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Impacts of Fed's Decisions on Emerging Countries: An Empirical Analysis & Investment Solution

**Bachelor Project submitted for the degree of
Bachelor of Science HES in International Business Management**

by

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Declaration

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Geneva, August 23rd

Simon AMIGO WEIDEMANN

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Executive Summary

On July 13th, 2019, the Fed decided to reduce its interest rates by 25 basis points. Its first since October 2008. A decision that could be thought of as a good thing for the emerging countries' economies. Indeed, according to economic theories and history, they would benefit from a significant breath of fresh air. Legend has it that the Fed's will have a significant impact on emerging countries, whether positive or negative.

One could, therefore, question why did Argentina's stock exchange – just a few weeks after the so-called beneficial decision of the US central bank – lose 48% in one trading session. The second-largest stock market sell-off in history after Sri Lanka's civil war outbreak in 1989 (-61.7%). Obviously, the reasons for this Argentine air gap have endogenous roots, mostly political, but it is then interesting to investigate if the Fed's decisions impact the emerging regions of the world. Do this relation still exists today? Have emerging countries emancipated themselves from the American game? And finally, depending on the answers, what would be the most efficient ways to invest in these regions, rationally and professionally.

This paper, therefore, tries to demonstrate whether the impact on emerging markets of the Fed's decisions on rates still exists. More precisely, the approach here is to investigate the reactions of emerging currencies against the US dollar when interest rates vary. Through a statistical analysis over two periods (1997-2008 and 2008-2019), using tools such as linear regression and correlation observation, and adding the time-lag component, interesting results emerge. Indeed, depending on the period chosen, they are diametrically opposed. As things stand, the study shows a causal relationship and a correlation between interest rate decisions and emerging currencies. However, the change in US rates does not explain all the variation in the analysed currencies. The economic cycle in which the analysis was made must also be considered, it is likely that the latter is a significant component. The addition of variables would improve the performed statistical model, thus allowing a better understanding of their behaviour and so facilitate the investment process.

On this basis, adjusted with informed insights and experience of professionals, but also with the attempt to reduce cognitive biases to a minimum, this paper concludes with an investment solution. More specifically, a quantitative stock selection tool based on the mixed implementation of fundamental and technical analysis, which now shows encouraging results.

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Abbreviations and acronyms

(in alphabetical order)

CEPII	Centre d'Etudes Prospectives et d'Informations Internationales
GDP	Gross Domestic Product
IMF	The International Monetary Fund
MTD	Month-to-Date
OECD	Organisation for Economic Co-operation and Development
PE ratio	Price-to-Earnings ratio
RSI	Relative Strength Index
S&P 1200	Standard & Poor's 1200
S&P 500	Standard & Poor's 500
WACC	Weighted Average Cost of Capital
YTM	Year-to-date

1. Introduction

Does the Fed's decisions impact emerging markets currencies? The current empirical literature seems to show that, indeed, when the Fed decides to move rates, it comes with an emerging market's reaction.

This first section will provide an overview on emerging markets reacting to Fed's decisions. Then, for a global understanding, it will present the Fed's background with some of its essential aspects, define what emerging markets are and finally contextualize current economic situation.

1.1 Literature review

In order not to deprive oneself of a voluminous and quality literature, it is necessary to understand that a significant in- or outflow of capital result a reaction of the value of a country's currency. So basically, the focus of this paper is on, if or if not, emerging currencies react to the Fed's rate, or, by extension, on if a variation in the US rate changes the geographical allocation of capital.

Some studies support the view that US rates have a role to play in the behaviour of emerging markets. For example, Fernandez-Arias (1996) states that low interest rates can, for a short period of time, improve a country's creditworthiness by lowering its borrowing rates, thereby creating an increase in demand for foreign capital. In another context, Taylor & Sarno (1997) write that the most affected asset class remains the emerging bonds, in the sense that Fed decisions are a significant factor in short-term investment flows to emerging economies.

In a more behavioural aspect, Koepke (2015) shows that capital flows to emerging markets are impacted by changes in market expectations. The study provides strong evidence that the unexpected is a key factor in an investor's decision to invest or withdraw and that the application of the decision itself – to raise or lower rates – does not cause a change in capital flows to emerging markets. This raises the question of how the Fed, by virtue of its primary role as an economic stabilizer, should communicate to minimize the consequences on capital flows to emerging countries and therefore by extension on their currencies as well.

Conversely, some studies have failed to provide evidence that capital flows from emerging markets are affected by US rates, but the conclusion allowed to drift to new suggestions – Hernandez, Mellado & Valdes (2001). They argue that the impact on emerging markets is only felt over a very short period after the decision. This observation reinforces the importance of the unexpected component, especially since evidence is brought that the reaction of emerging economies is weak in the long term, because market anticipation cancels out the surprise effect. So, this paper will investigate how the emerging currencies react to a Fed's decision over time, by implementing 0-, 3-, 6-, 9- and 12-months time-lags.

The next section looks at the Fed's historical foundations, its role in the global economy and the fears that accompany this powerful institution.

1.2 US Federal Reserve

1.2.1 Fed's history

The Federal Reserve System or often shortened Fed is the central bank of the United States. In 1791, the US government created the First Bank of the United States. For twenty-five years was this bank then responsible for the issuance of money and the regulation of credit. In 1816, after the war against the United Kingdom from 1812 to 1815, the bank was replaced by the Second Bank of the US, which was supposed to put an end to the galloping inflation that hit the country after the war. In 1830, President Andrew Jackson, who wanted to rebuild the banking and the monetary systems, dissolved the Second Bank. Since then, for several decades, the United States has had to contend with a complex monetary system that was based on barter between many regional currencies, known as "green papers." This decentralized situation made any regulation impossible, provoking numerous bankruptcies and crises.

In 1907, happened one of the biggest banking crises in the US's financial history. This led to the foundation of the National Monetary Commission, which was asked to define and implement a banking and monetary reform. This commission responded to the Congress and was led at that time by Republican Senator Nelson Aldrich. The report from this commission laid the foundation for the Federal Reserve Act that was passed by Congress on December 23, 1913 and promulgated by President Woodrow Wilson the same day. Then, the Congress set three monetary policy goals in the Owen-Glass Act: full employment, price stability,

and moderate long-term interest rates. It is often referred to the first two factors grouped under the term "dual purpose" or "dual mandate" of the Fed. Until today, in addition with preventing financial and banking crises, these objectives still are the sole purpose of the Fed.

1.2.2 Fed's structure & functioning

The institution publishes numerous reports, such as the beige book, a summary of the economic conditions in each state and in each region of the United States. The Federal Reserve consists of a board of governors, the Federal Open Market Committee (FOMC), twelve regional banks (Federal Reserve Banks), several banks, and some advisory boards. The FOMC Committee is responsible for the Fed's monetary policy. Today, this committee is made up of the seven members of the board of governors and the twelve presidents of regional banks, where only five have the right to vote at any given time.

Even though the Fed is a Federal institution, its structure is quite complicated and tries to meet both the public's interest and the banks. In the United States, all commercial banks licensed to operate in more than one state are required to be claim membership to the Federal Reserve in the region where their headquarters are located. These commercial banks own shares of their regional central bank, which allows to participate in the election of the Federal Reserve's board members.

In all cases, the Fed's authority is defined by the US Congress and the latter can exercise its congressional oversight right over the System. However, the members of the Board of Governors, including the President and Vice-President of the Fed, are appointed by the US President and confirmed by the Senate. It is also the government that appoints the bank's senior officials, sets their salaries, bonuses and other compensations. It is the federal government that receives the Fed's profits, except for a 6% dividend that is paid to the banks member of the system.

The federal government places the new institution under its authority by appointing the Secretary of the Treasury (Minister of Finance) and the Controller of the Currency as members, ending, the era of regional finance. Indeed, the purpose of the new organization is to promote currency management and the economy throughout the country, to allow the discounting of commercial paper and to monitor the operation of US banks.

This system proved its worth during the 1929 crash: the solution envisaged by the New York Federal Reserve, a monetary stimulus, would have made it possible to emerge from the crisis. However, a serious reorganization was required and in 1935, the Federal Reserve Board became the Governor's Board. The new body acquires control over the regional banks through the Banking Act. The Federal Open Market Committee (FOMC) was also created. This committee is responsible for overseeing national monetary policy and for regulating and controlling interest rates.

In theory, these measures ensure that the Fed stays independent for monetary policy. In practice, the Fed is continuously under pressure. And its independence is often disputed. In 1978, the Humphrey-Hawkins Full Employment Act redefined the Fed's mandate in terms of its even broader autonomy.

Today, the Federal Reserve or the US central bank is financially independent. It receives no budget from either the government or the US Congress. The Fed finances itself through the interest of public loans; commissions on bank deposit benefits and interest on foreign exchange. This is how the Fed manages to pay hundreds of millions of dollars to its shareholders and more billions of dollars of surplus to the US Treasury.

1.2.3 Fed's roles

The role of the Federal Reserve has evolved since then, and today this institution generally acts as an independent or independent institution that does not depend on other levels of government (as in many other countries). Like all central banks, the Fed is responsible for developing, implementing, and controlling the state's monetary policy. Also, the Fed has the important responsibility for maintaining full employment conditions (generally considered to be around 4 to 5 % unemployment) while keeping inflation at an acceptable level (usually below 2%). It is also responsible for maintaining the stability of the country's financial system, overseeing and regulating the banking system, providing financial services to deposit-taking institutions, the Federal government, and foreign financial institutions. A peculiarity of the US monetary system is that it is not the central bank (Fed) but the Federal Treasury Department that creates the currency, unlike most other countries.

Although, all these roles may sound simple in theory, it shows to be a delicate balancing act when it comes to practice. Indeed, to achieve its monetary policy

objectives, the Federal Reserve has in its possession four tools, it can use at its discretion (see figure 1).

1.2.4 Fed's toolbox

The Fed uses four tools to reach its monetary policy objectives: reserve requirements, the discount rate, interest on reserves and open market operations.

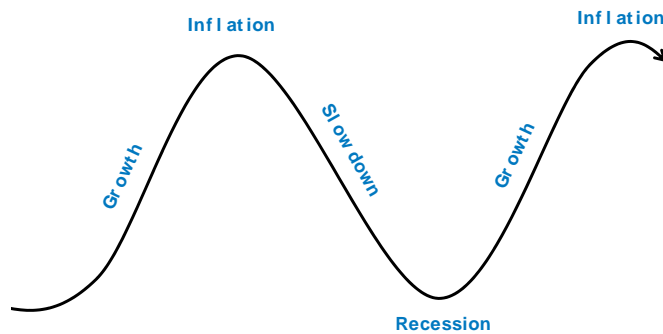
The most used and recent tool was given to the Fed after the 2008 financial crisis. Interest on reserves is what is paid to banks when there is an excess of reserves. Banks are required, by the Fed, to hold a certain percentage of their deposits, so when this percentage is higher than that required by the Fed, the banks receive interest on the surplus. So, depending on the rate decided by the Fed on reserves, banks have more or less incentive to keep or lend their reserves. Thus, by managing this rate, the Fed can increase or reduce the circulation of money.

Totally linked to the previous tool, reserve requirements set the deposit limit that banks must keep. Thus, a decrease in the limit on the Fed's part would mean the implementation of an expansionary policy. The opposite would logically explain why the Fed wants to introduce a more restrictive policy.

The discount rate is the interest rate at which Reserve Banks lends to commercial banks. Once again, by deciding at what rate the Fed wants commercial banks to borrow from it in the short term, it decides its monetary policy: a low rate will tend to see loan demand increase, demonstrating that the Fed's choice to expand its monetary policy. A higher rate would mean the opposite.

Finally, the open market operations tool is very simply used to buy or sell government financial instruments, always according to the same monetary policy management model.

Figure 1: Economic cycles



Growth:

- Growth Domestic Product (GDP) growth rate raises
- the Fed lowers interest rates, reserve requirements or acquires treasury bonds.
- Growing level of investments
- Unemployment rate decreases

Inflation:

- Abnormal GDP growth rates
- Borrowing becomes too cheap
- General price increase
- Unemployment rate decreases

Slow down:

- GDP growth rate stabilizes
- the Fed raises interest rates, reserve requirements or sells treasury bonds.
- Reduced investments
- Borrowing becomes more expensive

Recession:

- GDP growth rates decline substantially
- Borrowing becomes too expensive
- General price decrease
- Unemployment rate increases

1.2.5 Fed's independence

Due to its role, the Fed is supposed to be independent and should act, above all, for the better of the US economy. However, for some time now and more recently Fed's independence is disputed.

For example, some authors have, in the past, questioned its independence. Indeed, some developed the thesis that the Fed would, in fact, be controlled by the leading American private banks that could effectively defend their own interests to the detriment of the general interest. The Fed has also recently been questioned in several cases in which it is suspected of having been unresponsive to questionable practices by certain major banks. It did not launch an investigation against Goldman Sachs even though the information had been sent to it on a contentious operation carried out at the beginning of 2012. The Fed would not have acted on a recommendation from its 2009 team to conduct an in-depth review of the London branch of JP Morgan bank, while it found itself in 2012 at the heart of the financial scandal known as the "London whale."

More recently, concern about the Fed's independence has never been so acute. Analysts, economists, and academics have been worried about this independence, which they believe is threatened by the growing political pressure exerted by Donald Trump. In fact, the Republican President has consistently criticized the institution since his election. In particular, he criticizes it for maintaining interest rates that he considers too high.

Relatively recent, the independence of the major central banks was introduced in the aftermath of the oil shocks of the 1970s. Unelected, central bankers are free to take unpopular measures to avoid price hikes and limit excesses in the financial system. This freedom is essential to establish their credibility with the markets; otherwise their measures won't work. A famous example remains the German Bundesbank after World War II, which then obeyed to politics, massively printed money to pay off the war debt, which triggered severe hyperinflation for the Germans.

The following section introduces the definition of what emerging markets are and what characterises them.

1.3 Emerging markets

1.3.1 Definition

What is emergence? Or what is an emerging country?

Simply put, emergence is a concept to describe the growing attractiveness of developing countries with a middle-income population. With growth starting in its own financial market, until it becomes big enough to be considered as an emerging economy, to, finally, mature and become a developed country.

Although there is no unanimously accepted definition, the emergence concept contains the following three elements according to the CEPII¹ definition:

- a level of income below the OECD² average
- sustained economic growth accompanied by increasing openness over a relatively long period
- attractiveness for international investors

Thus, this paper will define a country as emerging with the following criteria. To understand the emergence and capacity of a country to emerge, it is necessary to highlight the competitive capacity of its economy and being a member of the OECD, is not enough to be categorized as a developed country.

