1, which serves as a proxy for global liquidity. Increases in liquidity raise foreign investment flows to the rest of the world. According to the impulse-response function, net PI flows rise by 0.99 after a one standard deviation liquidity shock, in the same period of the shock. Similarly, we observe a rise of 0.61 in the foreign investors' PI (see Figure 5). The latter contrasts with Ahmed & Zlate (2012) results, which do not find statistically significant positive effects of unconventional U.S. monetary expansion (US liquidity's shock) on total net inflows to emerging market economies.

¹⁰ The VAR model used to estimate the responses shown at the middle and bottom part of the figure includes PI by both foreign and domestic investors at the same time to allow for possible substitution effects between those types of flows. This approach will also be followed for the responses of OI and FDI presented later.

Figure 5
Effect of shocks to push factors on the components of portfolio investment
 90% confidence intervals. Sample: 1996 Q02 – 2015 Q04
 (Percent)



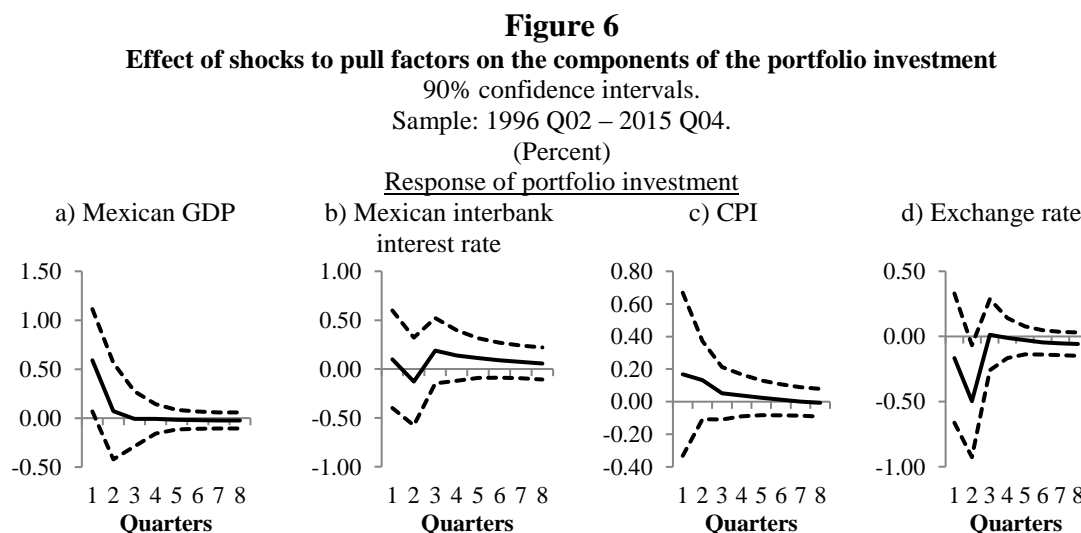
Note: The variables used in the VAR model are: the VIX Index, the Growth Rate of U.S. M1, the Growth Rate of U.S. GDP, U.S. Rate of Federal Funding for the United States, the Growth Rate of Mexican GDP, the Interbank Interest Rate, the Mexican Inflation, the Growth Rate of Exchange (FIX) and Capital Flows.

A one standard deviation positive shock to the U.S. GDP growth is associated with a 0.53 increase in domestic investors' PI, one quarter after the shock occurs. This is in line with Ying & Kim (2001), in their study for Korea and Mexico. We note, as well, that the same

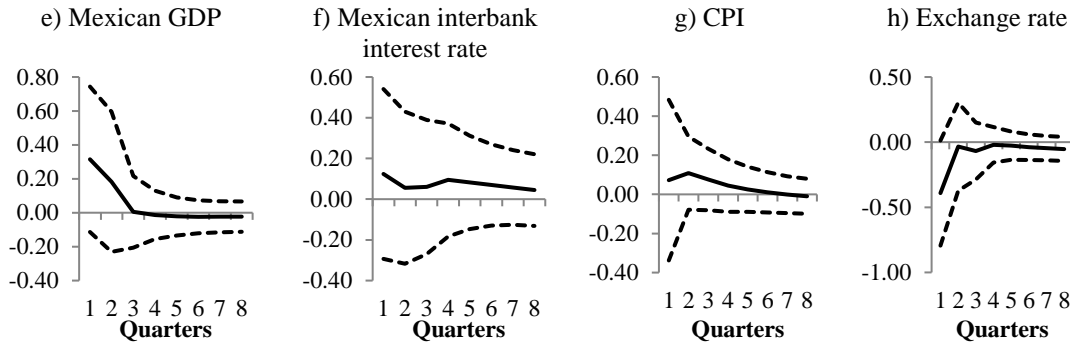
shock has no statistically significant effect on the net and foreign investors' PI. These results suggest that the dynamics of net PI inflows to external shocks in economic activity is mainly driven by the response of domestic investors' flows.

The IRF of net PI flows depicts a reduction of 0.20 (average from the third to the eighth period) in response to a one standard deviation in the US interest rate. This response is explained by the behaviour of foreign investors' flows, which decrease by about 0.19 (average from the third to the eighth period). In this sense, the IRF shows a negative relationship between this rate and PI, which can be explained in terms of the increase in the opportunity cost of maintaining domestic investments. This result is consistent with that from Çulha (2006), who finds that for the case of Turkey, push factors are dominant and, particularly, the role of foreign interest rate has become more significant with respect to other factors.

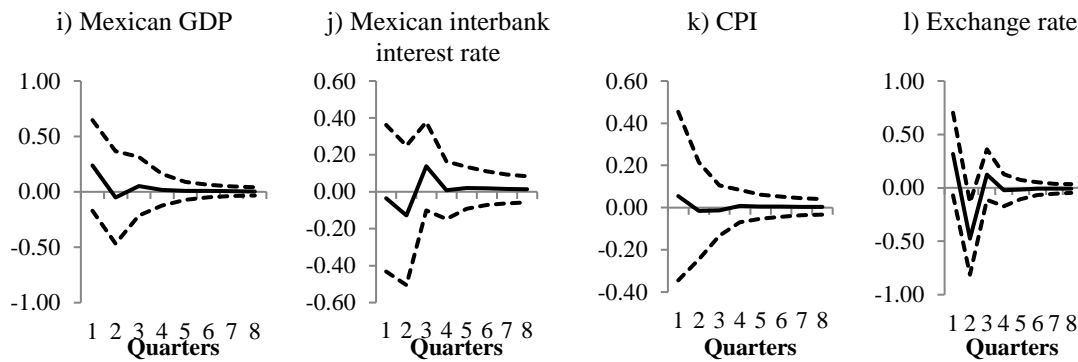
The response of PI to pull factors is showed in Figure 6. Notably, a one standard deviation shock in Mexican GDP growth raises net PI by 0.59 in the same period of the shock. Nevertheless, it has no statistically significant effect on domestic and foreign investors' PI. The results for net PI indicate that an increase in economic activity is associated with larger inflows, which is in accordance with the pull factors literature and De Vita & Kyaw (2008), who highlight the importance of real variables to explain capital flows.



Response of portfolio investment by foreign investors



Response of portfolio investment by domestic investors



Note: The variables used in the VAR model are: the VIX Index, the Growth Rate of U.S. M1, the Growth Rate of U.S. GDP, U.S. Rate of Federal Funding for the United States, the Growth Rate of Mexican GDP, the Interbank Interest Rate, the Mexican Inflation, the Growth Rate of Exchange (FIX) and Capital Flows.

The effects on net PI flow to a one standard deviation shock in the Mexican overnight rate and in the domestic inflation are not statistically significant. On the other hand, a depreciation of one standard deviation in the exchange rate is associated with a decrease of 0.50 in the net PI, during the period after the shock occurs. Similarly, a depreciation causes a decline in domestic investors' PI of 0.48 in the second quarter. This could be associated with lower investor confidence. The effect of the same shock on foreign investors' PI is not statistically significant.

In summary, it appears that both push and pull factors are important determinants of net PI. Our results highlight the positive impact of Mexico's GDP growth on this type of investment. An increase in the U.S. interest rate has a negative and persistent effect on net PI and foreign investors' PI. Moreover, a positive shock to U.S GDP growth has important effects on domestic investors' PI. We observe that the effect of a shock to liquidity and global risk on

net PI is considerably important. Global liquidity rise the net PI (particularly foreign investors' PI), while higher global risk has negative effects on PI, which is consistent with a scenario of seeking refuge in what the investors consider safe assets.

Next, we show the response of OI to push factors in Figure 7. The IRF shows that, a one standard deviation shock in the VIX is related to a 0.68 increase in total OI one quarter after the shock occurs. In this sense, OI by domestic investors shows a contemporaneous positive response (0.73) to the shock in global uncertainty. However, the same shock has no statistically significant effects on OI by foreign investors. On the other hand, the responses of OI and its components to a one standard deviation shock in liquidity and the FFR are not statistically significant. Finally, a shock in U.S. GDP growth is associated with a statistically significant effect on net OI of 0.48.

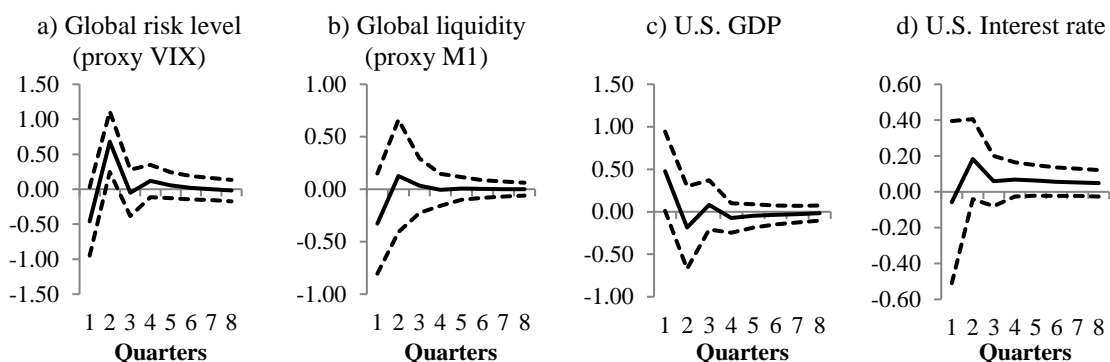
Figure 7
Effect of shocks to push factors on the components of other investments

90% confidence intervals.

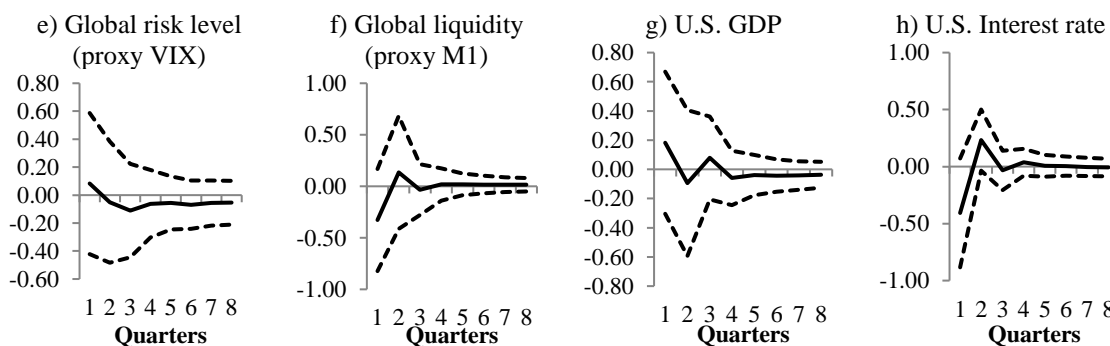
Sample: 1996 Q02 – 2015 Q04

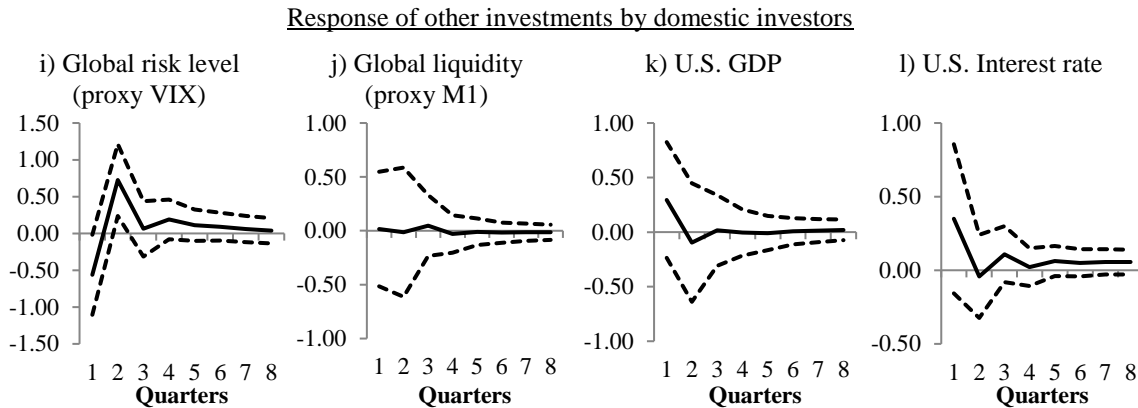
(Percent)

Response of other investments



Response of other investments by foreign investors

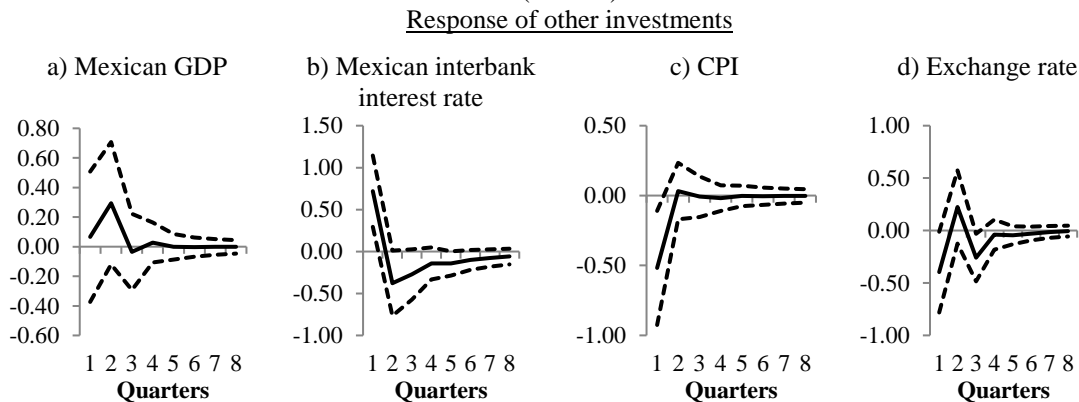


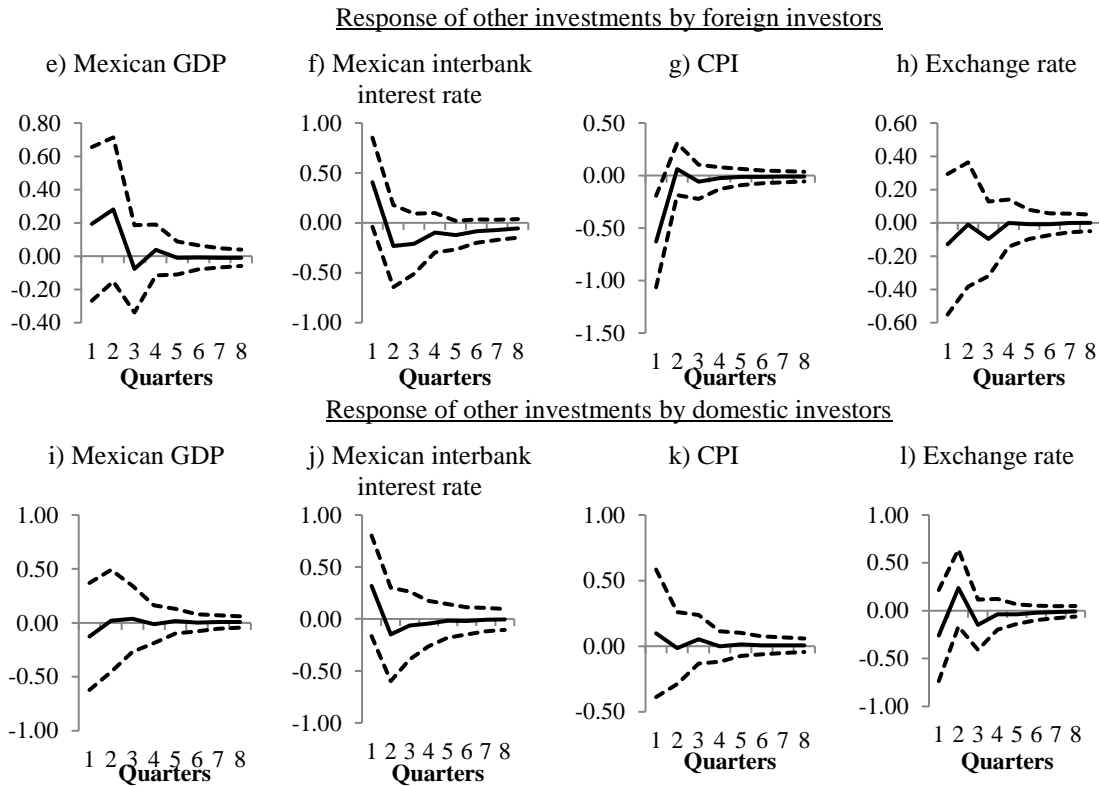


Note: The variables used in the VAR model are: the VIX Index, the Growth Rate of U.S. M1, the Growth Rate of U.S. GDP, U.S. Rate of Federal Funding for the United States, the Growth Rate of Mexican GDP, the Interbank Interest Rate, the Mexican Inflation, the Growth Rate of Exchange (FIX) and Capital Flows.

Figure 8 depicts the response of OI to pull factors. Net OI flows respond positively to a shock in Mexican interbank interest rate at the first period (0.72), which is possibly associated with higher returns on these securities. On the other hand, a shock to domestic inflation explains a decrease of 0.52 on net OI and a diminution of 0.63 in foreign investors in the same period of shock. That is, we observe that the response of net OI flows is driven by foreign investor's movements. The domestic inflation decreases OI flows, because higher inflation reduces expected real returns. Net OI flows decline by 0.40 due to an exchange rate shock in the same period of the shock and by 0.26 in the third quarter. However, an exchange rate shock has no significant effects on foreign and domestic investment in OI.

Figure 8
Effect of shocks to pull factors on the components of other investments
 90% confidence intervals.
 Sample: 1996 Q2 – 2015 Q04.
 (Percent)





Note: The variables used in the VAR model are: the VIX Index, the Growth Rate of U.S. M1, the Growth Rate of U.S. GDP, U.S. Rate of Federal Funding for the United States, the Growth Rate of Mexican GDP, the Interbank Interest Rate, the Mexican Inflation, the Growth Rate of Exchange (FIX) and Capital Flows.

Figure 9 shows the responses of net FDI to push factors. As can be seen, the responses of net FDI to shocks in the global risk, U.S. GDP growth and the U.S. interest rate are not statistically significant. Finally, Figure 10 presents the impulse-response functions to depict the effects of pull factors on net FDI. The exchange rate shock increases net FDI flows by 0.12 on the third quarter. This could occur if exports increase after the depreciation, thus making attractive the entry of FDI by exporting companies. In general, FDI does not seem to respond to short-term shocks as it is possibly determined by long-term economic fundamentals. These in turn are not captured in the VAR model as this framework is primarily useful for short-term analysis.

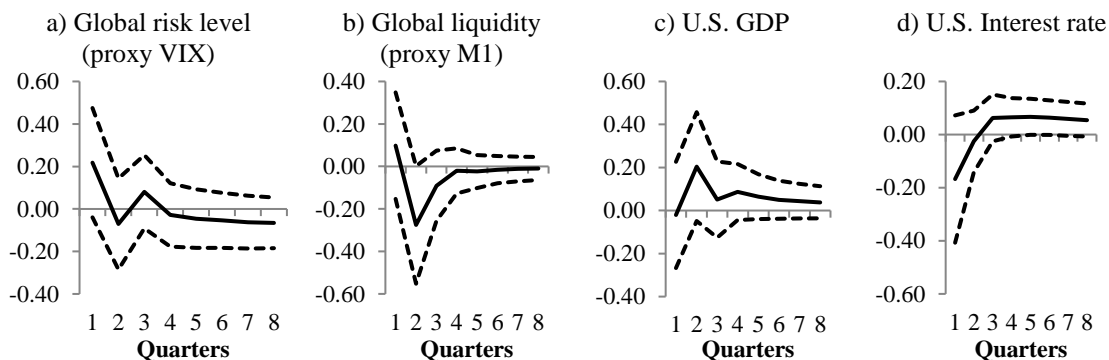
Figure 9
Effect of shocks to push factors on the components of foreign direct investment

90% confidence intervals.

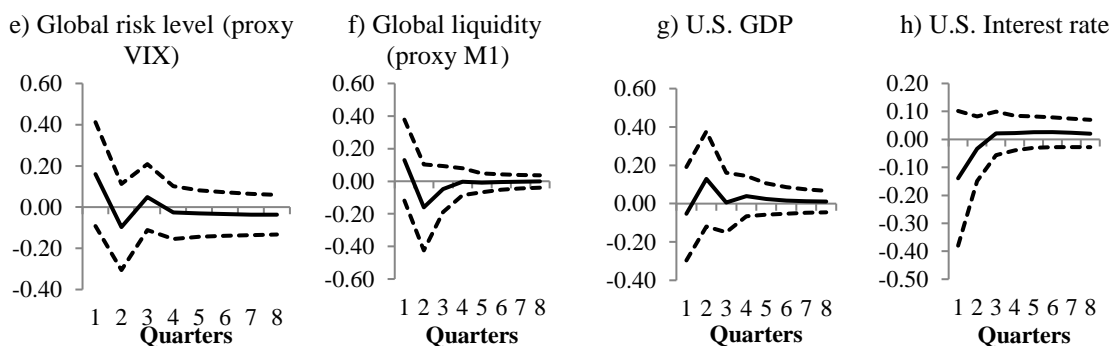
Sample: 1996 Q02 – 2015 Q04

(Percent)

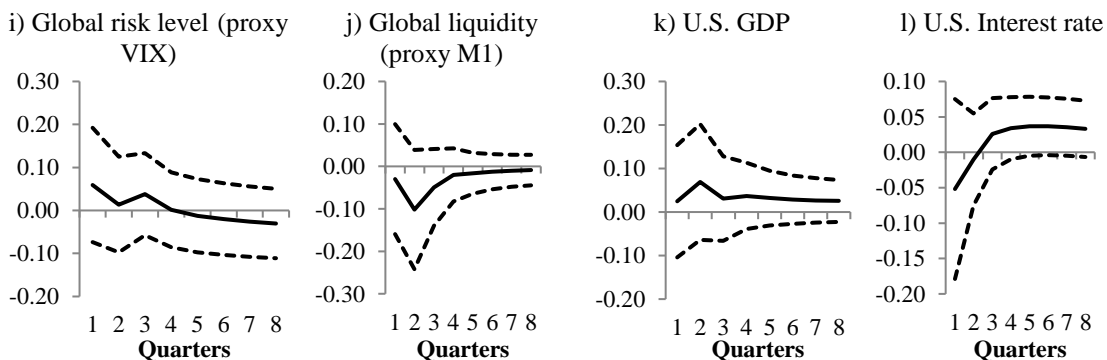
Response of FDI



Response of FDI in Mexico



Response of FDI Abroad



Note: The variables used in the VAR model are: the VIX Index, the Growth Rate of U.S. M1, the Growth Rate of U.S. GDP, U.S. Rate of Federal Funding for the United States, the Growth Rate of Mexican GDP, the Interbank Interest Rate, the Mexican Inflation, the Growth Rate of Exchange (FIX) and Capital Flows.