An emerging country must be able to sustain rapid economic growth over a significant period without jeopardizing its balance or stability. Indeed, many candidates in the past have demonstrated legitimate growth in a short period of time but have nevertheless found it impossible to replicate this development capacity in the medium or long term. This has often led to a crash in the value of the currency, periods of inflation and even hyperinflation. In the recent weeks, Argentina has been the perfect example of this situation, a real case study.

The emergence therefore highlights the competitive capacity of the economy. In short, it must apply the foundations of capitalist theory, which states that when in a liberal economy, a society or, here, a country, it must know how to allocate and use its resources as long as open and free, market and competition, without deception nor fraud, is possible.

¹ Centre d'Etudes Prospectives et d'Informations Internationales

² Organisation for Economic Cooperation and Development

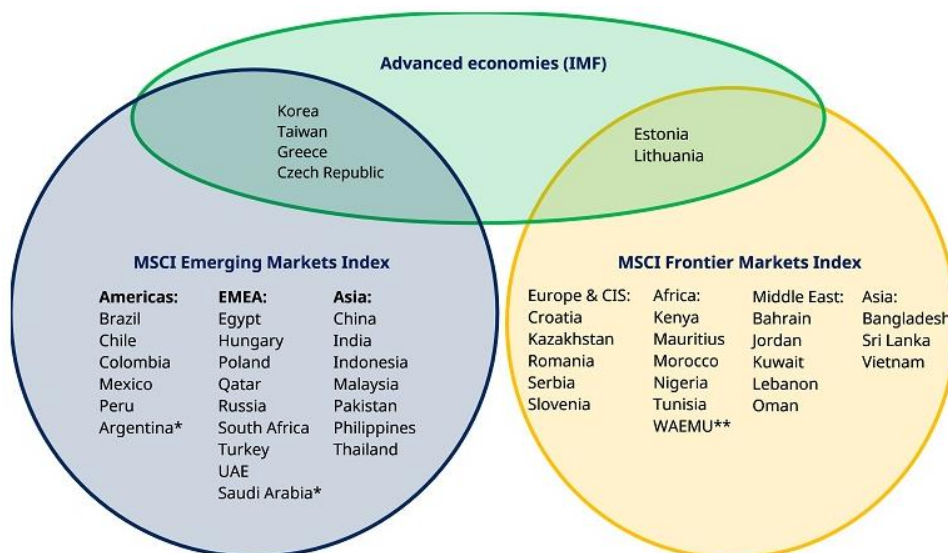
1.3.2 Investing in emerging markets

Investing is something one can do it anywhere in the world. The choice of investment products that make it possible to invest in the most diverse sectors, companies, themes, and countries of interest are vast. Emerging markets offer particularly attractive investment opportunities. But what exactly is it about? What are their particularities for investors?

Before making an investment in this area and including emerging market securities in your portfolio, it is therefore recommended to get a first impression of this sector. The easiest way to do this is to look at the "MSCI Emerging Markets" index (see figure 2). This equity index reflects the performance of the stock markets of 24 emerging countries. It, therefore, makes it possible to see which countries are precisely considered emerging and how their markets are evolving.

But first, a distinction must be made between an emerging country and an emerging economy. Korea and Taiwan are the best examples. For some indicators, such as GDP per capita, Taiwan is considered more developed than France or the UK. Not to mention, that both have world leaders in their field – Taiwan Semiconductor and Samsung - and that despite this, they still categorize themselves as emerging markets.

Figure 2 – Emerging & Frontier markets repartition



* Argentina and Saudi Arabia will be promoted to the MSCI EM Index in June 2019.

** The West African Economic and Monetary Union (WAEMU) consists of the following countries: Benin, Burkina Faso, Ivory Coast, Guinea-Bissau, Mali, Niger, Senegal and Togo. Currently the MSCI WAEMU Indices include securities classified in Senegal, Ivory Coast and Burkina Faso.

Source: IMF, MSCI and Schroders. Data as at 30 June 2018.

For investors, these markets offer additional opportunities but also present higher risks than industrialized countries. However, investing in emerging markets also involves a, and often higher, risk. Political insecurity and less monetary stability lead to increased volatility on the stock markets. As local currencies can quickly lose value, the exchange rate risk is also higher. As it has been statistically demonstrated, the situation in other countries also plays a role: in emerging markets, local currencies are often highly dependent on the US monetary policy. Similarly, the decisions taken by world powers in the context of their foreign policy may have a greater or lesser influence on these currencies.

Moreover, in these countries, the risk of a company being nationalized cannot be ruled out. Other additional risks include the lack of transparency in these markets. Market regulation does not always work or is subject to slow adaptation; intellectual property is poorly protected; these factors that can also influence the economic and financial development of emerging markets.

1.4 Current economic context

Despite the August's recent rollercoaster movements and the uncertainty of the current events (US-China trade war, Iran tensions, Brexit, etc.), shares have risen since January, and according to the experts, they should continue. So far, nothing has seemed to derail the rise in markets since January: +15% for the S&P 500, +16% for the SMI (data observed August 8th, 2019), stock market indices have risen in the developed and emerging world despite several threats to the global economy, particularly the trade war between China and the United States.

The question now would be to know if the second half will be as bullish as the first one as growth seems to be weakening, and trade tensions are picking up again. Credit Suisse believes so: "We believe that the upside potential is intact, although the risks of temporary corrections after the recent rally have increased," says Burkhard Varnholt, Head of Investments, in a note assessing market performance in the first half of the year and setting out the outlook for the second.

On the other hand, UBS is a little more cautious, reducing its equity allocation from "overweight" to "neutral" for the second half of the year. Isn't this year's rebound "too good to last"? Political risks - commercial or Brexit - could fuel volatility, they warn, also in a 2019 mid-term study. "Investors need to be agile and diversify their investment strategy in order to generate risk-adjusted returns," they recommend. It is in China, above all, that they see the most opportunity on the

equity markets. Its economy is stable, investors are increasingly positive, and the inclusion of this market in the MSCI index will make it even more critical. Nevertheless, the bank also believes that diversification into real assets and related alternative investments is likely to continue. For many, the rise in stock markets should, therefore, continue, while being subject to some probable ups and downs depending on political events. This will provide new purchasing opportunities. Especially since the signals from the US Federal Reserve, which seems to be considering another reduction in its interest rates, are favourable to the markets.

Most specific to this paper's question, Fed's latest rate cut (25bps reduction) could give emerging economies a breath of fresh air. Emerging economies, which are suffering from the slowdown in world trade and, above all, the decline in Chinese demand in goods and services, could benefit from a breath of fresh air thanks to the Fed which recently re-opened the door to a rate cut.

1.5 Latest comments³

Following are some interesting comments from professionals of the industry that will be investigated in this paper.

After leaving rates unchanged a week ago, Fed boss Jerome Powell explained on Tuesday that he did not want to "overreact" by immediately easing the bank's monetary policy in response to fears about trade tensions between Washington and Beijing.

Even if his speech was less accommodating than expected, he distanced the prospect of a further rate increase, which would have strengthened the transfer of capital to the United States, where investments are less risky or increased the price of servicing their debt in dollars.

"As the normalization of monetary policy in the United States is halted or even reversed, it may ease markets and financing conditions for emerging countries," Sébastien Jean, director of the Centre for Prospective Studies and International Information (CEPII), told AFP. "For some countries, there may, therefore, be some windfall effect," he added, referring to emerging economies that can afford it. Because

³ <https://www.allnews.ch/content/news/la-Fed-pourrait-donner-un-bol-d%E2%80%99air-aux-%C3%A9conomies-%C3%A9mergentes>

they have the flexibility to boost their growth by financing themselves on the markets without fear of rising interest rates.

A welcome breath of fresh air at a time when emerging economies are experiencing growth rates driven by "low investment and the sharp slowdown in world trade," as recently explained by World Bank President David Malpass.

"A low rate in the United States is, a priori, good news for emerging countries because it creates slightly stronger incentives for flows" to these countries, Jens Arnold, head of the OECD's Department of Economics for Argentina and Brazil, told AFP.

There is also the "risk aversion" that currently characterizes markets, as Sean Darby, of the American investment bank Jefferies, pointed out at a conference in Paris. "What is happening in China is necessarily harmful to emerging countries," he told AFP about the decline in raw material exports to the Asian giant, which have long supported emerging economies. For Mr. Faure, the rates are too high anyway for emerging countries to be able to finance themselves on the markets, especially Argentina, which is in recession. "Not only do the Argentinians not want to, but they couldn't. This is better because they are already very heavily indebted," he said.

However, Mr. Darby noted that central banks in emerging countries are distancing themselves from the Fed. "This time, long before the Fed moved, several central banks in emerging countries lowered their rates, such as Malaysia, the Philippines, and India," he said. "The divorce between the emerging countries and the Fed has become quite clear," said the Jefferies analyst, citing the case of Russia.

These comments could be the headlines of all the stereotypes and/or common literature when it comes to defining emerging markets reactions to the Fed's rate changes. So, using statistical analysis - a linear regression - this paper will try to unravel some of these affirmations anchored in the collective imagination.

The rest of the paper is organized as follows. Section 2. performs a statistical model to measure Fed's rate impact on emerging currencies. Section 2.3. shows

the results obtained by the linear regression and explains if and how emerging currencies react to changes in US rates.

Section 3.1. explains investing in emerging markets and introduces discussions with professionals of the financial industry about the statistical model (Section 2.) and how investment decisions are made.

Based on financial analysis theories such as fundamental, technical and behavioural, a quantitative investment solution for emerging markets equities is proposed in Section 3.2. Section 4. concludes.

2. Analysis

2.1 Hypothesis

It is commonly known and said that when the Fed flaps its wings, the emerging markets suffer an earthquake. Recently, James O'Neill, former chief economist at Goldman and inventor of the BRIC name, said that high deficit countries would get impacted heavily by the reduction of Fed's quantitative easing.

The first step is the attempt to prove that emerging currencies are heavily impacted by Fed rates. In a second step, the article wants to show that the more the current account of a country is negative, the more the elasticity of the currency with respect to the Fed is large.

2.2 Methodology

2.2.1 Objective

The objective of this analysis will be to analyse how the eight following emerging countries' currencies react to the decisions taken by the US Federal Reserve. To achieve this, the method used will be linear regression through STATA, a general-purpose statistical software.

The selection of currencies was based on the following reasons: First, we opted for the selection of currencies emanating from the countries represented by the association of the five largest emerging economies, more commonly known by the acronym BRICS. The latter includes Brazil, Russia, India, China, and South Africa, the latest country to join the alliance in 2010. Then, in order to identify a potential variation originating from the geographical location, we selected additional currencies coming from different continents, namely:

- For Africa: Nigerian Naira (NGN)
- For South America: Mexican Peso (MXN)
- For Europe: Turkish Lira (TRY)

So, the observed pairs of currency are:

- USDTRY (Turkish Lira / US Dollar)
- USDRUB (Russian Ruble / US Dollar)
- USDCNY (Chinese Yuan / US Dollar)
- USDINR (Indian Rupee / US Dollar)
- USDBRL (Brazilian Real / US Dollar)
- USDMXN (Mexican Peso / US Dollar)
- USDNGN (Nigerian Naira / US Dollar)
- USDZAR (South African Rand / US Dollar)

Also, we will take two distinct periods into consideration in order to conduct our analysis. The first, from 1997 to 2019, and the second, from 2008 to 2019, which represents the start of the after-crisis US quantitative easing.

2.2.2 Linear regression

We will continue with our model that tries to explain the variation of the emerging currencies (our dependent variable "Y") according to explanatory variables (X_1). Variable X_1 corresponds to the Fed's rate. So, our model looks like this:

$$Y = \alpha + \beta_1 X_1$$

where:

Y = the log (USDXXX) pair

X_1 = the Fed rate

The last term corresponds to the error term, which represents the deviation between the models' predictions and reality. As previously our goal here will be to determine the significant variables, i.e., whether the different coefficients are different from 0, the constant value of the alpha and the different "beta" coefficients that minimize the error between our estimated linear regression line and the real values of Y and finally the accuracy of our model, using, among other things, the "R-squared".

Within this model, the EM currency is put to the log in order that the results are expressed in percentage terms. In other words, to find out how much is the percentage of changes in Y for a change in 1 unit of X.

2.2.3 Economic time lags

Those who follow the market will have noticed that economists often announce a recession long after it has started. Indeed, time-lags or recognition lags can, depending on the strength and nature of the economic shock, be from several days to several months.

This economic characteristic exists because it takes time to measure the economic activity of a country, region or larger. Data is rarely available live, and it may take several months or quarters for some information to be collected and published. So that they can then be analysed and correctly interpreted by decision makers. It takes between three and six months, on average, for a lag to be seen, and it is difficult to reduce this window, mainly due to variables presenting economic health that are only presented monthly or quarterly.

As a result, monetary authorities are often not quick to respond to published figures. The initial estimates reported are often incomplete and inaccurate. Indeed, a variation in one direction or the other is often temporary and may return to normal by the time of the next publication. This gives the government more time to analyse trends more accurately and, if necessary, act to correct the situation. Time lags play an essential role in the effectiveness of the economic policy. There is an estimation of 18 months for interest rate cuts to have their full effect. This means that the rate cuts in the US of the past few weeks, may not have their full effect until mid-2020.

On the other hand, time lags make it very difficult for economists to try to boost the economy. For example, if the economy is in recession, the Fed will most likely cut its rates and the government may even lower taxes. But where it hurts is that by the time the economy acknowledges the government's actions, the recession will have lasted for some time, and, what is certain, the negative effects such as rising unemployment will have already had time to be felt. The other risk is that the government will go too hard on economic recovery and that in a year's time it will face the onset of inflationary pressure due to the economic air call created twelve months earlier. In other words, the main challenge for governments is not to find out how the economy is doing but how it will do. Everything is based

on the past to establish forecasts, and every action is actually an anticipation to control future economic conditions. They try to read the past to navigate the future between bandwidths.

Managing time-lags could be seen as one was manoeuvring a cargo ship, where one could only look out of the back window as economists can only see the past, not the future. Meaning that, when you try to change sides, it takes dozens of minutes (time Lag) for the cargo to show a response to the decision made some time ago. Therefore, accidents could happen quickly as you are always trying to compensate right and left to find out the correct navigation route or for governments, the right temperature for their pressure cooker they call Economy. Nearly every issue in economic can be subject to time-lags. An example of time lag could be if there is a shortage of nurses. This, in theory, should push up the wages of nurses. In the very long run, this may encourage more people to train as a nurse. A shortage of nurses may put pressure on the government to alter its immigration policies.