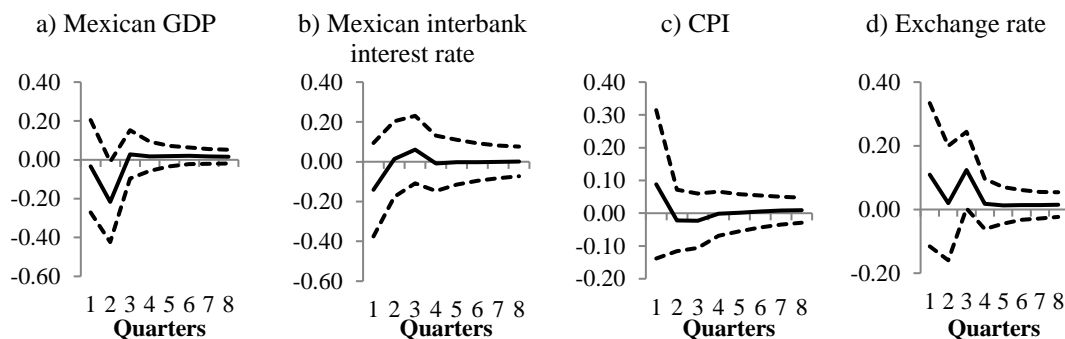
Figure 10
Effect of shocks to pull factors on the components of foreign direct investment

90% confidence intervals.

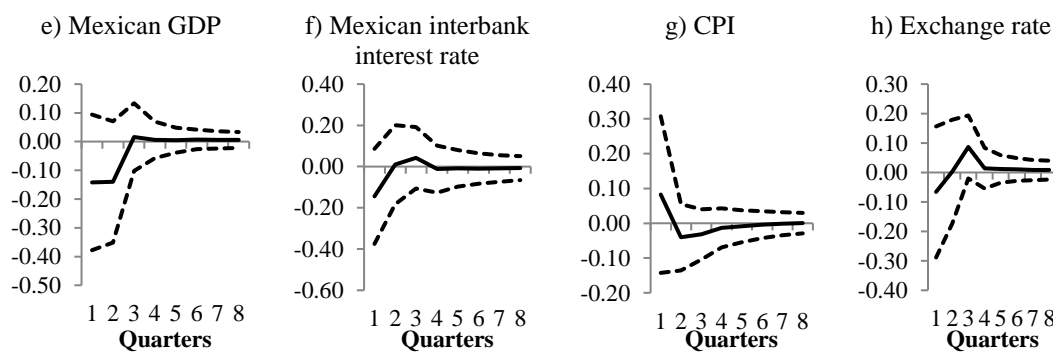
Sample: 1996 Q02 – 2015 Q04.

(Percent)

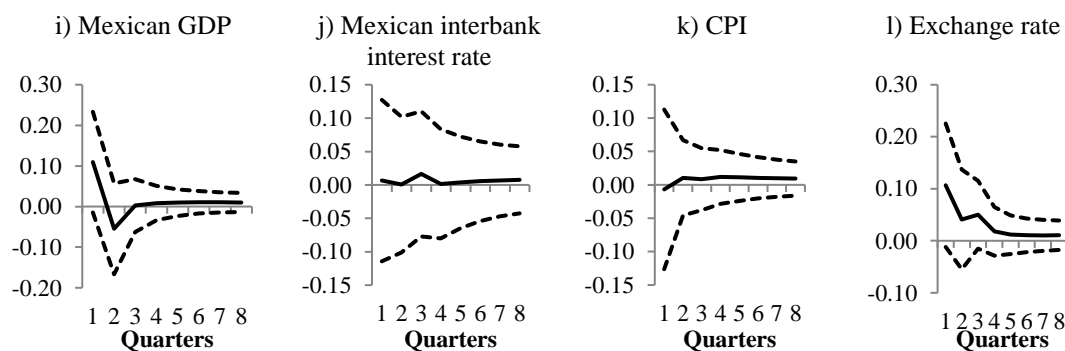
Response of FDI



Response of FDI in Mexico



Response of FDI abroad



Note: The variables used in the VAR model are: the VIX Index, the Growth Rate of U.S. M1, the Growth Rate of U.S. GDP, U.S. Rate of Federal Funding for the United States, the Growth Rate of Mexican GDP, the Interbank Interest Rate, the Mexican Inflation, the Growth Rate of Exchange (FIX) and Capital Flows.

In summary, the impulse-response functions above show that push factors seem to have more important effects on PI and OI than on FDI. Nevertheless, domestic GDP and exchange rate seem to be more relevant in the case of PI and FDI during the first periods after the shock occurs. In the next section, we analyse the determinants of each component of the financial account at the highest degree of disaggregation, which allows us to obtain more details about the dynamics inside net flows.

3.3 Robustness exercises

For robustness, we also analyse other push and pull factors that affect capital flows. In particular, we include the Emerging Markets Bond Index (EMBI)¹¹ for Mexico and the Public Debt (as a percentage of GDP) as indicators of country-risk. Previous literature (e.g., Bohn and Tesar, 1996) has found that this factor is an important determinant of capital flows. We find that OI by domestic investors shows a contemporaneous reduction when the EMBI increases. However, the shock to the EMBI and the public debt have no significant effects on the other components of the financial account.

We also include in the model the implicit exchange rate volatility to account for future expectations about the exchange rate. In particular, we use the one month to maturity options for the peso dollar exchange rate. We find that PI by foreign investors presents a contemporaneous reduction when the implicit volatility increases. However, this variable has no statistically significant effects on other components of the financial account. A potential explanation is that this type of effects may be already captured by the exchange rate variable.

In addition, we consider the interest rates in other Latin American countries to control for returns in emerging economies that could represent alternatives for foreign investors. In particular, we include a weighted average of the interest rates for Argentina, Brazil, Colombia and Chile, as well as the interest rates for Brazil's treasury certificates. These Latin American countries have been analysed in previous literature on capital flows, including, for example, Chuhan et al. (1998) and Fernandez and Arias (1996). In both cases, the responses of FDI, PI and OI are not statistically significant. This suggests that capital flows to Mexico are

¹¹ The EMBI is measured as the difference between the interest rates of government bonds issued by emerging market countries and those issued by the US.

mainly driven by global and domestic conditions rather than conditions in other emerging economies.

Additionally, to account for the unconventional monetary policy measures implemented by the Federal Reserve, we include the shadow interest rate by Wu and Xia (2016). Overall, we find that the responses to a shock to the shadow interest rate are qualitatively similar to those using the Federal Funds Rate reported by the FED. Note that our baseline model includes M1 to account for shocks to global liquidity.

We have also estimated the model starting from 2001, when the central bank adopted an inflation targeting regime. This regime coincides with a period of low and stable inflation. In general, the responses of capital flows to the push and pull factors are consistent with our baseline results. However, the lower sample size leads to a higher estimation uncertainty and a lower number of statistically significant responses for most categories of capital flows.

As alternative identification assumption, we also estimate the model using long run restrictions as in Blanchard and Quah (1989). In this way, the accumulated response of foreign variables variable to a shock on the domestic variables is zero in the long run. In particular, we use a diagonal response matrix as in the Cholesky method explained above, but using long run instead of short run restrictions. The results are similar to those presented in this paper. The results of the robustness exercises are available from the authors upon request.

3.4 Responses of disaggregated capital flows to push and pull factors

In this subsection, we present the responses of all components of the financial account to shocks in push and pull factors. This is motivated by the findings of Forbes & Warnock (2012) and Broner et al. (2013) and because the different components of flows might be driven by different types of factors, according to their particular features. Appendix A provides a brief definition of each component of the financial account. The responses of disaggregated capital flows are shown in Appendix B. To preserve parsimony, the VAR models in this subsection include only one component of the financial account. That is, we estimate 22 models, one for each of those components. To facilitate the comparison, we

present at the same time the responses of all items of the financial account to each particular shock.

The increase in global uncertainty is associated with a reduction of inflows in several components of the financial account. The negative response of PI to the shock in global risk is due to the impact on both foreign and domestic investors' flows. Foreign investor's PI decrease by 0.81 p.p. of GDP at the first period, which is mainly explained by a decrease in the public sector securities of 0.42 and a diminution of 0.34 in private sector securities. Within the last, securities issued abroad, and securities of stock and money market present a reduction 0.19 and 0.17, respectively, on the first quarter. Therefore, those funds seem to take refuge in lower risk securities in other economies. The negative response of foreign investors' PI is almost offset by an increase of 0.71 in domestic investor' PI during the same period of shock. Notably, we observe that the holdings of public sector securities by foreign investors rise after the increase in global uncertainty, although with a lag. That is, foreign investors seem to prefer these types of investment when global uncertainty is higher as they have lower risk.

Similarly, many of the components of other investments present a reduction following the rise in global uncertainty. In particular, a shock to the VIX index is followed by a decrease in the domestic investors' OI by 0.56 pp of GDP in the same period of shock. Similarly, we observe a reduction in the non-banking private sector's accounts by foreign investors of 0.11 the second period after the shock. Remarkably, holdings of public sector securities by foreign investors, particularly in development banks increase in an environment of high uncertainty, which possibly occurs due to the lower risk in these types of securities.

An increase in liquidity is followed by higher inflows for several components of the financial account, particularly in portfolio investment. The injection in US liquidity affects portfolio investment by foreign investors, but not for domestic investors. In particular, PI flows by foreign investors in the first period raise by 0.61. Importantly, we observe that the flows for money market securities of the public sector respond positively to a liquidity shock during the first two periods, while securities issued abroad in private sector rise by 0.18 on the first period. This supports the conclusion of Fratzscher (2012), who finds that an improvement in liquidity conditions induces net portfolio inflows and vice versa. The effects of U.S. M1

shocks on net OI, however, are not statistically significant. Importantly, even if there are not significant responses in some net flows, the disaggregation by components shows significant effects. In particular, we find that flows for foreign investors in private sector securities decrease by 0.49, which in turn is driven by a negative response of the flows in Business Banking securities of 0.55. This could occur if there is a substitution effect between investment portfolio and other investments.¹²

A shock to the U.S. GDP growth is associated with a 0.48 increase in domestic investors' PI, one quarter after the shock. The same shock is associated with a rise of around 0.13 in stock and money market securities within the private sector by foreign investors at the first quarter and a decrease of 0.15 during the second period. The positive shock to US GDP is followed by an increase in inflows in other investment by 0.48. However, this shock reduces slightly the flows for OI.

An increase in the FFR represents higher returns abroad, thus it leads to an important reduction in several components of portfolio investment by foreign investors. In particular, we can see persistent impacts from the third to the eighth periods, on net PI, which seems to be driven by a reduction in public sector securities by foreign investors. We also observe some negative effects on securities issued abroad in private sector, although smaller in magnitude. That is, changes in the FFR have an important negative effect on the demand of public sector's securities, which are closer substitutes of US government bonds. Interestingly, the effect of shocks in the FFR on the financial account is driven by the behaviour of foreign investors, as domestic investors do not seem to respond to the shock.

These results give support to those found in Chuhan et al. (1998), who indicate that the effect of US interest rates is more important than that of US output. Moreover, these results are consistent with the results in Calvo et al. (1993), who found that in most cases, an increase in interest rates abroad induces a capital outflow (for example, in Argentina, Bolivia, Colombia, Chile, Mexico, Uruguay and Venezuela).

¹² To allow for feedback effects, we have also estimated a VAR model including both PI and OI at the same time. The results indicate the existence of substitution effects among these types of investment and are available from the authors upon request.

Finally, we discuss the response of the flows to pull factors. A shock to Mexican GDP growth raises the financial account by 0.65 pp of GDP. This effect is mainly driven by an increase in net PI by 0.59. We observe some negative responses in some items of the financial account that might be associated with a substitution effect from OI and FDI to PI. However, as they are small in magnitude, the net effect of higher GDP on the financial account is positive.

The impact of the Mexican overnight rate on the financial account is positive during the first period by 0.67 and negative the second period, although smaller in magnitude. This response is mainly driven by a positive impact in OI. In particular, we observe an important increase in holdings of public sector securities by foreign investors, which can occur as the return on these type of investment is highly related to domestic interest rates.

The domestic inflation shock only has a negative effect on OI of 0.52, as it is associated with lower real yields in domestic securities. This is explained by a diminution of 0.65 in foreign investors' flows during the same period of shock. This occurs as a result of the dynamics presented in the public sector flows' OI (decreasing by about 0.49). The same shock produces a reduction of non-banking sector's flows by around 0.42.

An exchange rate depreciation is associated with negative movements into PI and OI. This can occur due to lower expected yields in foreign currency. In particular, this shock decreases the net PI flows by 0.50 at the second quarter. This response is driven by the behaviour of domestic investors' flows (-0.51). Also, we observed a reduction on money market holdings within the public sector (0.35) and on securities issued abroad within the private sector (0.20) in the same period of the shock. The response of OI to that shock is negative during the first and third quarters, respectively. This response is explained by a reduction on non-banking sector' flows (0.11) at the third period. Also, the positive response of FDI's flows, by 0.12 at third period, suggests a substitution effect between capital flows. This could occur if exports increase after of the depreciation, thus making attractive the entry of FDI by exporting companies.¹³

¹³ We exclude three categories of the financial account from the analysis, particularly those corresponding to Pidiregas in PI, Pidiregas in OI, and a category that includes securities issued by the Mexican Central Bank. Pidiregas refers to the "Productive Infrastructure Investment Project with Record Deferred in the Public Expenditure" which essentially entails a set of public projects financed by the private or social sectors. The Pidiregas categories have taken the value of zero since 2009, when those type of investments disappeared.

Finally, we discuss the net effects of the shocks on the financial account. The impulse-response functions are significant for the case of level of global liquidity and the U.S. interest rate. Pull factors have only statistically significant responses on the financial account for the cases of GDP growth and domestic interest rate. For a shock to the Mexican GDP growth, the effect on financial account is 0.65 in the 1st period. The response of the financial account to the domestic interest rate shock is 0.67 during the 1st period and -0.44 at the 2nd period. Whereas a shock in the level of global liquidity has a positive response of 0.67, the effect to FFR shock is negative (0.61).

4. Conclusion

Movements in capital flows are an important source of macroeconomic fluctuations and can pose risks to financial stability. Therefore, the increase in capital flows to emerging economies represents an opportunity as well as a challenge. Financial resources can contribute to the economic growth and development of emerging economies or markets, enabling projects that otherwise could not be funded. The challenge is to efficiently allocate the resources to the most profitable projects, establishing conditions that guarantee stability when faced with external shocks. Moreover, policy responses must be planned to prevent volatility and disorderly capital outflows. The aim is to employ incoming resources as efficiently as possible to maximize their contribution to growth and stability. Recent increases in capital flows can be explained by several factors. In this article, we studied the determinants of the dynamics for each component of the financial account for Mexico. The analysis is carried-out via estimation of impulse-response functions from a VAR model.

The variables that represent push factors in this research are the global risk, the injection of liquidity (through conventional and unconventional measures by the Federal Reserve), the FFR and U.S. GDP growth. Those factors had a statistically significant impact on several components of portfolio and other investment, more than on FDI, to Mexico. We find that a shock to the FFR has an important and persistent impact on several items of the financial

Similarly, we observe zero flows in the Mexican Bank category since the second quarter of 2010. As those accounts take zero values for an important part of the sample, the estimation results could be misleading and are thus excluded from the analysis.

account. Pull factors -mostly exchange rate and economic growth - are also strong determinants of capital flows, which is in line with Dooley (1988).

From the estimation for aggregate categories, we find that an increase in global risk has a negative effect on PI, and a rise in global liquidity has a positive contemporaneous impact on PI. The results for Mexico are consistent with Fratzscher (2012), who notes that changes in global liquidity and risk have an important effect on capital flows. External conditions, however, are difficult to control for policymakers. Then, the authorities of a country have no direct control and can only dampen such shocks to a certain degree. On the other hand, our results imply that monetary policy can influence portfolio investment, particularly in public sector securities. Similarly, our findings indicate that exchange rate policies can have important effects on PI, OI and FDI.

From the estimation for disaggregate components, the response of a shock to the FFR, global risk, global liquidity, domestic GDP growth, domestic inflation, domestic interest rate and the exchange rate seem to have statistically significant effects on several items of the financial account as opposed to the responses of net flows, as discussed in section 3.3. These results support the importance of analysing capital flows at a higher degree of disaggregation than has been commonly used in the literature. For instance, we find that a shock to the FFR has important effects on PI in public sector securities by foreign residents.

In addition, our results indicate that public sector securities increase after a rise in global uncertainty, but private sector securities present an opposite response. This can occur if investors prefer low-risk securities after the shock in global uncertainty. Furthermore, we find that only foreign investors respond to shocks in foreign interest rates and foreign liquidity, as opposed to domestic investors. Finally, our results suggest that shocks to US and domestic interest rates have important effects on the demand of public sector securities.

Our results are, of course, conditional on our empirical model and the sample period used. Further research could examine alternative identification assumptions such as imposing long run restrictions as an alternative strategy to identify the shocks. Other steps in the research agenda could include estimating a model with time varying parameters to examine whether

the determinant of capital flows have changed over time. In addition, future research could analyse the impact of capital flows on economic growth and stability.

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Appendix

A. Definitions of the financial account

Financial account	This account contains transactions associated with changes of possession in external financial by domestic and foreign investors. The financial account is divided into Direct Investment, Portfolio Investment and Other Investment by domestic and foreign investors.
Portfolio investment	This account includes equity securities and debt securities in the form of bonds, money market instruments and financial derivatives such as options.
Foreign investors	Foreign holdings of equity securities and debt securities issued by entities in the country. Debt securities are subdivided into bonds, money market instruments and financial derivatives.
Public sector	It consists of holdings of securities issued by the public sector by foreign residents.
Securities issued abroad	It contains securities issued abroad by the Public Sector.
Money market	Includes government bonds, IPAB bonds, among others.
Private sector	Foreign investors' flows in this account are originated by foreign investment in stock market, money market and the issuance of securities abroad.
Securities issued abroad	It contains securities issued abroad by the Private Sector.
Stock market and money	It includes commercial and financial paper, negotiable certificates of deposit and short-term notes.
Domestic investors	Holdings by Mexican residents of securities issued by foreign entities.
Other investment	Residual category that includes all financial transactions not covered under direct investment, portfolio investment or reserve domestic investors. Other investment includes trade credits, loans and deposits.
Foreign investors	Obligations that are not recorded in the FDI or PI. For example, when the foreign bank makes a loan to a domestic borrower, it would take a plus sign. Similarly, when a resident repays the principal on a loan to a foreigner it takes a minus sign.
Public sector	Foreign investors' flows of the Public Sector, for example net loans that have received the Public Sector non-bank Entities (Pemex, CFE and Federal Government).
Development banks	Foreign holdings of securities issued by the development bank.
Non-banking sector	Foreign holdings of securities issued by the non-banking sector.
Private sector	Foreign holdings of securities issued by the private sector.
Business banking	Foreign holdings of securities issued by domestic commercial banks.
Non-banking sector	Foreign securities issued by the Non-banking sector.
Domestic investors	Loans made by domestic banks to foreigners. For example, when a domestic bank makes the loan to the foreigner it would take a negative sign. Similarly, when a foreigner repays the principal on the loan it takes a plus sign. The loan is the domestic bank's asset and the foreigner's liability.
Foreign direct investment	It consists of domestic and foreign investors' flows between a non-resident direct investor and a resident company.
in Mexico	Flows of foreigners to a domestic country.
Abroad	Flows of residents to a foreign country.

Source: Balance of Payments Manual, Fifth Edition, IMF.

B. Tables of direct elasticities of the components of the financial account in Mexico in the face of shocks to push and pull factors