Coming back to our question and as we now understood that the economy could be compared to a cargo ship. We decided to implement time-lags in our analysis as well. Thus, the paper introduces time lags of 0, 3, 6, 9, and 12 months on each regression. In doing so, we will be able to bring consistency to the analysis. Then, to verify the second hypothesis, the current account in % of the GDP will be added to the first regression as a new independent variable. Once with linked with the same timeline than the Fed rate, once with the exchange rate. This will allow us to find out if the model is improved by checking an increase in the adjusted R2.

To conclude this analysis, this paper will investigate the correlation between the rate of the Fed and the currencies in both periods. And a last linear regression is performed on the coefficients previously with the average current accounts of their respective periods. This will allow a thorough check to see if the current account's value of a country has an impact on the sensitivity of the Fed rate and the EM currencies.

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 D_1 + \varepsilon$$

where:

Y = the log (USDXXX) pair

X₁ = the Fed rate

X₂ = current account in % of GDP

2.3 Results

First, we can see that overall, the regression of emerging currencies relative to the Fed rate is statistically significant for both periods (Table 1 and Table 2), despite the simplicity of the model.

For the period 1997-2007, the first hypothesis can be refuted for all currencies. All coefficients are negative, which means that a change in US rates would bring down a pair of currencies, meaning a strengthening of the emerging currency. Also, there is no consensus on the best model used. The adjusted R2s are scattered over four of the five time-lag models.

About the second period (2008-2019), there is relevancy in the numbers. Also, we can finally see how a hike in the US rates will impact the currencies. With all coefficients being positive, one can highlight the fact that low-interest rates result to a capital outflow in dollars to countries with higher rates, here emerging countries. So, when the attractiveness of the US is coming back with a rate hike, the money will return and thus peg the countries indebted in dollars.

Another interesting observation is that the twelve-months lag is the best model for the period except for China. China that could already be considered as an outlier since although it is officially an emerging country, one could ask oneself, if it is behaving like it.

Considering the debt, when we add the variable of the current account as a percentage of the GDP in the linear regression, we obtain a better model (Table 3 – 4). Even if some of the coefficients become statistically irrelevant, the adjusted R2 is noticeably improved. I am proving again that the country's debt has a role to play in the sensitivity of emerging currencies to US rates.

The models, where we linked the current account variable to the same quarter than the exchange rate, were also better than the first ones but did not bring a better understanding nor a better-adjusted R2.

Table 1 – Regression summary 1997-2007 period

USDTRY															
	0M lag	P> t	Adj. R2	3M lag	P> t	Adj. R2	6M lag	P> t	Adj. R2	9M lag	P> t	Adj. R2	12M lag	P> t	Adj. R2
Fed Rate	-0.2098	0.0000	0.3670	-0.2129	0.0000	0.3707	-0.2121	0.0000	0.3611	-0.2064	0.0000	0.3352	-0.1976	0.0000	0.3026
Constant	0.7362	0.0000		0.7333	0.0000		0.7130	0.0000		0.6723	0.0000		0.6194	0.0000	

USDRUB															
	0M lag	P> t	Adj. R2	3M lag	P> t	Adj. R2	6M lag	P> t	Adj. R2	9M lag	P> t	Adj. R2	12M lag	P> t	Adj. R2
Fed Rate	-0.0926	0.0000	0.1558	-0.0919	0.0000	0.1493	-0.0878	0.0000	0.1321	-0.0846	0.0000	0.1183	-0.0844	0.0000	0.1147
Constant	3.5536	0.0000		3.5468	0.0000		3.5265	0.0000		3.5090	0.0000		3.5029	0.0000	

USDCNY															
	0M lag	P> t	Adj. R2	3M lag	P> t	Adj. R2	6M lag	P> t	Adj. R2	9M lag	P> t	Adj. R2	12M lag	P> t	Adj. R2
Fed Rate	-0.0043	0.0020	0.0711	-0.0038	0.0010	0.0813	-0.0033	0.0010	0.0873	-0.0028	0.0010	0.0902	-0.0023	0.0010	0.0750
Constant	2.1164	0.0000		2.1169	0.0000		2.1169	0.0000		2.1167	0.0000		2.1162	0.0000	

USDINR															
	0M lag	P> t	Adj. R2	3M lag	P> t	Adj. R2	6M lag	P> t	Adj. R2	9M lag	P> t	Adj. R2	12M lag	P> t	Adj. R2
Fed Rate	-0.0165	0.0000	0.2573	-0.0179	0.0000	0.3344	-0.0194	0.0000	0.4229	-0.0204	0.0000	0.4971	-0.0216	0.0000	0.5441
Constant	3.8605	0.0000		3.8681	0.0000		3.8756	0.0000		3.8809	0.0000		3.8847	0.0000	

USDBRL															
	0M lag	P> t	Adj. R2	3M lag	P> t	Adj. R2	6M lag	P> t	Adj. R2	9M lag	P> t	Adj. R2	12M lag	P> t	Adj. R2
Fed Rate	-0.1289	0.0000	0.6158	-0.1278	0.0000	0.5977	-0.1224	0.0000	0.5381	-0.1138	0.0000	0.4530	-0.1043	0.0000	0.3695
Constant	1.2588	0.0000		1.2538	0.0000		1.2318	0.0000		1.1970	0.0000		1.1582	0.0000	

USDMXN															
	0M lag	P> t	Adj. R2	3M lag	P> t	Adj. R2	6M lag	P> t	Adj. R2	9M lag	P> t	Adj. R2	12M lag	P> t	Adj. R2
Fed Rate	-0.0202	0.0000	0.1721	-0.1684	0.0000	0.1152	-0.0125	0.0050	0.0590	-0.0075	0.0990	0.0156	-0.0022	0.6310	-0.0071
Constant	2.3941	0.0000		2.3788	0.0000		2.3596	0.0000		2.3391	0.0000		2.3170	0.0000	

USDNGN															
	0M lag	P> t	Adj. R2	3M lag	P> t	Adj. R2	6M lag	P> t	Adj. R2	9M lag	P> t	Adj. R2	12M lag	P> t	Adj. R2
Fed Rate	-0.1236	0.0000	0.1591	-0.1175	0.0000	0.1397	-0.1118	0.0000	0.1231	-0.1083	0.0000	0.1123	-0.1081	0.0000	0.1095
Constant	5.0654	0.0000		5.0322	0.0000		4.9994	0.0000		4.9743	0.0000		4.9610	0.0000	

USDZAR															
	0M lag	P> t	Adj. R2	3M lag	P> t	Adj. R2	6M lag	P> t	Adj. R2	9M lag	P> t	Adj. R2	12M lag	P> t	Adj. R2
Fed Rate	-0.0418	0.0000	0.1540	-0.0536	0.0000	0.2526	-0.0641	0.0000	0.3561	-0.0735	0.0000	0.4578	-0.0819	0.0000	0.5567
Constant	2.1054	0.0000		2.1490	0.0000		2.1854	0.0000		2.2164	0.0000		2.2424	0.0000	

Best Adj. R2
P>|t| > 10.00%
P>|t| > 5.00%
P>|t| > 1.00%

Table 2 – Regression summary 2008-2019

USDTRY															
	0M lag	P> t	Adj. R2	3M lag	P> t	Adj. R2	6M lag	P> t	Adj. R2	9M lag	P> t	Adj. R2	12M lag	P> t	Adj. R2
Fed Rate	0.1930	0.0000	0.1280	0.3178	0.0000	0.3084	0.3923	0.0000	0.4631	0.4403	0.0000	0.6291	0.4243	0.0000	0.6606
Constant	0.6949	0.0000		0.6171	0.0000		0.5704	0.0000		0.5364	0.0000		0.5251	0.0000	
USDRUB															
	0M lag	P> t	Adj. R2	3M lag	P> t	Adj. R2	6M lag	P> t	Adj. R2	9M lag	P> t	Adj. R2	12M lag	P> t	Adj. R2
Fed Rate	0.0888	0.0220	0.0315	0.1886	0.0000	0.1308	0.2640	0.0000	0.2457	0.3443	0.0000	0.3972	0.3641	0.0000	0.4628
Constant	3.6471	0.0000		3.5868	0.0000		3.5429	0.0000		3.5012	0.0000		3.4806	0.0000	
USDCNY															
	0M lag	P> t	Adj. R2	3M lag	P> t	Adj. R2	6M lag	P> t	Adj. R2	9M lag	P> t	Adj. R2	12M lag	P> t	Adj. R2
Fed Rate	0.0287	0.0000	0.2690	0.0293	0.0000	0.2113	0.0240	0.0000	0.1270	0.0132	0.0290	0.0298	0.0110	0.0730	0.0181
Constant	1.8597	0.0000		1.8605	0.0000		1.8632	0.0000		1.8678	0.0000		1.8685	0.0000	
USDINR															
	0M lag	P> t	Adj. R2	3M lag	P> t	Adj. R2	6M lag	P> t	Adj. R2	9M lag	P> t	Adj. R2	12M lag	P> t	Adj. R2
Fed Rate	0.0189	0.2970	0.0007	0.0616	0.0030	0.0604	0.0959	0.0000	0.1453	0.1332	0.0000	0.2725	0.1398	0.0000	0.3115
Constant	4.0186	0.0000		3.9915	0.0000		3.9709	0.0000		3.9501	0.0000		3.9420	0.0000	
USDBRL															
	0M lag	P> t	Adj. R2	3M lag	P> t	Adj. R2	6M lag	P> t	Adj. R2	9M lag	P> t	Adj. R2	12M lag	P> t	Adj. R2
Fed Rate	0.1074	0.0010	0.0731	0.1840	0.0000	0.1814	0.2410	0.0000	0.2970	0.2890	0.0000	0.4133	0.2880	0.0000	0.4375
Constant	0.9193	0.0000		0.7731	0.0000		0.7398	0.0000		0.7130	0.0000		0.7021	0.0000	
USDMXN															
	0M lag	P> t	Adj. R2	3M lag	P> t	Adj. R2	6M lag	P> t	Adj. R2	9M lag	P> t	Adj. R2	12M lag	P> t	Adj. R2
Fed Rate	0.0562	0.0060	0.0470	0.1195	0.0000	0.1878	0.1687	0.0000	0.3604	0.2174	0.0000	0.5725	0.2215	0.0000	0.6349
Constant	2.6463	0.0000		2.6087	0.0000		2.5807	0.0000		2.5561	0.0000		2.5468	0.0000	
USDNGN															
	0M lag	P> t	Adj. R2	3M lag	P> t	Adj. R2	6M lag	P> t	Adj. R2	9M lag	P> t	Adj. R2	12M lag	P> t	Adj. R2
Fed Rate	0.1698	0.0000	0.1369	0.2924	0.0000	0.3405	0.3736	0.0000	0.5405	0.4543	0.0000	0.7875	0.4472	0.0000	0.8443
Constant	5.1574	0.0000		5.0859	0.0000		5.0397	0.0000		4.9981	0.0000		4.9855	0.0000	
USDZAR															
	0M lag	P> t	Adj. R2	3M lag	P> t	Adj. R2	6M lag	P> t	Adj. R2	9M lag	P> t	Adj. R2	12M lag	P> t	Adj. R2
Fed Rate	0.0800	0.0040	0.0521	0.1397	0.0000	0.1356	0.1875	0.0000	0.2298	0.2308	0.0000	0.3303	0.2467	0.0000	0.3885
Constant	2.2661	0.0000		2.2302	0.0000		2.2033	0.0000		2.1801	0.0000		2.1656	0.0000	

Best Adj. R2
P>|t| > 10.00%
P>|t| > 5.00%
P>|t| > 1.00%

Table 3 – Regression summary 1997-2007 with current account variable

USDTRY															
	OM lag	P> t	Adj. R2	3M lag	P> t	Adj. R2	6M lag	P> t	Adj. R2	9M lag	P> t	Adj. R2	12M lag	P> t	Adj. R2
Fed Rate	-0,1964	0,0000		-0,0201	0,0000		-0,2226	0,0000		-0,2352	0,0000		-0,2502	0,0000	
Curr.Acc.	-0,1194	0,0000	0,6603	-0,1258	0,0000	0,7066	-0,1371	0,0000	0,7253	-0,1541	0,0000	0,7535	-0,1793	0,0000	0,7754
Constant	0,5246	0,0000		0,5409	0,0000		0,5324	0,0000		0,5040	0,0000		0,4522	0,0000	
USDRUB															
	OM lag	P> t	Adj. R2	3M lag	P> t	Adj. R2	6M lag	P> t	Adj. R2	9M lag	P> t	Adj. R2	12M lag	P> t	Adj. R2
Fed Rate	-0,0402	0,0000		-0,0425	0,0000		-0,0412	0,0000		-0,0392	0,0000		-0,0356	0,0000	
Curr.Acc.	0,0160	0,0000	0,8064	0,0154	0,0000	0,7001	0,0116	0,0010	0,5706	0,0067	0,0740	0,5293	0,0015	0,6810	0,5167
Constant	3,3103	0,0000		3,3218	0,0000		3,3572	0,0000		3,4048	0,0000		3,4492	0,0000	
USDCNY															
	OM lag	P> t	Adj. R2	3M lag	P> t	Adj. R2	6M lag	P> t	Adj. R2	9M lag	P> t	Adj. R2	12M lag	P> t	Adj. R2
Fed Rate	-0,0014	0,3030		-0,0013	0,3020		-0,0009	0,4000		-0,0007	0,5100		-0,0004	0,6980	
Curr.Acc.	-0,0095	0,0000	0,7845	-0,0077	0,0000	0,7659	-0,0063	0,0000	0,7241	-0,0051	0,0000	0,6784	-0,0041	0,0000	0,6152
Constant	2,1404	0,0000		2,1358	0,0000		2,1320	0,0000		2,1284	0,0000		2,1252	0,0000	
USDINR															
	OM lag	P> t	Adj. R2	3M lag	P> t	Adj. R2	6M lag	P> t	Adj. R2	9M lag	P> t	Adj. R2	12M lag	P> t	Adj. R2
Fed Rate	0,0002	0,9830		-0,0063	0,4030		-0,0092	0,1440		-0,0144	0,0050		-0,0181	0,0000	
Curr.Acc.	0,0230	0,0840	0,2082	0,0137	0,2590	0,2550	0,0115	0,2520	0,3982	0,0047	0,5470	0,5716	0,0003	0,9650	0,6826
Constant	3,8090	0,0000		3,8337	0,0000		3,8466	0,0000		3,8669	0,0000		3,8801	0,0000	
USDBRL															
	OM lag	P> t	Adj. R2	3M lag	P> t	Adj. R2	6M lag	P> t	Adj. R2	9M lag	P> t	Adj. R2	12M lag	P> t	Adj. R2
Fed Rate	-0,1005	0,0000		-0,0960	0,0000		-0,0861	0,0000		-0,0757	0,0000		-0,0637	0,0000	
Curr.Acc.	0,0119	0,2300	0,6615	0,0254	0,0060	0,7408	0,0395	0,0000	0,7739	0,0518	0,0000	0,7916	0,0641	0,0000	0,7898
Constant	1,2042	0,0000		1,2054	0,0000		1,1848	0,0000		1,1575	0,0000		1,1197	0,0000	
USDMXN															
	OM lag	P> t	Adj. R2	3M lag	P> t	Adj. R2	6M lag	P> t	Adj. R2	9M lag	P> t	Adj. R2	12M lag	P> t	Adj. R2
Fed Rate	-0,0024	0,4470		0,0007	0,8360		0,0041	0,2680		0,0074	0,6000		0,0105	0,0160	
Curr.Acc.	0,0767	0,0000	0,8091	0,0804	0,0000	0,7747	0,0850	0,0000	0,7565	0,0885	0,0000	0,7374	0,0866	0,0000	0,6936
Constant	2,4617	0,0000		2,4510	0,0000		2,4403	0,0000		2,4286	0,0000		2,4103	0,0000	
USDNGN															
	OM lag	P> t	Adj. R2	3M lag	P> t	Adj. R2	6M lag	P> t	Adj. R2	9M lag	P> t	Adj. R2	12M lag	P> t	Adj. R2
Fed Rate	-0,1410	0,1250		-0,0488	0,0040		-0,0430	0,0070		-0,0613	0,0030		-0,2130	0,0350	
Curr.Acc.	0,0459	0,0510	0,3479	0,0125	0,0040	0,7690	0,0127	0,0050	0,7410	0,1639	0,0030	0,7987	0,0627	0,2500	0,5382
Constant	4,7642	0,0000		4,8473	0,0000		4,8218	0,0000		4,8393	0,0000		4,7701	0,0000	
USDZAR															
	OM lag	P> t	Adj. R2	3M lag	P> t	Adj. R2	6M lag	P> t	Adj. R2	9M lag	P> t	Adj. R2	12M lag	P> t	Adj. R2
Fed Rate	-0,0139	0,3910		-0,0283	0,0780		-0,0411	0,0100		-0,0541	0,0010		-0,0666	0,0000	
Curr.Acc.	0,0421	0,0120	0,1987	0,0385	0,0170	0,2677	0,0342	0,0260	0,3504	0,0289	0,0430	0,4527	0,0209	0,1150	0,5419
Constant	2,0929	0,0000		2,1396	0,0000		2,1793	0,0000		2,2162	0,0000		2,2441	0,0000	

Best Adj. R2

P>|t| > 10.00%

P>|t| > 5.00%

P>|t| > 1.00%

Table 4 – Regression summary 2008-2019 with current account variable

USDTRY															
	0M lag	P> t	Adj. R2	3M lag	P> t	Adj. R2	6M lag	P> t	Adj. R2	9M lag	P> t	Adj. R2	12M lag	P> t	Adj. R2
Fed Rate	0,2080	0,0150		0,3183	0,0000		0,3826	0,0000		0,4611	0,0000		0,4460	0,0000	
Curr.Acc.	0,0267	0,4370	0,1081	0,0315	0,2890	0,2749	0,0250	0,3050	0,4274	0,0168	0,3720	0,6213	0,0126	0,4800	0,6324
Constant	0,8227	0,0000		0,7825	0,0000		0,7061	0,0000		0,6244	0,0000		0,5902	0,0000	
USDRUB															
	0M lag	P> t	Adj. R2	3M lag	P> t	Adj. R2	6M lag	P> t	Adj. R2	9M lag	P> t	Adj. R2	12M lag	P> t	Adj. R2
Fed Rate	0,1210	0,0980		0,1956	0,1300		0,2716	0,0010		0,3621	0,0000		0,3886	0,0000	
Curr.Acc.	-0,0929	0,0080	0,1504	-0,0846	0,1200	0,2100	-0,0750	0,0190	0,3070	-0,0588	0,0470	0,4470	-0,0569	0,0560	0,5019
Constant	3,9815	0,0000		3,9025	0,0000		3,8224	0,0000		3,7169	0,0000		3,6818	0,0000	
USDCNY															
	0M lag	P> t	Adj. R2	3M lag	P> t	Adj. R2	6M lag	P> t	Adj. R2	9M lag	P> t	Adj. R2	12M lag	P> t	Adj. R2
Fed Rate	0,0271	0,0010		0,0288	0,0010		0,0298	0,0020		0,0380	0,0010		0,0468	0,0000	
Curr.Acc.	0,0077	0,0020	0,3856	0,0099	0,0000	0,3794	0,0125	0,0000	0,3625	0,0171	0,0000	0,3383	0,0200	0,0000	0,3392
Constant	1,8376	0,0000		1,8314	0,0000		1,8250	0,0000		1,8118	0,0000		1,8042	0,0000	
USDINR															
	0M lag	P> t	Adj. R2	3M lag	P> t	Adj. R2	6M lag	P> t	Adj. R2	9M lag	P> t	Adj. R2	12M lag	P> t	Adj. R2
Fed Rate	0,0010	0,9780		0,0350	0,3580		0,0677	0,0650		0,1170	0,0010		0,1231	0,0000	
Curr.Acc.	0,0422	0,0350	0,0705	0,0470	0,1400	0,1526	0,0562	0,0010	0,3053	0,0593	0,0000	0,5041	0,0577	0,0000	0,5270
Constant	4,1234	0,0000		4,1136	0,0000		4,1165	0,0000		4,1005	0,0000		4,0892	0,0000	
USDBRL															
	0M lag	P> t	Adj. R2	3M lag	P> t	Adj. R2	6M lag	P> t	Adj. R2	9M lag	P> t	Adj. R2	12M lag	P> t	Adj. R2
Fed Rate	0,0885	0,3410		0,1336	0,1640		0,1822	0,0500		0,2320	0,0110		0,2176	0,1300	
Curr.Acc.	0,0292	0,5910	0,0484	0,0440	0,3900	0,1489	0,0527	0,2570	0,2781	0,0531	0,2070	0,4013	0,0770	0,1000	0,4582
Constant	0,9005	0,0000		0,9075	0,0000		0,8994	0,0000		0,8746	0,0000		0,9068	0,0000	
USDMXN															
	0M lag	P> t	Adj. R2	3M lag	P> t	Adj. R2	6M lag	P> t	Adj. R2	9M lag	P> t	Adj. R2	12M lag	P> t	Adj. R2
Fed Rate	0,0830	0,0160		0,1290	0,0010		0,1870	0,0000		0,2392	0,0000		0,2468	0,0000	
Curr.Acc.	-0,1625	0,0000	0,3628	-0,1319	0,0000	0,3776	-0,0998	0,0020	0,4920	-0,0631	0,0150	0,6492	-0,0451	0,0590	0,6831
Constant	2,3624	0,0000		2,3843	0,0000		2,4819	0,0000		2,4452	0,0000		2,4649	0,0000	
USDNGN															
	0M lag	P> t	Adj. R2	3M lag	P> t	Adj. R2	6M lag	P> t	Adj. R2	9M lag	P> t	Adj. R2	12M lag	P> t	Adj. R2
Fed Rate	0,4317	0,0010		0,4445	0,0000		0,4386	0,0000		0,4240	0,0000		0,4329	0,0000	
Curr.Acc.	-0,0382	0,0800	0,0764	-0,0460	0,0500	0,7669	-0,0432	0,0310	0,8233	-0,0373	0,0050	0,9277	-0,0191	0,1960	0,9194
Constant	5,1907	0,0000		5,1804	0,0000		5,1553	0,0000		5,1045	0,0000		5,0529	0,0000	
USDZAR															
	0M lag	P> t	Adj. R2	3M lag	P> t	Adj. R2	6M lag	P> t	Adj. R2	9M lag	P> t	Adj. R2	12M lag	P> t	Adj. R2
Fed Rate	0,0928	0,0000		0,1550	0,0110		0,2179	0,0010		0,2870	0,0000		0,3081	0,0000	
Curr.Acc.	-0,0343	0,0810	0,0641	-0,0360	0,1640	0,1419	-0,0370	0,1369	0,2398	-0,0418	0,8100	0,3646	-0,0316	0,1720	0,4246
Constant	2,1233	0,0000		2,0842	0,0000		2,0573	0,0000		2,0046	0,0000		2,0283	0,0000	

Best Adj. R2	
P> t > 10.00%	
P> t > 5.00%	
P> t > 1.00%	

Table 5 – Comparison of Average Current Acc. (% GDP) and Average Coefficient over the analysed periods

1997-2007		
	Average Curr. Acc. % GDP	Average Coeff. 2nd regression
TURKEY	-2,30	-0,18
S. AFRICA	-1,61	-0,04
MEXICO	-1,58	0,00
BRAZIL	-1,14	-0,08
INDIA	-0,18	-0,01
CHINA	3,95	0,00
NIGERIA	8,27	-0,01
RUSSIA	10,39	-0,04

2008-2019		
	Average Curr. Acc. % GDP	Average Coeff. 2nd regression
TURKEY	-5,17	0,36
S. AFRICA	-3,89	0,21
MEXICO	-1,65	0,18
BRAZIL	-2,31	0,17
INDIA	-2,28	0,07
CHINA	3,03	0,03
NIGERIA	2,69	0,43
RUSSIA	3,83	0,27

With Table 5, we realize that there are no rules that can be deduced with a comparison between the current accounts and the regression coefficients. Indeed, a change in the current account does not necessarily have an impact on the coefficient of the regression.

However, with Table 6, it becomes evident that the economic cycle has a real impact on the correlation between the prices of the currencies and the US rates.

Table 6 - Correlation between Fed rate and EM Currency

<u>Pairwise correlations since 1997</u>		<u>Pairwise correlations since 2008</u>	
	Fed Rate		Fed Rate
Fed Rate	1,0000	Fed Rate	1,0000
USDTRY	-0,4630	USDTRY	0,9149
USDRUB	-0,4620	USDRUB	0,6109
USDCNY	0,7259	USDCNY	0,3901
USDINR	-0,5320	USDINR	0,5886
USDBRL	-0,3727	USDBRL	0,6719
USDMXN	-0,5419	USDMXN	0,7441
USDNGN	-0,4395	USDNGN	0,8786
USDZAR	-0,4900	USDZAR	0,5626

2.3.1 Comments

Today, if the Fed continues to cut rates in the future, there will inevitably be some reaction from all emerging countries. According to the numbers above, the consequence of a cut in rates would be an increase in the volatility as well as in the emerging currency's value.

The overall results show this sensitivity between these two variables. However, as far as the current account is concerned, we can say that this variable has an impact on the model even if it won't be necessary to explain emerging currencies elasticity to Fed's rate change. Obviously, as mentioned above the model used is limited. Longer, shorter, or simply other study periods could have already changed the outcome. In addition, the few variables also influence the result as many variables are ignored within the said model. For example, there is no doubt that indicators such as debt to GDP, gold reserves or budget balance, to name but a few, have an impact on the reaction of the country's currency and its economy as a whole. And, it would be interesting to integrate them in order to complete the analysis and understand which component has the most weight in these variations. Nevertheless, overall and for a simplified model, some interesting conclusions still come up. There is strong evidence that a variation in the Fed's rate has an impact on emerging currencies and it takes 12 months lag to see when the impact is the strongest. Coming back to Koepke's (2015) "surprise view", during overreacted events or unexpected important decisions, people realize that countries and/or asset classes are impacted more severely than they should be according to their economic fundamentals. Hence, it is also essential to highlight the fact that the behavioural aspect of the investor is not considered here, although it represents an important, influential element. Sometimes the irrationality of the investor is preponderant to the logic of figures and economic indicators. This phenomenon is probably not about to diminish as the interconnectedness between world economies is growing continuously.

In conclusion, despite the few numbers of variables used and the arbitrary choice of periods, which obviously influences the results, we can say that the outcome shows an interesting level of significance. In this sense, the obtained results allowed us to come up with some interesting conclusions that leave an ample room for debate. It would be now interesting to push this research forward by implementing other variables and discuss these results with professionals to finally get to a point where and investment could be made.

3. Discussion

When there is a desire to invest in financial markets, one should know how vital it is how markets respond to economic indicators, political decisions, information, and other essential factors. Thus, in order to avoid pitfalls and reduce risks as much as possible, understanding emerging markets and asking professionals for information and advice is essential.

3.1 Industry's needs and opinion

3.1.1 Interviews

To obtain a more informed opinion on how to invest rationally, interviews with professionals were conducted. The aim was to have as much material as possible from the experts, without them being formatted or restricted by questions that were too focused and without any manoeuvring. Hence, the interviews were conducted in a semi-structured interview format, giving a common thread to the discussion and sometimes reframing specific ideas as they went off-topic.

The backbone of the discussion was organized mainly around the investment process of each of the professionals, and the statistical results obtained earlier. The interest was to discover how and on what basis, a decision is taken for an investment to be made in a region, asset class, or security. Indeed, getting to know what type of financial analysis is performed is essential. Similarly, it was important to learn how they minimize the noises whites related to their behaviour.

3.1.2 Interviewees biographies⁴

3.1.2.1 Edouard de l'Espée

After graduating from Ecole Supérieure de Commerce de Paris (ESCP) in 1972, Edouard de L'Espee trained as a financial analyst then worked for Banque Rothschild in Paris, first as a private client relationship manager, then as a trader on the Eurobond market. In these early years, he became convinced that he would best serve private clients by building deep expertise in financial markets and economics, in order to master his own investment decisions.

⁴ <https://www.sing-alliance.com/our-team/#>

In the following years, he successfully developed these skills; in 1981 he started managing a bond fund for a subsidiary bank of UBS group named Banque Cantrade Ormond Burrus Geneva and portfolios for its private clients. In 1986 he joined the Cursitor Group in London to develop private client management activity in a closely associated company while participating in the development of macro-economic forecasting tools. He has been managing both private clients and yield funds for over 30 years, earning Standard & Poor's distinctions for outstanding performance over 3, 5 and 10 years.

In 1999, after having moved back to Switzerland, he founded Calypso Asset Management S.A., an external asset management company in Geneva and held the position of Executive Managing Partner. In 2008, Calypso Asset Management was absorbed by Compagnie Financière Aval S.A., and Edouard became a Managing Partner of Compagnie Financière Aval S.A. and Chief Investment Officer of the company.

In 2013, he joined Quaero Capital S.A., a swiss licensed independent fund management firm, as co-manager of a dynamic yield fund. Since 2005 he is on the Board and Audit Committee of the Wendel Group (France), a public investment company with gross assets over 10 billion Euros which takes significant participation as an active shareholder with a long-term perspective.