Quarters	Shock to VIX							
	1	2	3	4	5	6	7	8
Financial Account	-0.3148 (0.3364)	0.0628 (0.2900)	0.1188 (0.2052)	0.2028 (0.1592)	0.1920 (0.1408)	0.1904 (0.1332)	0.1808 (0.1300)	0.1696 (0.1280)
Portfolio Investment	-0.1080 (0.3708)	-0.5092* (0.3036)	0.0616 (0.2304)	0.1296 (0.1860)	0.1840 (0.1652)	0.2184 (0.1584)	0.2412 (0.1552)	0.2532 (0.1552)
Foreign Investors	-0.8068* (0.2928)	-0.1252 (0.2424)	-0.0704 (0.1992)	0.0720 (0.1800)	0.1396 (0.1728)	0.1808 (0.1680)	0.2088 (0.1652)	0.2256 (0.1632)
Public Sector	-0.4236* (0.2192)	-0.0900 (0.1820)	0.0292 (0.1532)	0.1080 (0.1384)	0.1696 (0.1348)	0.2012 (0.1336)	0.2200 (0.1340)	0.2292* (0.1352)
Securities Issued Abroad	-0.2532 (0.1616)	0.0212 (0.1352)	0.0812 (0.1000)	0.0876 (0.0768)	0.1212* (0.0692)	0.1296* (0.0680)	0.1348* (0.0684)	0.1348* (0.0696)
Money Market	-0.1776 (0.1324)	-0.0276 (0.1192)	-0.0428 (0.1076)	-0.0048 (0.1064)	0.0284 (0.1060)	0.0508 (0.1052)	0.0664 (0.1040)	0.0776 (0.1032)
Private Sector	-0.3436* (0.1392)	-0.0200 (0.1148)	-0.0940 (0.0920)	-0.0204 (0.0800)	0.0012 (0.0728)	0.0140 (0.0688)	0.0280 (0.0652)	0.0376 (0.0624)
Securities Issued Abroad	-0.1912* (0.1024)	-0.0292 (0.0824)	-0.0740 (0.0660)	-0.0240 (0.0588)	-0.0020 (0.0544)	0.0128 (0.0512)	0.0248 (0.0492)	0.0340 (0.0476)
Stock and Money Market	-0.1652* (0.0808)	0.0196 (0.0652)	-0.0256 (0.0484)	0.0024 (0.0376)	-0.0004 (0.0340)	0.0004 (0.0316)	0.0020 (0.0300)	0.0032 (0.0288)
Domestic Investors	0.7064* (0.2756)	-0.4944* (0.2540)	0.2232 (0.1880)	0.0336 (0.1368)	0.0592 (0.0988)	0.0524 (0.0856)	0.0452 (0.0776)	0.0392 (0.0740)
Other Investment	-0.4604 (0.2972)	0.6792* (0.2632)	-0.0520 (0.2008)	0.1180 (0.1412)	0.0564 (0.1128)	0.0208 (0.1012)	0.0016 (0.0964)	-0.0188 (0.0928)
Foreign Investors	0.1024 (0.3036)	-0.0152 (0.2504)	-0.1672 (0.1756)	-0.0256 (0.1280)	-0.0812 (0.1048)	-0.0620 (0.0960)	-0.0608 (0.0916)	-0.0544 (0.0888)
Public Sector	0.2376 (0.1596)	0.1680 (0.1356)	0.0408 (0.1012)	0.1116 (0.0792)	0.0680 (0.0676)	0.0684 (0.0652)	0.0536 (0.0636)	0.0464 (0.0636)
Development Banks	0.1400* (0.0420)	0.0312 (0.0356)	0.0200 (0.0268)	0.0300 (0.0232)	0.0296 (0.0220)	0.0280 (0.0220)	0.0260 (0.0220)	0.0240 (0.0224)
Non-Banking Sector	0.1016 (0.1232)	0.1496 (0.1020)	-0.0392 (0.0780)	0.0584 (0.0588)	0.0260 (0.0488)	0.0256 (0.0448)	0.0212 (0.0428)	0.0168 (0.0420)
Private Sector	-0.1392 (0.2436)	-0.1616 (0.1916)	-0.2132 (0.1416)	-0.1120 (0.1080)	-0.1312 (0.0948)	-0.1060 (0.0908)	-0.0932 (0.0884)	-0.0788 (0.0872)
Business Banking	-0.1628 (0.2400)	-0.0376 (0.1904)	-0.1752 (0.1360)	-0.0540 (0.1032)	-0.0804 (0.0904)	-0.0612 (0.0848)	-0.0492 (0.0816)	-0.0392 (0.08)
Non-Banking Sector	0.0236 (0.0724)	-0.1116* (0.0584)	-0.0576 (0.0452)	-0.0520 (0.0352)	-0.0508 (0.0328)	-0.0472 (0.0328)	-0.0432 (0.0328)	-0.0396 (0.0332)
Domestic Investors	-0.5564* (0.3220)	0.7248* (0.2820)	0.0528 (0.2132)	0.2008 (0.1520)	0.1028 (0.1204)	0.0948 (0.1080)	0.0572 (0.1012)	0.0364 (0.0976)
Foreign Direct Investment	0.2180 (0.1564)	-0.0704 (0.1304)	0.0808 (0.1048)	-0.0280 (0.0904)	-0.0456 (0.0836)	-0.0536 (0.0792)	-0.0620 (0.0752)	-0.0656 (0.0728)
In Mexico	0.1652 (0.1512)	-0.0944 (0.1216)	0.0512 (0.0928)	-0.0316 (0.0736)	-0.0308 (0.0652)	-0.0332 (0.0596)	-0.0352 (0.0564)	-0.0352 (0.0540)
Abroad	0.0640 (0.0792)	0.0108 (0.0648)	0.0404 (0.0556)	0.0000 (0.0512)	-0.0120 (0.0492)	-0.0196 (0.0472)	-0.0256 (0.0456)	-0.0300 (0.0448)

Source: Own estimations with Banxico data.

Confidence level: (*) 90%.

Quarters	Shock to U.S. M1							
	1	2	3	4	5	6	7	8
Financial Account	0.6716* (0.3220)	0.0920 (0.3720)	-0.0244 (0.1728)	-0.0100 (0.0976)	0.0032 (0.0712)	0.0056 (0.0624)	0.0060 (0.0584)	0.0052 (0.0556)
Portfolio Investment	0.9916* (0.3500)	0.2708 (0.4052)	-0.0640 (0.2048)	-0.0016 (0.1152)	0.0100 (0.0892)	0.0136 (0.0828)	0.0132 (0.0792)	0.0120 (0.0784)
Foreign Investors	0.6140* (0.2732)	0.3648 (0.3132)	0.1176 (0.1820)	0.0388 (0.1172)	0.0300 (0.0944)	0.0252 (0.0856)	0.0224 (0.0820)	0.0200 (0.0804)
Public Sector	0.4532* (0.2096)	0.3796 (0.2324)	0.1428 (0.1480)	0.0500 (0.0992)	0.0304 (0.0808)	0.0260 (0.0748)	0.0224 (0.0728)	0.0200 (0.0724)
Securities Issued Abroad	0.0648 (0.1584)	0.1372 (0.1744)	0.0160 (0.0776)	0.0072 (0.0492)	0.0008 (0.0416)	0.0016 (0.0396)	0.0012 (0.0388)	0.0008 (0.0380)
Money Market	0.3240* (0.1292)	0.2512* (0.1488)	0.1500 (0.1148)	0.0728 (0.0876)	0.0424 (0.0716)	0.0308 (0.0624)	0.0256 (0.0568)	0.0224 (0.0540)
Private Sector	0.1544 (0.1328)	0.0684 (0.1516)	0.0152 (0.0824)	-0.0036 (0.0488)	0.0060 (0.0356)	0.0060 (0.0300)	0.0052 (0.0264)	0.0048 (0.0244)
Securities Issued Abroad	0.1848* (0.0968)	0.0616 (0.1100)	0.0204 (0.0600)	0.0036 (0.0372)	0.0064 (0.0272)	0.0068 (0.0228)	0.0068 (0.0208)	0.0064 (0.0200)
Stock and Money Market	-0.0384 (0.0788)	0.0116 (0.0872)	-0.0068 (0.0396)	-0.0052 (0.0228)	0.0004 (0.0160)	-0.0008 (0.0124)	-0.0008 (0.0104)	-0.0008 (0.0096)
Domestic Investors	0.2952 (0.2616)	-0.0864 (0.3108)	-0.0716 (0.1432)	-0.0080 (0.0716)	-0.0132 (0.0440)	-0.0084 (0.0344)	-0.0072 (0.0288)	-0.0068 (0.0260)
Other Investment	-0.3284 (0.2900)	0.1260 (0.3252)	0.0328 (0.1580)	-0.0068 (0.0924)	0.0072 (0.0652)	0.0016 (0.0512)	0.0016 (0.0428)	0.0008 (0.0372)
Foreign Investors	-0.3276 (0.2984)	0.1264 (0.3256)	-0.0464 (0.1324)	0.0184 (0.0832)	0.0172 (0.0556)	0.0172 (0.0452)	0.0180 (0.0396)	0.0164 (0.0360)
Public Sector	0.1908 (0.1560)	0.0720 (0.1752)	0.0320 (0.0812)	0.0048 (0.0516)	0.0124 (0.0388)	0.0088 (0.0328)	0.0092 (0.0296)	0.0080 (0.0272)
Development Banks	0.0160 (0.0400)	0.0356 (0.0460)	0.0056 (0.0224)	-0.0008 (0.0136)	0.0000 (0.0108)	0.0004 (0.0100)	0.0004 (0.0092)	0.0000 (0.0092)
Non-Banking Sector	0.1696 (0.1192)	-0.0132 (0.1332)	0.0300 (0.0632)	-0.0060 (0.0356)	0.0048 (0.0240)	0.0044 (0.0192)	0.0044 (0.0172)	0.0044 (0.0156)
Private Sector	-0.4940* (0.2340)	0.0644 (0.2516)	-0.0612 (0.1072)	0.0080 (0.0724)	0.0084 (0.0508)	0.0092 (0.0432)	0.0104 (0.0384)	0.0092 (0.0352)
Business Banking	-0.5532* (0.2308)	0.0616 (0.2484)	-0.0588 (0.1020)	0.0104 (0.0676)	0.0144 (0.0460)	0.0116 (0.0380)	0.0132 (0.0328)	0.0116 (0.0296)
Non-Banking Sector	0.0712 (0.0704)	0.0068 (0.0756)	-0.0144 (0.0360)	-0.0068 (0.0236)	-0.0048 (0.0192)	-0.0040 (0.0172)	-0.0036 (0.0160)	-0.0028 (0.0148)
Domestic Investors	0.0104 (0.3124)	-0.0200 (0.3532)	0.0604 (0.1600)	-0.0196 (0.0880)	-0.0116 (0.0652)	-0.0160 (0.0484)	-0.0132 (0.0420)	-0.0128 (0.0368)
Foreign Direct Investment	0.0980 (0.1524)	-0.2752 (0.1684)	-0.0908 (0.1004)	-0.0208 (0.0648)	-0.0236 (0.0468)	-0.0156 (0.0388)	-0.0120 (0.0352)	-0.0100 (0.0328)
In Mexico	0.1160 (0.1492)	-0.1728 (0.1592)	-0.0360 (0.0796)	-0.0004 (0.0464)	-0.0048 (0.0316)	-0.0024 (0.0256)	-0.0020 (0.0224)	-0.0016 (0.0204)
Abroad	-0.0384 (0.0776)	-0.1068 (0.0860)	-0.0416 (0.0540)	-0.0128 (0.0348)	-0.0124 (0.0260)	-0.0104 (0.0224)	-0.0092 (0.0204)	-0.0084 (0.0192)

Source: Own estimations with Banxico data.

Confidence level: (*) 90%.