3.1.2.2 Lanhua Yu

Lanhua Yu is a Taiwanese (Singapore PR) with more than 15 years of experience in financial markets across asset management, investment bank and private bank in Taipei, London, and Singapore. She started her banking career as a Portfolio Strategist at ABN Amro in London, where she advised institutional clients across Europe on asset enhancement and liability management strategies.

She later joined Barclays Wealth as an Investment Product Specialist, responsible for new product development for European private clients and pension funds. In 2007, she joined the Royal Bank of Scotland in London and later transferred to the Royal Bank Scotland in Singapore, as a Product Structurer for its multi-asset platform, servicing institutional clients both in Europe and in Asia with a solution-driven approach.

In 2013, she joined Falcon Private Bank in Singapore as a Senior Portfolio Manager, specializing in investments across global Emerging Market Fixed Income markets.

Lanhua holds a Ph.D. and an MBA from Imperial College London (UK) as well as an MSc in Accounting and Finance from the London School of Economics (UK). She is a CFA charterholder.

3.1.2.3 Laurent Perusset

Laurent Perusset is a Swiss national with more than 25 years of banking experience. He started his career in 1989 as a fixed income trader for Darier & Cie. In 1995 he joined Banque Ferrier Lullin & Cie as Head of Fixed Income and Member of Treasury Committee of the bank.

From 2000 to 2010, Laurent worked for Union Bancaire Privée as Head of Investment Research & Advisory, Member of Investment Strategy. Equipped with strong management skills, Laurent was also heading the group of analysts and advisors for the bank at the same time. In 2010, he decided to embark on a new challenge and joined Barclays Bank (Suisse) SA as Head of Investment & Global Research, looking after EU discretionary mandates. During his involvement in Barclays, he also acted as Chairman of the bank's Pension Fund.

After four years at Barclays Bank (Suisse) SA, Union Bancaire Privée offered Laurent the opportunity to re-join the bank as Global Advisory Head, Member of the Investment Committee and Manager of the Swiss and Asian teams for the bank with the objectives to develop and re-design the Advisory Offering, boost the Return on Assets and create the global pitch book. He took up the offer and returned to Union Bancaire Privée in 2014.

Before joining SingAlliance as Head of Investment Solutions for the Group, Laurent spent nearly two years at Edmond de Rothschild in Geneva. He was in charge of the Advisory department which included the Analyst, the Structured Product, and the Advisory teams for the International Private Banking department and was also a member of the Global Investment Committee.

3.1.3 Interviews summary

The first thing that emerges from these discussions is the definition of what an emerging country is. The OECD list is commonly used, but depending on the criteria used, from one organization to another, an emerging country may move into the developed category and vice versa. In addition to that, what are the criteria to be considered? Should it be based on the rating of a rating agency, the standard of living or a country's ability to refinance itself? To this must be added the emergence itself. Not all emerging countries are at the same stage of development, which complicates matters even more. The only thing that is certain is that the overall situation in these countries is much better today than it was 15 years ago.

By stating this, it is necessary to consider an expanding global economy and the knock-on effect that China has on the entire Southeast Asian region, for example. In general, some emerging countries remain investment opportunities, while others become so.

Does this mean that developed countries are no longer attractive for investment? A developed country would, therefore, be a mature country that has reached its limit and therefore, no yield or added value is possible. Again, it is the term used that is confusing. Indeed, there can be no end to development, especially in a globalized economy. As long as fiscal and economic competition exists, there is no reason to imagine that development will end. Based on these remarks can we affirm that growth is infinite, or does it transfer from one region to another as soon as development is complete?⁵

Concerning the exciting results of the statistical analysis. Despite a precise work, the simplicity of the model does not logically provide all the information needed to make investment decisions. Indeed, the first step in investment thinking is to have a global view of the global economy, from which one then zooms into more specific components (top-down approach). In other words, one defines which region, sector, or industry is to be overweight or underweight. Then, still based on a maximum of data, the analysis deepens more precisely to focus on a country or a

⁵ By making a little aside, the paradox of Zeno's dichotomy and its resolution reflects my vision of Global Growth. A stone thrown against a tree will need to travel halfway to reach its target. Once halfway through, this stone will have to cover half again – the first distance divided by two – and this an infinite number of times. With this reasoning, the stone will never reach its target and the distances covered will be smaller and smaller. In the context of growth, I like to believe that with new technologies, we tend towards infinite growth but where the marginal product will shrink more and more. The only concern is that with time, and here, with modern calculus, we have discovered that the stone hits the tree.

company, for example. Finally, at the level of companies, two major options are available: fundamental analysis and technical analysis. Obviously, some data and indicators have more weight and impact than others, but all indicators are essential, and the more indicators one takes into consideration, the more one is close to the market.

To be the closest to the market, you must know how to get rid of the cognitive biases that everyone has and that unintentionally have and will have an impact on the decisions made. That is why a quantitative stock selection tool can make sense. However, it is essential to have enough access to the necessary data. Without it, there is no need to start anything. Also, this kind of tool already exists, and many of them got lost by not regularly reviewing their tool settings. Therefore, particular attention should be paid to the constant monitoring of this type of procedure.

3.2 Investment tool

Now we know how investing should be made, we need to define the best way to do it getting influenced by anything else than data. That's how the idea of a quantitative tool for decision support came up. Having all the tools at your disposal to do so, in this case, a Bloomberg terminal and its link with MS Office Excel. From this point on, it was necessary to define a methodology to implement the demands and needs of professionals while respecting a precise analysis of investments. In other words, to take up the theory of fundamental and technical analysis.

3.2.1 Financial analysis

3.2.1.1 Technical analysis

If there is one area where theorists and practitioners have been competing for decades, it is undoubtedly about technical analysis. Often criticized this empirical method suffers from a lack of scientific foundations. Nevertheless, critics cannot deny its utility in the decision-making process.

Initially practiced by the Japanese in the 18th century to predict the evolution of rice prices, the technical analysis was updated in the 20th century thanks to the work of Charles Dow, co-founder of the Wall Street Journal who will give his name to the US flagship index. End 1930s, Ralph Nelson Elliott, revolutionised the method by highlighting Elliott's famous waves. Over time, the method became popular and expanded, first called graphical analysis (or "chartism"), it now incorporates many tools borrowed from mathematics and science. It was under this era that big names emerged, like Steve Nison, a follower of the Japanese candlestick method, Stan Weinstein, a fervent adept at moving averages, and John Bollinger.

Considering that there is an intense psychological dimension in the act of buying or selling, the technical analysis seeks to identify recurring behaviours (fear, euphoria, greed, etc.) in order to predict, from a historical of course, the future movements of an action. To summarize, we can say that technical analysis is the study of the evolution of the supply and demand of a financial asset from its graphical representation and this, in order to predict its future evolution.

In theory, the market takes everything into account; all the information, all the economic and psychological factors that affect the price determination of an equity are already embedded in the courses. As soon as an unexpected data comes in, the price will adjust in the short term, but the long / medium-term trend will not be

affected. The technical analyst seeks to interpret the price movements, in their dynamics and is interested only in the prices and volumes traded.

Technical analysis applies to all types of markets: indices, equities, interest rates, commodities, etc. the same tools and methods that can be applied to any type of asset when its price is determined by the comparison of an offer and a demand. The only constraint is to have sufficient liquidity; otherwise, the investor can, on his own, influence the share price by the passage of a large order. We are talking about self-realization.

Specifically, there are 3 primary sources of information: prices, volumes, and "open interest," i.e., open positions for options and futures.

The technical analysis starts from 3 postulates:

- The price includes all the information available at the moment t
- Prices are changing in trend
- The story repeats itself

The other major strand in financial analysis is the fundamental one and is explain quickly here below.

3.2.1.2 Fundamental analysis

When it comes to equities, fundamental analysis is the method that is used to determine the value of a stock by focusing on the underlying factors that affect the current and future business of the company. More generally, it is possible to apply fundamental analysis to a sector of activity or even to the economy as a whole. The term simply refers to the economic health of an entity, as opposed to the minor fluctuation of its prices.

Fundamental analysis attempts to answer questions such as:

- Does the company's turnover increase?
- Does the company make a profit?
- Is the company in a position strong enough to outperform its competitors?
- Is the company solvent? can she repay her debts?

All these questions can fit into one: Does the company represent a good investment? The purpose of fundamental analysis is to allow us to answer all these questions.

We could define fundamental analysis as "the search for fundamentals," but that does not advance us much unless we already know these fundamentals. The big

problem in defining the fundamentals is that it can include everything related directly or indirectly to the economic health of the business. Some elements are quite distinct, such as profit and profits, but these fundamentals can also include other parameters, such as market share or management quality. The fundamental factors can be grouped into two categories: one quantitative, the other qualitative.

- Quantitative factors: those capable of being measured and quantified.
- Qualitative factors: those based on the quality or peculiarity of something, as opposed to its size or quantity.

In the context of the stock market, quantitative fundamentals are measurable and quantifiable characteristics of the company's activity. Financial statements are a great source of encrypted data. The result, profit, and assets can be measured with high precision. Qualitative fundamentals are the immaterial factors that surround the business of the company, such as the quality of its leaders, the power of its brand or its patents.

One should know that quantitative analysis and qualitative analysis are not exclusive. Neither is superior to the other. Financial analysts like to combine these two aspects. Take a company like Nestlé. By studying the Nestlé share, the financial analyst will look at the dividend, the earnings per share (EPS) and the Price / Earnings Ratio (PER). But any analysis of Nestlé would be incomplete without studying the different brands that make up the strength of the company's product portfolio. A lot of companies are in the food business, but few companies can boast strong international brands. It is difficult to define how much Nestlé's brands contribute to the long-term success of the company, but they are undoubtedly important.

Before continuing, let's talk about intrinsic value. One of the basic premises of the fundamental analysis is that the price of a stock in the secondary market of the stock market does not reflect its "real" value. After all, why do fundamental analysis if the market was always right? In financial jargon, this value is known as the "intrinsic" value.

For example, let's say that a company's stock trades at CHF 20. After doing our homework, we determine that this action is really worth CHF 25. In other words, we find that the intrinsic value of the stock is CHF 25. Obviously, it's worth it, because any investor seeks to buy securities that trade well below their intrinsic value.

This brings us to the second basic premise of fundamental analysis: in the long term, stock markets will reflect the value of the fundamentals of corporate equities. This is the primary goal of fundamental analysis. By focusing on particular companies, the financial analyst can estimate the intrinsic value of the stocks and then look for good deals in the market. If all goes well, the investment will pay off in the long run as the market moves to the fundamentals.

The big unknowns of fundamental analysis:

- We do not know if our estimate of intrinsic value is fair.
- We do not know how long the market will take to reflect the intrinsic value of a share.

The biggest criticisms of fundamental analysis come from two schools of thought: advocates of graphic analysis and advocates of the theory of market efficiency.

Advocates of market efficiency theory often disagree with fundamental analysis and graphical analysis. Theoreticians of market efficiency argue that it is impossible to beat the market, regardless of the method used. The argument is that any opportunity for an above-average return on investment due to inefficiency is almost immediately corrected by the countless market participants, preventing anyone from significantly beating the long-term indices.

This leads us to another school of thought: the behavioural aspects in finance.

3.2.1.3 Behavioural finance

Behavioural finance is a branch of finance (born at the end of the 1970s) that seeks, in a practical way (via questionnaires, transaction records, laboratory experiments, etc.), to evaluate the behaviour of financiers and test whether or not they are perfectly rational.

Financial theory has been built over the past half-century on the assumption of rationality of individuals and its macroeconomic corollary, market efficiency. This scientific paradigm has made it possible to considerably advance knowledge about the valuation of financial assets. It has also shown its limitations. Empirical tests invalidating the predictions of the theoretical model have been accumulating over the past thirty years, to the point of encouraging researchers to relax their assumptions.

For anyone who would doubt it, the results of empirical studies conducted by behavioural finance researchers conclude that investors, whether individual or professional, are not entirely rational. On the contrary, their behaviours display

many biases, which can be cognitive, emotional, and social and reflect complicated risk preferences.

Some of the most frequent behavioural biases include a better explained by renowned educational financial web site; Investopedia⁶;

For example, the disposition bias refers to when investors sell their winners and hang onto their losers. Investors' thinking is that they want to realize gains quickly. However, when an investment is losing money, they'll hold onto it because they want to get back to even or their initial price. Investors tend to admit their correct about an investment quickly (when there's a gain). However, investors are reluctant to admit when they made an investment mistake (when there's a loss). The flaw in disposition bias is that the performance of the investment is not tied to the entry price for the investor. In other words, if the fundamentals have worsened for the investment, it'll likely decline in price regardless of the investor's entry price.

Confirmation bias is when investors have a bias to accepting information that confirms their already-held belief in an investment. If information surfaces, investors accept it readily to confirm that they're correct about their investment decision—even if the information is flawed.

An availability bias occurs when investors' memory of recent events makes them biased or believe that the event is far more likely to occur again. For example, the financial crisis in 2008 and 2009 led many investors to exit the stock market. Many had a dim view of the markets and likely expected more economic hardship in the coming years. The experience of having gone through such an adverse event increased their bias or likelihood that the event could reoccur. In reality, the economy recovered, and the market bounced back in the years to follow.

Loss aversion occurs when investors place a higher weighting on the concern for losses than the pleasure from market gains. In other words, they're far more likely to try to assign a higher priority on avoiding losses than making investment gains. As a result, some investors might want a higher pay-out to compensate for losses. If the high pay-out isn't likely, they might try to avoid losses altogether even if the investment's risk is acceptable from a rational standpoint.

⁶ <https://www.investopedia.com/terms/b/behavioralfinance.asp>

The familiarity bias is when investors tend to invest in what they know, such as domestic companies or locally owned investments. As a result, investors are not diversified across multiple sectors and types of investments, which reduces risk. Investors tend to go with investments that they have a history with or have familiarity.

Long snubbed by supporters of the standard approach, behavioural finance has established itself thanks to a strict methodology that allows it to avoid the pitfalls of intuitive psychology and the bridges it has built between individual psychology and aggregate market behaviour. The recent emergence of behavioural models for asset valuation should make it possible to merge it with the conventional current, so that in the long run, there may no longer be any real behavioural finance.

The interest of behavioural finance for market practitioners (individuals and professionals) is double. On the one hand, it makes it possible to better analyse one's behaviour, to know how to recognize situations at risk, and to implement debit strategies (at least for some biases). On the other hand, it helps to understand the psychological dimension of market cycles and, possibly, to apply strategies that take this into account.

For obvious reasons, not all the workings of the tool will be disclosed in the next section.

3.2.2 Methodology

First, before investing, it was necessary to define the investment universe. This means that it is needed to list all the instruments in which one could imagine investing. In this case, the S&P Global 1200 has been chosen, and this is for different reasons. First, because it is composed by the biggest market capitalization for each seven indexes listed below, but also for its geographical coverage, the index covers 31 countries around the world:

- S&P 500 Index (United States)
- S&P/TSX 60 Index (Canada)
- S&P Latin America 40 Index (Mexico, Brazil, Colombia, Chile, Peru)
- S&P/TOPIX 150 Index (Japan)
- S&P Asia 50 Index (Hong Kong, Korea, Singapore, Taiwan)
- S&P/ASX 50 Index (Australia)
- S&P Europe 350 Index

The index also represents about 70% of the world's market capitalization. And then because the eleven GICS economic sectors are significantly represented.

- Communication services
- Consumer discretionary
- Consumer staples
- Energy
- Financials
- Health care
- Industrials
- Information technology
- Materials
- Real estate
- Utilities

The purpose of this tool is to find a list of securities in which it would be possible to invest rationally, based on figures and without any cognitive bias.

Now, the investment universe is defined, how to proceed with the selection?

It has been decided to compare all securities according to several ratios and to classify them into quintiles. The ratios were defined based on the discussions with the professionals and following the two-leading school of thoughts of financial analysis – fundamental and technical. It is important to mention that all the ratios used are common ones and available to everyone. In this case, the selected ratios can be classified into four families that reflect the theories of financial analysis discussed above.

Fundamental ratios

- Operations (11 ratios)
- Balance Sheet (5 ratios)

Market ratios (technical ratios)

- Valuation (9 ratios)
- Momentum (11 ratios)

Operations and Balance Sheet correspond to fundamental ratios, which include fundamental analysis, while Valuation and Momentum are market-related ratios - which could be placed under the aegis of technical analysis.

The key figures in the Operations family define the company's profitability. The WACC and the operating margin are two examples of ratios. In Balance Sheet, it is a question of knowing the strength and financial solvency of the company. Typically, the current ratio and the debt/equity ratio are used.

As far as Valuation is concerned, the aim here is to quantify the market's anticipation in relation to this security. The theory is that the price of a stock is equivalent to the companies' future returns. As a result, PE ratio and the Price to Book value are components used in this family. Finally, data like YTM, MTD, or RSI are values that are quantified in the last family; Momentum. This last group of indicators is used to show the stock's dynamism in the market.

Then, the ratio ranks of each security are averaged for each family. The final rank of the security is then set according to a precise weighting, according to the importance of the ratio's family. Currently, the model is configured so that Valuation is overweight. The reason is simple; the theory is that the prices reflected in the stock market are those of future corporate returns.

The final score of 1200 titles obtained, this one is one last time divided into quintiles. This results in 240 securities from which it is still necessary to subtract all companies with a market capitalization of less than ten billion. This is for operational reasons. Indeed, by removing securities with a market cap of less than 10 billion, the turnover of companies entering and leaving the index is reduced.

Eventually, the tool has now listed less than 200 companies that could be invested in after it went through fundamental and technical indicators with no behavioural biases.

3.2.3 Application

This tool was finalized on March 11th, 2019, and a virtual portfolio is running since then. All the stocks in the first quintile belonging to an emerging country or economy are selected and are implemented equally in the portfolio. The selectable countries or regions are:

- Mexico
- Brazil
- Colombia
- Chile
- Peru
- Hong Kong
- South Korea⁷
- Taiwan⁷

Each month the tool is refreshed, and the portfolio updated. The portfolio is fully invested and is, on average, composed of 15 to 20 stocks. The missing decimals to reach 100% are compensated by USD. Table 7 and figures 3 & 4 give a practical example of what the virtual portfolio looked like at its inception, March 11th, 2019.

Table 7 – Virtual portfolio – Holdings (March 11th, 2019)

Portfolio Name		MODEL EMERGING	Ticker	.MODEL-EM Index ID	U25066022-53	Currency USD		
Date	< < 03/11/19 > >	Rebalanced	03/11/19	Portfolio Value	100,000,000	As Of	03/11/19	
Security	ID	Descr	Weight	Current Price PCS	FX Rate	Cost Price	FX Rate	
			100.0000					
11)	000660 KP	KR7000660001	SK HYNIX INC	6.6600	66600.00	EXCH	0.00088	0.00088
12)	005930 KP	KR7005930003	SAMSUNG ELECTRONICS CO LTD	6.6600	43650.00	EXCH	0.00088	0.00088
13)	033780 KP	KR7033780008	KT&G CORP	6.6600	109500.00	EXCH	0.00088	0.00088
14)	068270 KP	KR7068270008	CELLTRION INC	6.6600	205000.00	EXCH	0.00088	0.00088
15)	1928 HK	KYG7800X1079	SANDS CHINA LTD	6.6600	37.65	EXCH	0.12739	0.12739
16)	2330 TT	TW0002330008	TAIWAN SEMICONDUCTOR MANUFAC	6.6600	230.50	EXCH	0.03235	0.03235
17)	2412 TT	TW0002412004	CHUNGHWA TELECOM CO LTD	6.6600	107.00	EXCH	0.03235	0.03235
18)	27 HK	HK0027032686	GALAXY ENTERTAINMENT GROUP L	6.6600	51.45	EXCH	0.12739	0.12739
19)	3008 TT	TW0003008009	LARGAN PRECISION CO LTD	6.6600	4490.00	EXCH	0.03235	0.03235
20)	388 HK	HK0388045442	HONG KONG EXCHANGES & CLEAR	6.6600	272.20	EXCH	0.12739	0.12739
21)	700 HK	KYG875721634	TENCENT HOLDINGS LTD	6.6600	354.80	EXCH	0.12739	0.12739
22)	823 HK	HK0823032773	LINK REIT	6.6600	88.00	EXCH	0.12739	0.12739
23)	883 HK	HK0883013259	CNOOC LTD	6.6600	13.24	EXCH	0.12739	0.12739
24)	941 HK	HK0941009539	CHINA MOBILE LTD	6.6600	82.95	EXCH	0.12739	0.12739
25)	B3SA3 BS	BRB3SAACNOR6	B3 SA-BRASIL BOLSA BALCAO	6.6600	32.90	EXCH	0.25982	0.25982
26)	USD	USD	US Dollar Spot	0.1000	1.00	EXCH	1.00000	1.00000
27)								

⁷ Korea and Taiwan are considered emerging markets as their FX markets are not fully liberalised.

Figure 3 – Virtual portfolio – Currency Allocation (March 11th, 2019)

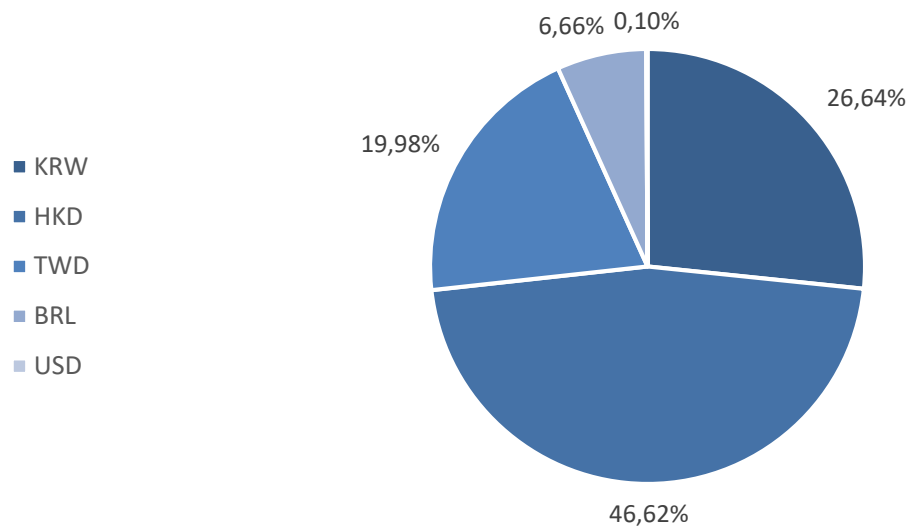
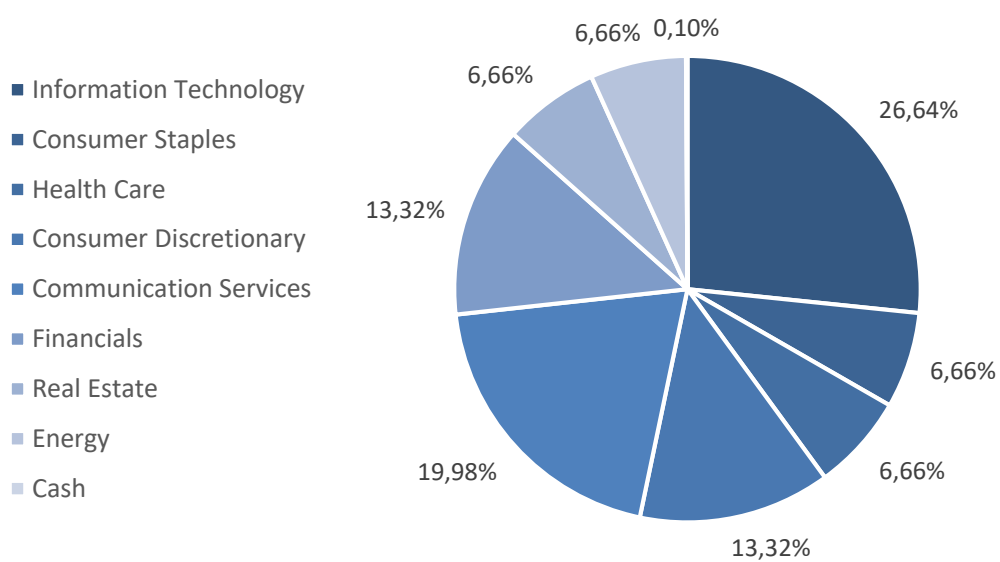


Figure 4 – Virtual portfolio – Sector Allocation (March 11th, 2019)

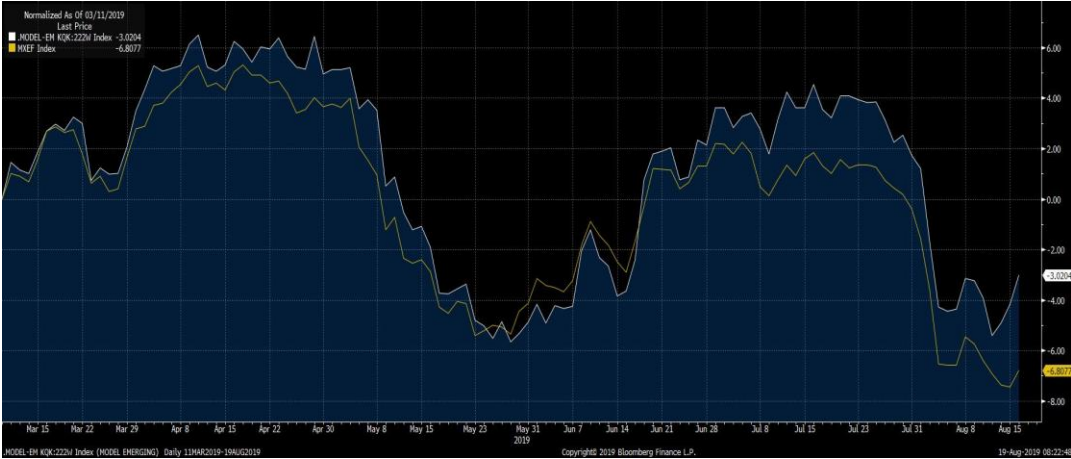


3.2.4 Performance

The virtual portfolio’s performance is promising. When compared to its benchmark over the period⁸, the portfolio outperforms its benchmark by more than 380 basis points (Figure 5). This result means that, for the time being, the stock selection made by the quantitative tool, coupled with the monthly update of the portfolio, pays off.

Of course, it would be wrong to take this performance at granted. Unknown variables remain. One should continue to the selection/update process, and the portfolio should be challenged during high volatility and/or significant market decisions. It should nevertheless be noted that despite August’s large stock market movements, the portfolio held up well and maintained its lead over its index.

Figure 5 – Virtual portfolio EM – Performance vs. MSCI EM



Now, if we verify the hypothesis of the analysis performed above on the EM virtual portfolio, consistent results are demonstrated. Through the implementation of customized risk scenarios in Bloomberg, we discover some similarities with the previous results (Table 8).

The figures in the first column correspond to the performance in % of the portfolio and the various currencies making up the portfolio when US rates increase by 100bps. Looking at the positive numbers, we understand the importance of time lag. Indeed, if US rates rise, it means that growth is present and therefore, for the time being, emerging countries can still benefit from it.

⁸ Performance from March 11th, 2019 to August 19th, 2019

Since the system cannot for obvious reasons predict the future, the second column corresponds to the same increase in base points but carried out a year ago. This is therefore the EM virtual portfolio's behaviour through its correlation a year earlier. So, one year after the rate hike, it is impressive to see how the portfolio would have behaved, even though the -9.38% already includes the devaluation of the currencies.

Finally, it is enlightening to see the behaviour of a portfolio created from scratch behave as the previous statistical analysis would have predicted.

Table 8 – Risk Scenarios in Bloomberg

Risk Scenarios	Profit & Loss % (100bps change in US rates)	Profit & Loss % (100bps change in US rates - 12M lag)
EM Virtual Portfolio	4.30	-9.38
BRL	5.02	-22.04
HKD	0.00	-0.19
KRW	2.47	-4.69
TWD	0.55	-5.50
USD	0.00	0.00

3.2.5 Comments

The creation of this tool required several weeks of work. First, it was necessary to define which indicators were the most important when analysing securities. To this end, both the review of the theoretical literature and the advice and feedback from the interviews with the professionals were crucial.

Then, online classes were taken as an update of computer knowledge was required. Indeed, the project would have been compromised without an improvement in VBA or an introduction to Python. Furthermore, there were some technical problems. To begin with, the computer did not support working with so many data - about 1200 equities multiplied by 36 indicators. Once this problem is solved, by increasing the power of the computer. The number of monthly data allowed by Bloomberg was reached. Indeed, each refresh of the information meant a consumption of more than 43,000 data "ticks," making weeks of work null and void. After negotiating with Bloomberg, a solution was found. They, exceptionally, agreed to reset the counters to zero, and from now, the tool no more live and is only updated when needed or modified.

4. Conclusion

The findings presented in this paper provide robust evidence that emerging markets, post 2008, are impacted by variations of US Fed's rate, especially after 12 months.