Quarters	Shock to U.S. GDP							
	1	2	3	4	5	6	7	8
Financial Account	-0.0292 (0.3140)	0.5496 (0.3396)	0.0288 (0.1992)	-0.0012 (0.1348)	-0.0468 (0.1016)	-0.0576 (0.0884)	-0.0584 (0.0812)	-0.0540 (0.078)
Portfolio Investment	-0.4656 (0.3344)	0.5308 (0.3748)	-0.0216 (0.2336)	-0.0056 (0.1516)	-0.0408 (0.1160)	-0.0568 (0.1056)	-0.0672 (0.1008)	-0.0716 (0.1004)
Foreign Investors	-0.0944 (0.2656)	0.0120 (0.2880)	-0.0028 (0.1936)	-0.0652 (0.1484)	-0.0740 (0.1212)	-0.0800 (0.1092)	-0.0840 (0.1036)	-0.0848 (0.1012)
Public Sector	-0.2084 (0.2028)	0.1908 (0.2164)	0.0276 (0.1548)	-0.0348 (0.1204)	-0.0600 (0.1016)	-0.0688 (0.0928)	-0.0728 (0.0896)	-0.0736 (0.0888)
Securities Issued Abroad	-0.1984 (0.1556)	0.1848 (0.1600)	-0.0372 (0.0896)	0.0016 (0.0628)	-0.0180 (0.0516)	-0.0184 (0.0492)	-0.0208 (0.0484)	-0.0220 (0.0484)
Money Market	0.0504 (0.1232)	0.0456 (0.1344)	0.0240 (0.1116)	-0.0244 (0.0952)	-0.0492 (0.0804)	-0.0580 (0.0712)	-0.0604 (0.066)	-0.0588 (0.0628)
Private Sector	0.0888 (0.1308)	-0.1732 (0.1400)	-0.0280 (0.0904)	-0.0364 (0.0664)	-0.0260 (0.0524)	-0.0188 (0.0452)	-0.0180 (0.0404)	-0.0180 (0.0376)
Securities Issued Abroad	-0.0488 (0.0948)	-0.0400 (0.1004)	0.0176 (0.0652)	-0.0112 (0.0480)	-0.0168 (0.0376)	-0.0200 (0.0328)	-0.0220 (0.03)	-0.0228 (0.0284)
Stock and Money Market	0.1268* (0.0760)	-0.1456* (0.0788)	-0.0256 (0.0480)	-0.0192 (0.0316)	-0.0048 (0.0244)	0.0024 (0.0200)	0.0040 (0.0176)	0.0044 (0.0156)
Domestic Investors	-0.3256 (0.2544)	0.4816* (0.2856)	-0.0324 (0.1696)	0.0676 (0.1040)	0.0260 (0.0700)	0.0180 (0.0548)	0.0140 (0.0456)	0.0116 (0.0416)
Other Investment	0.4776* (0.2832)	-0.1848 (0.2952)	0.0816 (0.1756)	-0.0732 (0.1056)	-0.0476 (0.0832)	-0.0372 (0.0680)	-0.0276 (0.0592)	-0.0152 (0.0532)
Foreign Investors	0.2276 (0.2904)	-0.1172 (0.3000)	0.1088 (0.1648)	-0.0696 (0.1096)	-0.0256 (0.0804)	-0.0424 (0.0648)	-0.0396 (0.0584)	-0.0368 (0.0536)
Public Sector	0.2296 (0.1500)	-0.1616 (0.1600)	0.0380 (0.1004)	-0.0772 (0.0708)	-0.0328 (0.0552)	-0.0460 (0.0452)	-0.0368 (0.0416)	-0.0352 (0.0384)
Development Banks	0.0488 (0.0392)	-0.0072 (0.0416)	-0.0056 (0.0248)	-0.0112 (0.0180)	-0.0092 (0.0152)	-0.0076 (0.0140)	-0.0064 (0.0132)	-0.0056 (0.0128)
Non-Banking Sector	0.1444 (0.114)	-0.0180 (0.1236)	0.0800 (0.0708)	-0.0168 (0.0488)	-0.0060 (0.0356)	-0.0148 (0.0292)	-0.0168 (0.0264)	-0.0164 (0.0244)
Private Sector	0.0036 (0.2248)	0.0368 (0.2424)	0.0964 (0.1260)	-0.0016 (0.0912)	0.0132 (0.0680)	-0.0020 (0.0596)	-0.0036 (0.0540)	-0.0056 (0.0504)
Business Banking	-0.0456 (0.2188)	-0.0480 (0.2372)	0.0708 (0.1220)	-0.0376 (0.0852)	-0.0168 (0.0620)	-0.0260 (0.0528)	-0.0264 (0.0472)	-0.0240 (0.0436)
Non-Banking Sector	0.0584 (0.0696)	0.0712 (0.0688)	0.0396 (0.0400)	0.0340 (0.0280)	0.0304 (0.0244)	0.0260 (0.0224)	0.0224 (0.0216)	0.0192 (0.0208)
Domestic Investors	0.2908 (0.3104)	-0.0968 (0.3200)	0.0188 (0.1776)	-0.0176 (0.1148)	-0.0052 (0.0848)	0.0032 (0.0668)	0.0128 (0.0592)	0.0192 (0.0528)
Foreign Direct Investment	-0.0208 (0.1500)	0.2040 (0.1540)	0.0512 (0.1076)	0.0860 (0.0788)	0.0640 (0.0632)	0.0496 (0.0536)	0.0432 (0.0488)	0.0384 (0.0456)
In Mexico	-0.0496 (0.1456)	0.1288 (0.146)	0.0048 (0.0892)	0.0416 (0.0592)	0.0236 (0.0452)	0.0168 (0.0376)	0.0132 (0.0336)	0.0104 (0.0308)
Abroad	0.0236 (0.0764)	0.0660 (0.0776)	0.0224 (0.0560)	0.0328 (0.0436)	0.0292 (0.0356)	0.0280 (0.0308)	0.0276 (0.0284)	0.0272 (0.0268)

Source: Own estimations with Banxico data.

Confidence level: (*) 90%.

Quarters	Shock to Federal Funds Rate							
	1	2	3	4	5	6	7	8
Financial Account	-0.6128* (0.3052)	0.1104 (0.1720)	-0.1496 (0.1096)	-0.0772 (0.0784)	-0.0824 (0.0676)	-0.0704 (0.0648)	-0.0616 (0.0632)	-0.0520 (0.0624)
Portfolio Investment	-0.2752 (0.3280)	-0.1804 (0.1592)	-0.2652* (0.1032)	-0.2256* (0.0828)	-0.2092* (0.0772)	-0.1904* (0.0760)	-0.1716* (0.0756)	-0.1524* (0.0760)
Foreign Investors	-0.2216 (0.2560)	-0.1624 (0.1112)	-0.2172* (0.0896)	-0.2184* (0.0816)	-0.2044* (0.0796)	-0.1888* (0.0784)	-0.1724* (0.0780)	-0.1552* (0.0776)
Public Sector	-0.1732 (0.1996)	-0.1328 (0.0836)	-0.1756* (0.0700)	-0.1868* (0.0636)	-0.1764* (0.0624)	-0.1620* (0.0628)	-0.1468* (0.0632)	-0.1308* (0.0644)
Securities Issued Abroad	-0.1300 (0.1524)	-0.0900 (0.0652)	-0.1048* (0.0416)	-0.1008* (0.0344)	-0.0900* (0.0324)	-0.0796* (0.0324)	-0.0692* (0.0328)	-0.0592* (0.0332)
Money Market	-0.0360 (0.1220)	-0.0256 (0.0672)	-0.0528 (0.0556)	-0.0724 (0.0508)	-0.0788 (0.0492)	-0.0792 (0.0484)	-0.0764 (0.0480)	-0.0720 (0.0476)
Private Sector	0.0212 (0.1292)	-0.0264 (0.0560)	-0.0624 (0.0404)	-0.0568 (0.0356)	-0.0536 (0.0336)	-0.0512 (0.0324)	-0.0480 (0.0312)	-0.0440 (0.0300)
Securities Issued Abroad	-0.0024 (0.0936)	-0.0204 (0.0404)	-0.0448 (0.0296)	-0.0488* (0.0264)	-0.0484* (0.0252)	-0.0468* (0.0244)	-0.0448* (0.0240)	-0.0420* (0.0232)
Stock and Money Market	0.0356 (0.0744)	-0.0112 (0.0292)	-0.0152 (0.0204)	-0.0072 (0.0168)	-0.0064 (0.0156)	-0.0048 (0.0144)	-0.0040 (0.0140)	-0.0036 (0.0132)
Domestic Investors	-0.0152 (0.2552)	-0.0312 (0.1396)	-0.0060 (0.0680)	-0.0048 (0.0472)	0.0000 (0.0396)	0.0020 (0.0376)	0.0048 (0.0356)	0.0068 (0.0348)
Other Investment	-0.0576 (0.2748)	0.1828 (0.1356)	0.0596 (0.0852)	0.0692 (0.0580)	0.0632 (0.0516)	0.0564 (0.0480)	0.0524 (0.0464)	0.0476 (0.0448)
Foreign Investors	-0.3872 (0.2800)	0.2076 (0.1472)	-0.0300 (0.0908)	0.0328 (0.0624)	0.0096 (0.0520)	0.0032 (0.0472)	-0.0016 (0.0444)	-0.0072 (0.0432)
Public Sector	-0.0528 (0.1468)	0.0076 (0.0740)	-0.0404 (0.0480)	-0.0192 (0.0332)	-0.0208 (0.0312)	-0.0152 (0.0296)	-0.0132 (0.0296)	-0.0108 (0.0292)
Development Banks	-0.0148 (0.0384)	-0.0072 (0.0156)	-0.0144 (0.0116)	-0.0132 (0.0104)	-0.0112 (0.010)	-0.0096 (0.0104)	-0.0080 (0.0104)	-0.0064 (0.0108)
Non-Banking Sector	-0.0444 (0.1128)	0.0292 (0.0580)	-0.0176 (0.0352)	-0.0056 (0.0244)	-0.0052 (0.0224)	-0.0048 (0.0212)	-0.0036 (0.0208)	-0.0032 (0.0204)
Private Sector	-0.3284 (0.222)	0.1636 (0.1144)	-0.0040 (0.0696)	0.0344 (0.0520)	0.0148 (0.0448)	0.0064 (0.0432)	0.0008 (0.0420)	-0.0048 (0.0416)
Business Banking	-0.2636 (0.2148)	0.1088 (0.1080)	-0.0184 (0.0648)	0.0064 (0.0480)	-0.0040 (0.0420)	-0.0124 (0.0396)	-0.0148 (0.0384)	-0.0184 (0.0376)
Non-Banking Sector	-0.0644 (0.0672)	0.0360 (0.0296)	0.0264 (0.0196)	0.0224 (0.0164)	0.0200 (0.0156)	0.0176 (0.0156)	0.0148 (0.0156)	0.0128 (0.0160)
Domestic Investors	0.3488 (0.3056)	-0.0400 (0.1620)	0.1000 (0.0988)	0.0300 (0.0680)	0.0576 (0.0560)	0.0508 (0.0516)	0.0560 (0.0488)	0.0552 (0.0476)
Foreign Direct Investment	-0.1676 (0.1456)	-0.0260 (0.0704)	0.0628 (0.0536)	0.0644 (0.044)	0.0668 (0.0412)	0.0640 (0.0396)	0.0592 (0.0388)	0.0544 (0.0376)
In Mexico	-0.1420 (0.1440)	-0.0136 (0.0592)	0.0308 (0.0416)	0.0300 (0.0332)	0.0288 (0.0308)	0.0256 (0.0296)	0.0228 (0.0284)	0.0200 (0.0272)
Abroad	-0.0608 (0.0752)	-0.0020 (0.0360)	0.0332 (0.0276)	0.0372 (0.0240)	0.0372 (0.0228)	0.0360 (0.0220)	0.0340 (0.0220)	0.0316 (0.0216)

Source: Own estimations with Banxico data.

Confidence level: (*) 90%.