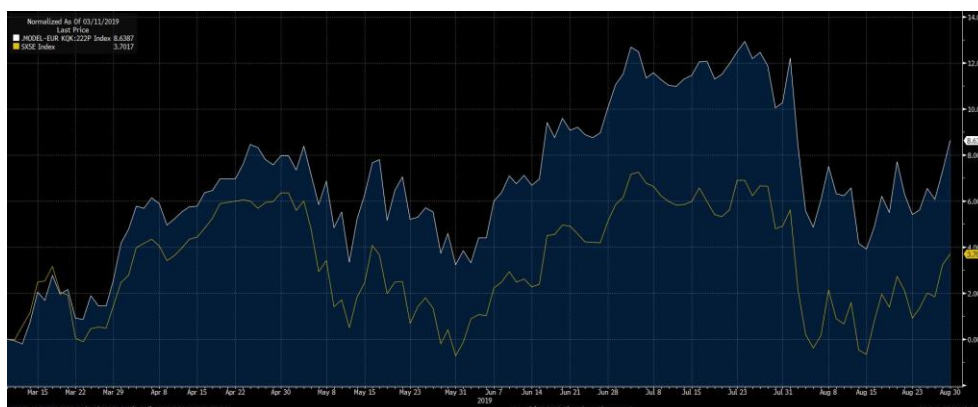
However, there are also strong clues that support the fact that the economic cycle in which one find oneself is a significant component on how emerging markets will react. The two periods, pre- and post- the 2008 financial crisis show completely opposite results. And this is true for both the statistical model and the correlation comparison between the value of currencies and the US rate.

Further research would be welcome to define the main driver for these results. Is the link between the US and the emerging countries still a kind of filiation or simply a driving effect of a booming economy?

In all cases, these results are consistent with the financial industry's investment process. Indeed, this strongly demonstrates that a systematic approach, starting with the big picture to understand all the ins and outs (macro analysis) and ending, for example, with the company's CEO and understanding how the company's governance is (micro analysis).

These comments reinforce the reasons of using these unbiased data-based tools but not only. Indeed, to go a bit further, the same strategy was used to create two other portfolios⁹; one in EUR and one in CHF (Figure 6 & 7).

Figure 6 – Virtual portfolio EUR – Performance vs. Euro Stoxx 50

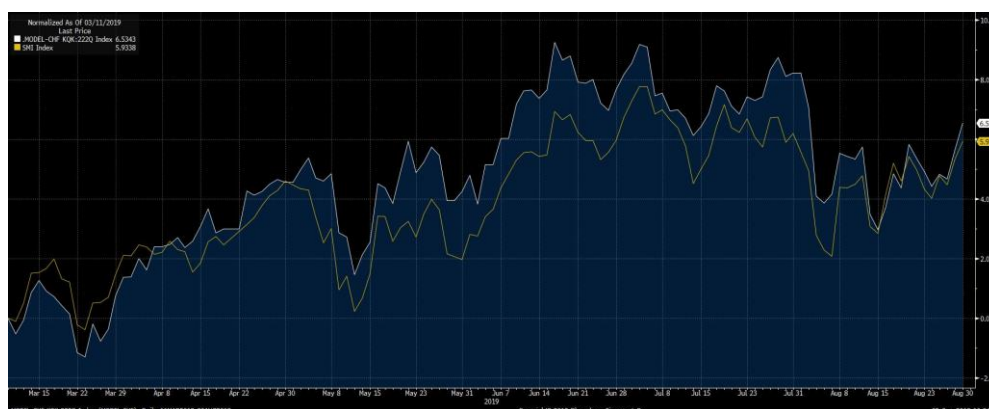


⁹ Created March 11th, 2019 and performance as of August 30th, 2019

Compared to their respective benchmarks, we obtain for the current portfolio CHF vs. SMI an outperformance of +0.6008% for the observed period. This is an interesting performance when you consider that more than 60% of the SMI is composed of only three stocks - Nestlé, Roche, Novartis - which in this case also appear in the portfolio. This means that in addition to monitoring the SMI's 60% performance, the portfolio creates alpha on the rest of its stock selection.

On the other hand, the current EUR portfolio beats all expectations, with an outperformance over the period of +4.9370%. Using the graph, we can see that not only does the portfolio perform better when its index is positive, but it also resists better when it falls.

Figure 7 – Virtual portfolio CHF – Performance vs. SMI



Thus, with not only three extracted portfolios bringing very encouraging results but also with a rationally established ranking of more than 1200 stocks, the tool has found its place in the daily business of the company in which I work. This is for operational reasons, compliance reasons and finally customer demand.

First of all, for operational reasons, a structure with less than ten employees will find it difficult to compare itself in resources and manpower with the giants of the industry, where dozens of analysts spend hours on sectors and stocks Automating a comparative analysis to perform a first important sorting is essential, both in terms of time savings and savings.

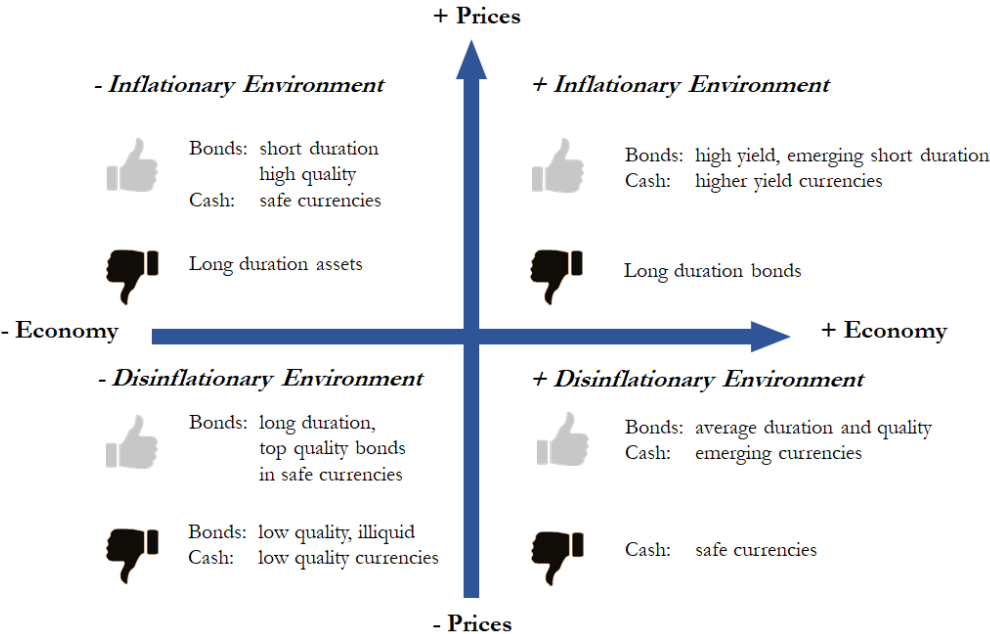
Compliance is becoming increasingly strict. It is necessary to demonstrate a systematic approach to investment and to be able to explain the investment process. Thus, between the advent of MiFID 2 and the implementation in January 2020 of LSFIn and LEFin, this type of tool becomes a matter of course for the

operation of external managers. Typically, we are often asked to provide an opinion and a recommendation for our advisory clients. So, from now on, it is possible for us to automate a factsheet with the desired title and all the ratios we use in order to present a complete analysis. This factsheet with the recommendation is then recorded and kept for future reference all regulatory requests from the market authority.

However, when the tool is presented, some clients may see this tool as a Blackbox with an opaque and dubious operation. However, as mentioned above, all the ratios used are available with a Bloomberg and there is no secret formula. The tool's encryption key is actually the weighting given to each ratios' family. These settings are decided by the investment committee on a monthly basis. Like Alan Turing in his Enigma resolution, there is nothing hidden or secret, there is only a configuration.

Furthermore, as the stock selection tool showed some encouraging results and to extend it. It would be interesting to replicate the strategy of a quantitative tool to precisely and rationally define the cycle in which the economy is in, to know the best investment solutions, in form and content (see figure 8).

Figure 8 – Economic scenarios (simplified)



Obviously, more research needs to be done, but there are signs that do not deceive. Markets are not rational, at least not in the short term. So, a factual help

can only make sense in a world where most of the variables exists. Of course, they are not implemented - yet. But everything leads to the belief, and there is a trend going in this direction day after day, that data is to finance what oil is to commodities.

To wrap up this last opinion, information is key. Behavioural errors are only situations where not all information has been received or interpreted. A gift for the financial industry that is completely shifting paradigm and thus experiencing a new youth. Past mistakes are only information to be interpreted in order not to reproduce them, while today's information only need to be collected to be used. Basically, in addition to having the cards in hand, the rest of the deck is available to all face up.

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Appendix 1: Observed data

DATE Stata	FED RATE	USDTRY	USD RUB	USD CNY	USD INR	USD BRL	USD MXN	USD NGN	USD ZAR
2019m4	2,4200	5,9661	64,6319	6,7349	69,5563	3,9210	18,9460	360,7500	14,2986
2019m3	2,4100	5,5707	65,6304	6,7121	69,1488	3,9205	19,4279	360,6000	14,5012
2019m2	2,4000	5,3370	65,9115	6,6941	70,7450	3,7568	19,2813	361,0000	14,0849
2019m1	2,4000	5,1646	65,4060	6,7000	71,0850	3,6468	19,1056	362,6300	13,2542
2018m12	2,2700	5,2894	69,7150	6,8785	69,7712	3,8745	19,6504	364,0000	14,3467
2018m11	2,2000	5,2153	66,9760	6,9605	69,5837	3,8663	20,3668	364,5000	13,8699
2018m10	2,1900	5,5829	65,8804	6,9757	73,9550	3,7224	20,3389	363,5000	14,7864
2018m9	1,9500	6,0559	65,5532	6,8688	72,4900	4,0493	18,7183	362,0000	14,1415
2018m8	1,9100	6,5396	67,5427	6,8315	70,9962	4,0540	19,0850	362,2500	14,6887
2018m7	1,9100	4,9140	62,5221	6,8168	68,5475	3,7574	18,6469	361,5000	13,2750
2018m6	1,8200	4,5929	62,7416	6,6210	68,4700	3,8765	19,9078	361,0000	13,7250
2018m5	1,7000	4,5267	62,3985	6,4106	67,3963	3,7239	19,9117	362,0000	12,6993
2018m4	1,6900	4,0621	62,9713	6,3323	66,6613	3,5072	18,7141	360,2500	12,4608
2018m3	1,5100	3,9553	57,1305	6,2753	65,1775	3,3063	18,1812	360,2500	11,8408
2018m2	1,4200	3,7992	56,3433	6,3310	65,1775	3,2477	18,8381	360,0000	11,7957
2018m1	1,4100	3,7554	56,2173	6,2888	63,5863	3,1869	18,5999	360,5000	11,8514
2017m12	1,3000	3,7982	57,6258	6,5067	63,8713	3,3085	19,6590	360,5000	12,3828
2017m11	1,1600	3,9200	58,4524	6,6091	64,4588	3,2683	18,6284	359,7500	13,6981
2017m10	1,1500	3,7915	58,3302	6,6350	64,7462	3,2713	19,1466	359,6300	14,1272
2017m9	1,1500	3,5633	57,4938	6,6528	65,2762	3,1623	18,2545	359,7500	13,5590
2017m8	1,1600	3,4529	58,0089	6,5901	63,9063	3,1491	17,8863	359,2500	13,0032
2017m7	1,1500	3,5193	59,7734	6,7266	64,1875	3,1266	17,8005	305,9000	13,1859
2017m6	1,0400	3,5207	58,9430	6,7809	64,5788	3,3072	18,1203	341,5000	13,0744
2017m5	0,9100	3,5279	56,5670	6,8180	64,5112	3,2266	18,6199	314,7500	13,1179
2017m4	0,9000	3,5517	56,9300	6,8935	64,2450	3,1765	18,8206	315,2500	13,3701
2017m3	0,7900	3,6363	56,2649	6,8872	64,8500	3,1224	18,7249	314,5000	13,4136
2017m2	0,6600	3,6462	58,3140	6,8670	66,6900	3,1097	20,1090	315,2500	13,1285
2017m1	0,6500	3,7733	60,1660	6,8840	67,8650	3,1486	20,8322	314,7500	13,4753
2016m12	0,5400	3,5235	61,2668	6,9450	67,9250	3,2500	20,7272	315,2500	13,7401
2016m11	0,4100	3,4375	64,1395	6,8894	68,3887	3,3857	20,5743	315,2500	14,0940
2016m10	0,4000	3,0940	63,3920	6,7758	66,7787	3,1939	18,8642	305,2500	13,4741
2016m9	0,4000	2,9999	62,8495	6,6718	66,6150	3,2613	19,3852	315,2500	13,7225
2016m8	0,4000	2,9579	65,3334	6,6793	66,9637	3,2263	18,7836	314,2500	14,7313
2016m7	0,3900	2,9888	66,0262	6,6350	66,9950	3,2491	18,7527	315,5000	13,8787
2016m6	0,3800	2,8777	63,9674	6,6480	67,5250	3,2126	18,2804	280,5000	14,7266
2016m5	0,3700	2,9494	66,6931	6,5854	67,2600	3,6109	18,4672	199,0500	15,7086
2016m4	0,3700	2,7955	64,6641	6,4780	66,3300	3,4351	17,1770	199,0500	14,2302
2016m3	0,3600	2,8173	67,0515	6,4536	66,2475	3,5928	17,2790	198,0600	14,7673
2016m2	0,3800	2,9657	75,2012	6,5520	68,4200	4,0163	18,1360	199,0500	15,8715
2016m1	0,3400	2,9548	75,4522	6,5760	67,7925	3,9991	18,1065	199,3100	15,8907
2015m12	0,2400	2,9172	73,5950	6,4937	66,1537	3,9640	17,2075	199,3000	15,4685
2015m11	0,1200	2,9138	66,4873	6,3984	66,6675	3,8685	16,5768	197,5200	14,4480
2015m10	0,1200	2,9150	63,9303	6,3175	65,2650	3,8568	16,5021	199,0400	13,8224
2015m9	0,1400	3,0256	65,4342	6,3561	65,5900	3,9471	16,9177	199,2600	13,8549
2015m8	0,1400	2,9149	64,2767	6,3762	66,4825	3,6198	16,7503	198,9200	13,2799
2015m7	0,1300	2,7708	61,7308	6,2097	64,1362	3,4211	16,1088	198,9000	12,6808
2015m6	0,1300	2,6816	55,2879	6,2010	63,6513	3,1030	15,7389	199,1500	12,1688
2015m5	0,1200	2,6629	52,3445	6,1976	63,8250	3,1787	15,3780	198,7500	12,1525
2015m4	0,1200	2,6725	51,6265	6,2032	63,4225	3,0144	15,3505	199,0000	11,9107
2015m3	0,1100	2,5975	58,1919	6,1997	62,4975	3,1974	15,2635	199,2800	12,1321
2015m2	0,1100	2,5082	61,6094	6,2695	61,8450	2,8389	14,9499	202,7700	11,6585
2015m1	0,1100	2,4417	68,9592	6,2505	61,8725	2,6836	14,9770	187,6000	11,6476
2014m12	0,1200	2,3350	58,6570	6,2057	63,0425	2,6582	14,7515	183,4500	11,5706
2014m11	0,0900	2,2201	49,3230	6,1434	62,0337	2,5651	13,9293	178,7000	11,0629