Quarters	Shock to Domestic GDP							
	1	2	3	4	5	6	7	8
Financial Account	0.6508*	0.1960	0.0516	0.0280	0.0020	-0.0068	-0.0112	-0.0116
	(0.2924)	(0.2740)	(0.1536)	(0.0824)	(0.0548)	(0.0460)	(0.0408)	(0.0388)
Portfolio Investment	0.5912*	0.0720	-0.0076	-0.0072	-0.0160	-0.0208	-0.0232	-0.0240
	(0.3180)	(0.3000)	(0.1704)	(0.0916)	(0.0612)	(0.0540)	(0.0500)	(0.0500)
Foreign Investors	0.3164	0.1724	0.0008	-0.0136	-0.0204	-0.0240	-0.0244	-0.0244
	(0.2528)	(0.2384)	(0.1164)	(0.0772)	(0.0608)	(0.0536)	(0.0516)	(0.0512)
Public Sector	0.2648	0.0744	0.0328	-0.0092	-0.0172	-0.0208	-0.0220	-0.0220
	(0.1920)	(0.1752)	(0.0924)	(0.0632)	(0.0504)	(0.0464)	(0.0452)	(0.0452)
Securities Issued Abroad	0.2020	-0.0860	0.0296	-0.0172	-0.0080	-0.0096	-0.0088	-0.0084
	(0.1460)	(0.1284)	(0.0676)	(0.0392)	(0.0292)	(0.0272)	(0.0260)	(0.0260)
Money Market	0.0744	0.1184	0.0564	0.0180	0.0004	-0.0080	-0.0116	-0.0128
	(0.1200)	(0.1148)	(0.0720)	(0.0548)	(0.0428)	(0.0364)	(0.0328)	(0.0312)
Private Sector	0.0944	0.1384	-0.0256	-0.0136	-0.0092	-0.0100	-0.0084	-0.0076
	(0.1260)	(0.1140)	(0.0592)	(0.0352)	(0.0256)	(0.0204)	(0.0176)	(0.0164)
Securities Issued Abroad	0.0332	0.1052	0.0100	0.0004	-0.0028	-0.0056	-0.0064	-0.0064
	(0.0928)	(0.0808)	(0.0420)	(0.0260)	(0.0188)	(0.0156)	(0.0140)	(0.0132)
Stock and Money Market	0.0540	0.0192	-0.0356	-0.0088	-0.0056	-0.0028	-0.0008	0.0000
	(0.0728)	(0.0652)	(0.0320)	(0.0180)	(0.0120)	(0.0092)	(0.0076)	(0.0068)
Domestic Investors	0.2096	-0.0248	0.0684	0.0076	0.0148	0.0072	0.0052	0.0044
	(0.2452)	(0.2420)	(0.1444)	(0.0716)	(0.0412)	(0.0288)	(0.0224)	(0.0192)
Other Investment	0.0672	0.2940	-0.0348	0.0284	-0.0004	-0.0032	-0.0016	-0.0012
	(0.2680)	(0.2512)	(0.1564)	(0.0816)	(0.0528)	(0.0396)	(0.0324)	(0.0276)
Foreign Investors	0.1744	0.2552	-0.0804	0.0408	-0.0108	-0.0036	-0.0068	-0.0076
	(0.2724)	(0.2504)	(0.1428)	(0.0804)	(0.0504)	(0.0368)	(0.0300)	(0.026)
Public Sector	0.2520	-0.0168	-0.0080	-0.0092	-0.0108	-0.0088	-0.0088	-0.0076
	(0.1424)	(0.1360)	(0.0804)	(0.0472)	(0.0324)	(0.0240)	(0.0212)	(0.0184)
Development Banks	-0.0448	0.0216	-0.0040	-0.0032	-0.0032	-0.0028	-0.0024	-0.0020
	(0.0380)	(0.0348)	(0.0168)	(0.0100)	(0.0080)	(0.0072)	(0.0064)	(0.0064)
Non-Banking Sector	0.1224	0.0956	-0.0164	0.0168	0.0008	0.0004	-0.0004	-0.0016
	(0.1096)	(0.1016)	(0.0596)	(0.0340)	(0.0212)	(0.0148)	(0.0128)	(0.0112)
Private Sector	-0.0348	0.2544	-0.0536	0.0424	0.0024	0.0040	0.0012	-0.0008
	(0.2212)	(0.2000)	(0.1116)	(0.0652)	(0.0416)	(0.0324)	(0.0272)	(0.0244)
Business Banking	0.0984	0.2204	-0.0604	0.0300	-0.0028	-0.0040	-0.0040	-0.0060
	(0.2140)	(0.1960)	(0.1076)	(0.0604)	(0.0388)	(0.0288)	(0.0236)	(0.0204)
Non-Banking Sector	-0.1492*	0.0220	0.0100	0.0076	0.0068	0.0060	0.0052	0.0044
	(0.0648)	(0.0572)	(0.0296)	(0.0164)	(0.0132)	(0.0116)	(0.0108)	(0.0104)
Domestic Investors	-0.1244	0.0196	0.0432	-0.0076	0.0084	0.0036	0.0084	0.0088
	(0.2948)	(0.2784)	(0.1716)	(0.0916)	(0.0600)	(0.0416)	(0.0336)	(0.0280)
Foreign Direct Investment	-0.0328	-0.2168*	0.0280	0.0180	0.0192	0.0208	0.0180	0.0164
	(0.1444)	(0.1256)	(0.0752)	(0.0452)	(0.0316)	(0.0256)	(0.0228)	(0.0216)
In Mexico	-0.1376	-0.1456	0.0316	0.0080	0.0104	0.0084	0.0068	0.0056
	(0.1404)	(0.1212)	(0.0620)	(0.0344)	(0.0232)	(0.018)	(0.0160)	(0.0148)
Abroad	0.1104	-0.0476	0.0108	0.0104	0.0084	0.0084	0.0080	0.0076
	(0.0740)	(0.0652)	(0.0356)	(0.0232)	(0.0176)	(0.0148)	(0.0132)	(0.0124)

Source: Own estimations with Banxico data.

Confidence level: (*) 90%.

Quarters	Shock to Domestic Interest Rate							
	1	2	3	4	5	6	7	8
Financial Account	0.6664*	-0.4364*	-0.0096	-0.0596	-0.0308	-0.0212	-0.0120	-0.0068
	(0.2776)	(0.2600)	(0.2004)	(0.1456)	(0.1120)	(0.0940)	(0.0848)	(0.0804)
Portfolio Investment	0.1000	-0.1284	0.1884	0.1368	0.1120	0.0896	0.0720	0.0564
	(0.3036)	(0.2728)	(0.2032)	(0.1572)	(0.1240)	(0.1084)	(0.1016)	(0.1000)
Foreign Investors	0.1232	0.0520	0.0568	0.0956	0.0840	0.0704	0.0568	0.0444
	(0.2508)	(0.2196)	(0.1936)	(0.1648)	(0.1372)	(0.1200)	(0.1116)	(0.1084)
Public Sector	0.1400	-0.0220	0.0308	0.0568	0.0596	0.0508	0.0412	0.0320
	(0.1892)	(0.1624)	(0.1512)	(0.1288)	(0.1084)	(0.0964)	(0.0916)	(0.0908)
Securities Issued Abroad	-0.0352	0.0660	0.0976	0.0764	0.0728	0.0584	0.0476	0.0380
	(0.1444)	(0.1180)	(0.0804)	(0.0636)	(0.0528)	(0.0496)	(0.0484)	(0.0488)
Money Market	0.1668	0.0028	-0.0728	-0.0588	-0.0420	-0.0308	-0.0228	-0.0176
	(0.1172)	(0.1128)	(0.1136)	(0.1056)	(0.0908)	(0.0788)	(0.0704)	(0.0652)
Private Sector	-0.0808	0.0412	0.0040	0.0356	0.0308	0.0260	0.0224	0.0184
	(0.1248)	(0.1008)	(0.0872)	(0.0708)	(0.0568)	(0.0464)	(0.0396)	(0.0356)
Securities Issued Abroad	-0.0416	0.0100	-0.0180	0.0056	0.0088	0.0092	0.0092	0.0084
	(0.0896)	(0.0752)	(0.0652)	(0.0540)	(0.0432)	(0.0356)	(0.0312)	(0.0284)
Stock and Money Market	-0.0592	0.0344	0.0168	0.0264	0.0192	0.0152	0.0120	0.0096
	(0.0720)	(0.0568)	(0.0424)	(0.0320)	(0.0248)	(0.0196)	(0.0164)	(0.0144)
Domestic Investors	-0.0480	-0.0940	0.1120	0.0108	0.0248	0.0184	0.0164	0.0144
	(0.2380)	(0.2192)	(0.1276)	(0.0868)	(0.0620)	(0.0508)	(0.0432)	(0.0388)
Other Investment	0.7196*	-0.3776	-0.2732	-0.1424	-0.1428	-0.1000	-0.0768	-0.0588
	(0.2584)	(0.2364)	(0.1824)	(0.1156)	(0.088)	(0.0724)	(0.0636)	(0.0568)
Foreign Investors	0.4140	-0.2896	-0.1384	-0.1056	-0.1052	-0.0784	-0.0664	-0.0536
	(0.2676)	(0.2292)	(0.1460)	(0.1048)	(0.0788)	(0.0660)	(0.0580)	(0.0532)
Public Sector	0.2784*	-0.1212	-0.0260	-0.0400	-0.0380	-0.0372	-0.0344	-0.0312
	(0.1372)	(0.1252)	(0.0820)	(0.0636)	(0.0516)	(0.0456)	(0.0424)	(0.0396)
Development Banks	0.0848*	-0.0140	-0.0080	0.0016	0.0036	0.0040	0.0040	0.0036
	(0.0364)	(0.0324)	(0.0264)	(0.0216)	(0.0180)	(0.0160)	(0.0152)	(0.0148)
Non-Banking Sector	0.1260	0.0220	-0.0432	-0.0084	-0.0260	-0.0236	-0.0228	-0.0212
	(0.1072)	(0.0924)	(0.0592)	(0.0468)	(0.0368)	(0.032)	(0.0284)	(0.0260)
Private Sector	0.1192	-0.1404	-0.0928	-0.0512	-0.0520	-0.0328	-0.0244	-0.0172
	(0.2148)	(0.1812)	(0.1140)	(0.0912)	(0.0724)	(0.0640)	(0.0580)	(0.0544)
Business Banking	0.0680	-0.1356	-0.1252	-0.0632	-0.0652	-0.0436	-0.0328	-0.0244
	(0.2112)	(0.1772)	(0.1108)	(0.0860)	(0.0668)	(0.0568)	(0.0504)	(0.0456)
Non-Banking Sector	0.0356	0.0032	0.0232	0.0164	0.0116	0.0096	0.0080	0.0072
	(0.0640)	(0.0512)	(0.0388)	(0.0304)	(0.0260)	(0.0236)	(0.0224)	(0.0216)
Domestic Investors	0.3152	-0.1484	-0.0452	-0.0652	-0.0188	-0.0180	-0.0080	-0.0052
	(0.2912)	(0.2564)	(0.1616)	(0.1208)	(0.0896)	(0.0736)	(0.0644)	(0.0568)
Foreign Direct Investment	-0.1408	0.0136	0.0608	-0.0084	-0.0028	-0.0016	-0.0008	0.0016
	(0.1424)	(0.1152)	(0.1032)	(0.0844)	(0.0684)	(0.0572)	(0.0496)	(0.0452)
In Mexico	-0.1476	0.0196	0.0416	-0.0116	-0.0080	-0.0088	-0.0084	-0.0068
	(0.1360)	(0.1100)	(0.0868)	(0.0652)	(0.0492)	(0.0396)	(0.0336)	(0.0300)
Abroad	0.0056	0.0068	0.0176	-0.0008	0.0020	0.0044	0.0060	0.0072
	(0.0724)	(0.0596)	(0.0560)	(0.0484)	(0.0404)	(0.0344)	(0.0304)	(0.0280)

Source: Own estimations with Banxico data.

Confidence level: (*) 90%.

Quarters	Domestic Inflation Shock							
	1	2	3	4	5	6	7	8
Financial Account	-0.2960 (0.2644)	0.1144 (0.1348)	0.0084 (0.0928)	0.0324 (0.0708)	0.0212 (0.0580)	0.0144 (0.0500)	0.0072 (0.0452)	0.0016 (0.0424)
Portfolio Investment	0.1680 (0.3040)	0.1316 (0.1456)	0.0520 (0.0980)	0.0388 (0.0784)	0.0240 (0.0652)	0.0116 (0.0576)	0.0012 (0.0532)	-0.0068 (0.0520)
Foreign Investors	0.0704 (0.2468)	0.1092 (0.1048)	0.0748 (0.0904)	0.0440 (0.0788)	0.0252 (0.0684)	0.0100 (0.0608)	-0.0016 (0.0560)	-0.0100 (0.0536)
Public Sector	0.1928 (0.1856)	0.1168 (0.0824)	0.0712 (0.0728)	0.0444 (0.0644)	0.0256 (0.0564)	0.0124 (0.0508)	0.0028 (0.0480)	-0.0048 (0.0468)
Securities Issued Abroad	0.0584 (0.1424)	0.0764 (0.0604)	0.0344 (0.0380)	0.0256 (0.0312)	0.0136 (0.0268)	0.0068 (0.0252)	0.0016 (0.0244)	-0.0020 (0.0248)
Money Market	0.1636 (0.1156)	0.0944 (0.0672)	0.0664 (0.0600)	0.0464 (0.0560)	0.0324 (0.0504)	0.0224 (0.0456)	0.0152 (0.0420)	0.0096 (0.0392)
Private Sector	-0.1256 (0.1212)	0.0292 (0.0572)	0.0428 (0.0416)	0.0232 (0.0328)	0.0184 (0.0268)	0.0116 (0.0224)	0.0060 (0.0196)	0.0020 (0.0176)
Securities Issued Abroad	-0.0668 (0.0892)	0.0160 (0.0388)	0.0272 (0.0300)	0.0188 (0.0248)	0.0136 (0.0208)	0.0084 (0.0176)	0.0040 (0.0156)	0.0008 (0.0140)
Stock and Money Market	-0.0652 (0.0704)	0.0260 (0.0316)	0.0152 (0.0208)	0.0056 (0.0160)	0.0056 (0.0124)	0.0032 (0.0100)	0.0024 (0.0084)	0.0020 (0.0072)
Domestic Investors	-0.0184 (0.2376)	0.0268 (0.1348)	-0.0148 (0.0636)	0.0108 (0.0440)	0.0072 (0.0324)	0.0068 (0.0268)	0.0060 (0.0228)	0.0048 (0.0204)
Other Investment	-0.5176* (0.2480)	0.0320 (0.1228)	-0.0080 (0.0880)	-0.0184 (0.0556)	-0.0016 (0.0448)	-0.0048 (0.0376)	-0.0032 (0.0332)	-0.0024 (0.0292)
Foreign Investors	-0.6508* (0.2588)	0.0832 (0.1404)	-0.0856 (0.0880)	-0.0236 (0.0568)	-0.0200 (0.0440)	-0.0172 (0.0348)	-0.0120 (0.0304)	-0.0108 (0.0272)
Public Sector	-0.4904* (0.1284)	0.0876 (0.0852)	-0.1092* (0.0608)	-0.0240 (0.0408)	-0.0412 (0.0328)	-0.0256 (0.0260)	-0.0236 (0.0232)	-0.0188 (0.0208)
Development Banks	0.0044 (0.0348)	0.0152 (0.0152)	0.0108 (0.0128)	0.0060 (0.0104)	0.0036 (0.0088)	0.0024 (0.0080)	0.0012 (0.0076)	0.0004 (0.0072)
Non-Banking Sector	-0.4196* (0.1008)	0.0412 (0.0688)	-0.0644 (0.0448)	-0.0336 (0.0296)	-0.0224 (0.0216)	-0.0200 (0.0172)	-0.0144 (0.0148)	-0.0120 (0.0128)
Private Sector	-0.1448 (0.2100)	0.0168 (0.0988)	0.0056 (0.0560)	0.0120 (0.0456)	0.0140 (0.0372)	0.0112 (0.0328)	0.0096 (0.0300)	0.0076 (0.0276)
Business Banking	-0.1692 (0.2048)	0.0216 (0.0976)	0.0052 (0.0544)	0.0072 (0.0424)	0.0096 (0.0340)	0.0052 (0.0292)	0.0036 (0.0260)	0.0012 (0.0232)
Non-Banking Sector	0.0144 (0.0632)	0.0024 (0.0256)	0.0004 (0.0184)	0.0036 (0.0152)	0.0052 (0.0132)	0.0056 (0.0124)	0.0060 (0.0116)	0.0060 (0.0112)
Domestic Investors	0.0980 (0.2848)	-0.0140 (0.1468)	0.0368 (0.0812)	0.0108 (0.0588)	0.0120 (0.0444)	0.0076 (0.0368)	0.0076 (0.0320)	0.0072 (0.0284)
Foreign Direct Investment	0.0880 (0.1376)	-0.0220 (0.0572)	-0.0228 (0.0504)	-0.0012 (0.0412)	0.0012 (0.0348)	0.0052 (0.0296)	0.0080 (0.0256)	0.0092 (0.0232)
In Mexico	0.0776 (0.1348)	-0.0416 (0.0540)	-0.0332 (0.0416)	-0.0136 (0.0316)	-0.0092 (0.0252)	-0.0048 (0.0208)	-0.0020 (0.0176)	0.0000 (0.0156)
Abroad	-0.0112 (0.0704)	0.0048 (0.0320)	0.0076 (0.0280)	0.0124 (0.0244)	0.0120 (0.0212)	0.0112 (0.0184)	0.0104 (0.0164)	0.0096 (0.0148)

Source: Own estimations with Banxico data.

Confidence level: (*) 90%.

Quarters	Exchange Rate Shock							
	1	2	3	4	5	6	7	8
Financial Account	-0.3872 (0.2576)	-0.2912 (0.2376)	-0.1304 (0.1476)	-0.0704 (0.0824)	-0.0688 (0.0576)	-0.0592 (0.0496)	-0.0536 (0.0460)	-0.0480 (0.0448)
Portfolio Investment	-0.1668 (0.3016)	-0.4972* (0.2612)	0.0128 (0.1660)	-0.0120 (0.0936)	-0.0296 (0.0656)	-0.0452 (0.0572)	-0.0536 (0.0544)	-0.0592 (0.0540)
Foreign Investors	-0.3880 (0.2396)	-0.0316 (0.2020)	-0.0748 (0.1224)	-0.0204 (0.0780)	-0.0264 (0.0632)	-0.0384 (0.0576)	-0.0472 (0.0552)	-0.0536 (0.0548)
Public Sector	-0.2756 (0.1832)	-0.0620 (0.1544)	-0.0692 (0.0996)	-0.0544 (0.0628)	-0.0444 (0.0524)	-0.0504 (0.0492)	-0.0560 (0.0484)	-0.0592 (0.0488)
Securities Issued Abroad	0.1512 (0.1408)	-0.0416 (0.1164)	0.0112 (0.0656)	-0.0216 (0.0380)	-0.0136 (0.0284)	-0.0224 (0.0260)	-0.0260 (0.0256)	-0.0284 (0.0256)
Money Market	-0.3496* (0.1084)	-0.0932 (0.1012)	-0.0884 (0.0756)	-0.0592 (0.0548)	-0.0412 (0.0472)	-0.0348 (0.0428)	-0.0332 (0.0408)	-0.0332 (0.0400)
Private Sector	-0.1504 (0.1176)	0.0268 (0.0924)	-0.0308 (0.0556)	0.0176 (0.0336)	0.0100 (0.0252)	0.0016 (0.0212)	-0.0020 (0.0192)	-0.0060 (0.0180)
Securities Issued Abroad	-0.1988* (0.0848)	0.0116 (0.0692)	-0.0232 (0.0412)	0.0016 (0.0256)	0.0012 (0.0196)	-0.0028 (0.0172)	-0.0056 (0.0156)	-0.0080 (0.0152)
Stock and Money Market	0.0308 (0.0688)	0.0048 (0.0556)	-0.0056 (0.0320)	0.0172 (0.0184)	0.0060 (0.0120)	0.0040 (0.0096)	0.0024 (0.0084)	0.0012 (0.0080)
Domestic Investors	0.3840 (0.2352)	-0.5128* (0.2056)	0.1364 (0.1384)	-0.0384 (0.0868)	-0.0104 (0.0516)	-0.0100 (0.0340)	-0.0092 (0.0268)	-0.0072 (0.0232)
Other Investment	-0.396* (0.2344)	0.2244 (0.2124)	-0.2580* (0.1380)	-0.0392 (0.0868)	-0.0448 (0.0524)	-0.0292 (0.0396)	-0.0136 (0.0340)	-0.0060 (0.0308)
Foreign Investors	-0.1396 (0.2484)	0.0052 (0.2196)	-0.1160 (0.1264)	0.0260 (0.0736)	-0.0196 (0.0452)	-0.0016 (0.0356)	-0.0020 (0.0304)	-0.0004 (0.0280)
Public Sector	-0.0416 (0.1196)	0.0324 (0.1216)	-0.1176 (0.0768)	-0.0088 (0.0464)	-0.0408 (0.0324)	-0.0232 (0.0256)	-0.0244 (0.0232)	-0.0192 (0.0212)
Development Banks	-0.0192 (0.0348)	-0.0224 (0.0308)	-0.0216 (0.0180)	-0.0080 (0.0104)	-0.0072 (0.0084)	-0.0068 (0.008)	-0.0064 (0.0076)	-0.0060 (0.0076)
Non-Banking Sector	-0.0800 (0.0936)	0.1120 (0.0900)	-0.1084* (0.0588)	0.0028 (0.0376)	-0.0204 (0.0240)	-0.0148 (0.0176)	-0.0116 (0.0148)	-0.0104 (0.0132)
Private Sector	-0.0648 (0.2040)	-0.0272 (0.1724)	-0.0264 (0.098)	0.0408 (0.0584)	0.0116 (0.0392)	0.0192 (0.0320)	0.0160 (0.0288)	0.0144 (0.0268)
Business Banking	-0.0828 (0.2072)	-0.0016 (0.1668)	-0.0536 (0.0928)	0.0292 (0.0552)	-0.0032 (0.0352)	0.0044 (0.0288)	0.0040 (0.0252)	0.0024 (0.0232)
Non-Banking Sector	0.0152 (0.0612)	-0.0276 (0.0504)	0.0216 (0.0308)	0.0192 (0.0176)	0.0152 (0.0128)	0.0140 (0.0116)	0.0128 (0.0112)	0.0120 (0.0108)
Domestic Investors	-0.2352 (0.2816)	0.2348 (0.2456)	-0.1596 (0.1544)	-0.0352 (0.0876)	-0.0448 (0.0556)	-0.0204 (0.0416)	-0.0160 (0.0344)	-0.0076 (0.0308)
Foreign Direct Investment	0.1088 (0.1368)	0.0204 (0.1092)	0.1240* (0.0732)	0.0176 (0.0484)	0.0128 (0.0348)	0.0140 (0.0284)	0.0136 (0.0252)	0.0152 (0.0236)
In Mexico	-0.0208 (0.1324)	-0.0152 (0.1048)	0.0792 (0.0616)	-0.0008 (0.0368)	0.0052 (0.0244)	0.0060 (0.0196)	0.0068 (0.0172)	0.0076 (0.016)
Abroad	0.1064 (0.0704)	0.0428 (0.0556)	0.0488 (0.0380)	0.0136 (0.0260)	0.0088 (0.0208)	0.0092 (0.0180)	0.0100 (0.0164)	0.0108 (0.0160)

Source: Own estimations with Banxico data.

Confidence level: (*) 90%.