DATE Stata	FED RATE	USDTRY	USD RUB	USDCNY	USDINR	USDBRL	USDMXN	USDNGN	USDZAR
2014m10	0,0900	2,2229	42,9389	6,1129	61,3675	2,4779	13,4813	165,6000	11,0395
2014m9	0,0900	2,2782	39,5555	6,1394	61,7575	2,4461	13,4286	163,8200	11,2853
2014m8	0,0900	2,1630	37,0959	6,1437	60,5150	2,2362	13,0847	162,2600	10,6666
2014m7	0,0900	2,1418	35,6772	6,1738	60,5600	2,2638	13,2166	161,8700	10,7073
2014m6	0,1000	2,1185	34,0465	6,2033	60,1862	2,2145	12,9683	162,8900	10,6375
2014m5	0,0900	2,0968	34,8522	6,2473	59,1025	2,2413	12,8580	162,6600	10,5723
2014m4	0,0900	2,1125	35,7500	6,2593	60,3350	2,2327	13,0793	160,7400	10,5224
2014m3	0,0800	2,1407	35,1371	6,2168	59,8900	2,2720	13,0580	165,0500	10,5319
2014m2	0,0700	2,2061	35,9063	6,1427	61,7575	2,3435	13,2492	165,2000	10,7551
2014m1	0,0700	2,2565	35,2498	6,0598	62,6575	2,4128	13,3573	162,4900	11,1206
2013m12	0,0900	2,1482	32,7287	6,0540	61,8000	2,3592	13,0367	160,3000	10,4926
2013m11	0,0800	2,0192	33,1725	6,0930	62,4487	2,3361	13,1093	158,2400	10,1742
2013m10	0,0900	1,9968	32,1145	6,0942	61,4950	2,2399	13,0217	159,0100	10,0467
2013m9	0,0800	2,0185	32,3894	6,1191	62,6175	2,2169	13,0914	161,2700	10,0278
2013m8	0,0800	2,0381	33,2980	6,1200	65,7050	2,3855	13,3800	161,4000	10,2799
2013m7	0,0900	1,9342	33,0238	6,1302	60,3600	2,2765	12,7320	160,6000	9,8768
2013m6	0,0900	1,9281	32,8261	6,1421	59,3900	2,2322	12,9308	162,5300	9,8806
2013m5	0,1100	1,8757	31,9390	6,1339	56,5050	2,1386	12,8089	158,2000	10,0915
2013m4	0,1500	1,7924	31,0326	6,1610	53,8050	2,0014	12,1340	158,0200	8,9682
2013m3	0,1400	1,8103	31,0545	6,2090	54,2800	2,0219	12,3312	158,5500	9,2362
2013m2	0,1500	1,7985	30,5519	6,2218	54,3600	1,9775	12,7793	158,3800	9,0246
2013m1	0,1400	1,7588	30,0321	6,2200	53,2237	1,9916	12,7087	157,1700	8,9559
2012m12	0,1600	1,7836	30,4302	6,2303	54,9850	2,0428	12,8533	156,1500	8,4735
2012m11	0,1600	1,7872	30,8875	6,2281	54,2650	2,1360	12,9667	157,2000	8,9088
2012m10	0,1600	1,7926	31,3368	6,2377	53,8138	2,0299	13,0949	157,0600	8,6736
2012m9	0,1400	1,7970	31,2038	6,2847	52,8600	2,0258	12,8585	157,2000	8,3146
2012m8	0,1300	1,8179	32,3311	6,3486	55,5263	2,0297	13,1910	158,1000	8,4000
2012m7	0,1600	1,7952	32,1694	6,3617	55,6550	2,0569	13,3291	160,7400	8,2587
2012m6	0,1600	1,8083	32,4225	6,3540	55,6375	2,0093	13,3608	162,7500	8,1642
2012m5	0,1600	1,8673	33,4858	6,3685	56,1100	2,0226	14,3755	159,8500	8,5230
2012m4	0,1400	1,7573	29,4005	6,2795	52,7363	1,9073	13,0127	157,4300	7,7774
2012m3	0,1300	1,7826	29,4459	6,2990	50,8750	1,8263	12,8107	157,7000	7,6730
2012m2	0,1000	1,7486	29,0646	6,2938	49,0238	1,7177	12,8624	157,6500	7,5063
2012m1	0,0800	1,7765	30,1704	6,3083	49,4550	1,7471	13,0456	161,1000	7,8108
2011m12	0,0700	1,8909	32,1026	6,2949	53,0650	1,8663	13,9357	162,3000	8,0900
2011m11	0,0800	1,8281	30,7360	6,3793	52,2112	1,8085	13,6251	161,2500	8,1089
2011m10	0,0700	1,7711	30,2315	6,3549	48,6950	1,7173	13,3517	159,2500	7,9599
2011m9	0,0800	1,8599	32,2404	6,3820	48,9637	1,8792	13,8973	159,7200	8,0967
2011m8	0,1000	1,7156	28,8286	6,3781	46,0950	1,5896	12,3327	154,7800	6,9915
2011m7	0,0700	1,6885	27,6379	6,4415	44,1881	1,5497	11,7354	153,0000	6,6910
2011m6	0,0900	1,6230	27,8994	6,4634	44,6981	1,5635	11,7135	152,2800	6,7693
2011m5	0,0900	1,5934	27,9988	6,4808	45,0600	1,5805	11,5693	156,5100	6,8021
2011m4	0,1000	1,5212	27,3808	6,4911	44,2194	1,5743	11,4959	154,6500	6,5686
2011m3	0,1400	1,5452	28,4260	6,5524	44,5850	1,6325	11,9048	155,1000	6,7743
2011m2	0,1600	1,5980	28,8570	6,5770	45,2708	1,6632	12,1016	153,3000	6,9687
2011m1	0,1700	1,6043	29,7888	6,6025	45,9050	1,6736	12,1219	152,1500	7,1855
2010m12	0,1800	1,5439	30,5174	6,5933	44,7050	1,6613	12,3401	152,0000	6,6291
2010m11	0,1900	1,5044	31,5083	6,6670	45,8850	1,7129	12,4877	150,8500	7,1032
2010m10	0,1900	1,4329	30,8592	6,6740	44,4275	1,7019	12,3450	150,8000	6,9990
2010m9	0,1900	1,4456	30,5350	6,6921	44,9450	1,7079	12,5936	154,5100	6,9630
2010m8	0,1900	1,5265	30,8038	6,8078	47,0750	1,7559	13,2046	150,6000	7,3740
2010m7	0,1800	1,5078	30,2050	6,7745	46,4075	1,7549	12,6453	150,2000	7,2972
2010m6	0,1800	1,5845	31,2095	6,7818	46,4500	1,8047	12,9409	149,8000	7,6710
2010m5	0,2000	1,5730	30,9025	6,8278	46,3675	1,8209	12,9346	151,3500	7,6700

DATE Stata	FED RATE	USDTRY	USD RUB	USDCNY	USDINR	USDBRL	USDMXN	USDNGN	USDZAR
2010m4	0,2000	1,4882	29,2537	6,8253	44,3650	1,7394	12,3109	150,9400	7,3890
2010m3	0,1600	1,5176	29,4205	6,8259	44,9175	1,7813	12,3650	149,9500	7,2850
2010m2	0,1300	1,5498	29,9485	6,8261	46,0850	1,8076	12,7720	150,3500	7,7154
2010m1	0,1100	1,4972	30,3482	6,8269	46,1782	1,8950	13,0950	150,9300	7,6263
2009m12	0,1200	1,4986	30,0350	6,8271	46,5250	1,7445	13,0914	149,5000	7,3980
2009m11	0,1200	1,5273	29,2640	6,8274	46,5150	1,7557	12,9342	148,2500	7,4046
2009m10	0,1200	1,5054	29,1384	6,8275	46,9750	1,7612	13,1977	150,9000	7,8150
2009m9	0,1500	1,4848	30,0154	6,8264	48,1100	1,7670	13,5115	149,8500	7,5098
2009m8	0,1600	1,5006	31,7919	6,8308	48,8250	1,8804	13,3633	154,0800	7,7771
2009m7	0,1600	1,4707	31,4644	6,8321	47,9350	1,8651	13,1917	156,7000	7,7610
2009m6	0,2100	1,5403	31,1527	6,8305	47,9050	1,9518	13,1850	148,1000	7,7140
2009m5	0,1800	1,5333	30,9700	6,8291	47,0913	1,9702	13,1506	148,0000	7,9386
2009m4	0,1500	1,5973	33,1005	6,8210	50,0925	2,1904	13,8408	148,0000	8,5274
2009m3	0,1800	1,6650	33,9540	6,8339	50,7300	2,3228	14,1722	148,1000	9,5026
2009m2	0,2200	1,7001	35,9137	6,8400	51,1612	2,3866	15,2550	147,9000	10,1165
2009m1	0,1500	1,6432	35,7364	6,8519	48,8750	2,3230	14,3333	148,7500	10,1996
2008m12	0,1600	1,5405	29,4027	6,8277	48,8025	2,3145	13,6733	139,7000	9,5250
2008m11	0,3900	1,5630	27,9231	6,8347	50,1075	2,3063	13,4647	119,3300	10,0500
2008m10	0,9700	1,5423	27,0690	6,8388	49,4575	2,1590	12,8259	117,7000	9,7800
2008m9	1,8100	1,2695	25,6439	6,8460	46,9550	1,9046	10,9378	117,6200	8,2865
2008m8	2,0000	1,1844	24,6450	6,8397	43,9375	1,6315	10,2870	117,6300	7,7045
2008m7	2,0100	1,1639	23,4318	6,8319	42,5700	1,5654	10,0368	117,7800	7,3360
2008m6	2,0000	1,2264	23,4446	6,8544	43,0400	1,6037	10,3098	117,8200	7,8194
2008m5	1,9900	1,2186	23,6840	6,9421	42,4575	1,6270	10,3300	117,8300	7,6100
2008m4	2,2800	1,2792	23,6377	6,9878	40,4950	1,6629	10,4860	117,9000	7,5615
2008m3	2,6100	1,3241	23,4929	7,0120	40,1175	1,7519	10,6421	117,0700	8,0905
2008m2	2,9800	1,2031	24,0143	7,1108	40,0141	1,6907	10,7136	117,0300	7,8300
2008m1	3,9400	1,1766	24,4353	7,1818	39,3685	1,7592	10,8272	117,7900	7,4820
2007m12	4,2400	1,1700	24,6006	7,3037	39,4125	1,7800	10,8988	117,9000	6,8625
2007m11	4,4900	1,1757	24,5010	7,3919	39,5987	1,7924	10,9202	118,9300	6,8038
2007m10	4,7600	1,1744	24,6556	7,4627	39,3256	1,7360	10,6542	121,1500	6,4986
2007m9	4,9400	1,2072	24,8588	7,5105	39,8450	1,8336	10,9355	125,2000	6,8698
2007m8	5,0200	1,3026	25,6560	7,5450	40,9300	1,9619	11,0303	126,1600	7,1475
2007m7	5,2600	1,2756	25,5537	7,5728	40,3675	1,8825	10,9860	127,1400	7,1388
2007m6	5,2500	1,3040	25,7449	7,6151	40,7225	1,9290	10,8084	127,2500	7,0430
2007m5	5,2500	1,3203	25,8835	7,6460	40,6115	1,9246	10,7416	127,6500	7,1175
2007m4	5,2500	1,3683	25,6908	7,7033	41,1775	2,0345	10,9658	127,4500	7,0800
2007m3	5,2600	1,3847	25,9860	7,7315	43,4750	2,0594	11,0494	127,9500	7,2638
2007m2	5,2600	1,4161	26,1157	7,7417	44,2938	2,1205	11,1619	128,2500	7,2325
2007m1	5,2500	1,4183	26,4700	7,7737	44,1825	2,1229	11,0242	128,2000	7,2165
2006m12	5,2400	1,4156	26,3255	7,8045	44,2700	2,1364	10,8033	128,8000	7,0060
2006m11	5,2500	1,4527	26,2597	7,8331	44,7470	2,1649	10,9823	128,2500	7,1538
2006m10	5,2500	1,4539	26,7121	7,8794	45,0325	2,1418	10,7733	128,2500	7,3710
2006m9	5,2500	1,5155	26,7958	7,9040	45,8675	2,1690	10,9850	128,3500	7,7838
2006m8	5,2500	1,4650	26,7521	7,9527	46,4400	2,1450	10,9128	128,2900	7,1993
2006m7	5,2400	1,4979	26,8040	7,9690	46,5000	2,1770	10,9656	128,2500	6,9475
2006m6	4,9900	1,5870	26,8455	7,9943	46,0400	2,1650	11,3463	128,4000	7,1740
2006m5	4,9400	1,5685	27,0136	8,0175	46,3700	2,3070	11,3373	128,7500	6,7368
2006m4	4,7900	1,3195	27,1746	8,0140	44,8800	2,0870	11,0613	128,3300	6,0050
2006m3	4,5900	1,3483	27,7050	8,0172	44,6225	2,1640	10,8740	128,1500	6,1765
2006m2	4,4900	1,3155	28,0359	8,0402	44,3900	2,1235	10,4883	128,7500	6,1650
2006m1	4,2900	1,3245	28,0788	8,0608	44,1175	2,2120	10,4498	129,3000	6,0579
2005m12	4,1600	1,3510	28,7414	8,0702	45,0500	2,3355	10,6350	130,3800	6,3288
2005m11	4,0000	1,3553	28,8072	8,0804	45,9288	2,2035	10,5580	130,3000	6,4625

DATE Stata	FED RATE	USDTRY	USDRUB	USDCNY	USDINR	USDBRL	USDMXN	USDNGN	USDZAR
2005m10	3,7800	1,3513	28,5850	8,0845	45,1637	2,2518	10,7870	130,2500	6,7025
2005m9	3,6200	1,3470	28,4977	8,0920	44,0150	2,2275	10,7590	130,7500	6,3701
2005m8	3,5000	1,3455	28,4800	8,0998	44,1500	2,3570	10,7512	131,7500	6,3660
2005m7	3,2600	1,3259	28,6300	8,1056	43,4800	2,3787	10,5949	136,5000	6,5811
2005m6	3,0400	1,3305	28,6300	8,2764	43,4850	2,3325	10,7490	133,1000	6,6495
2005m5	3,0000	1,3645	28,2405	8,2767	43,7000	2,4076	10,8790	131,8500	6,8120
2005m4	2,7900	1,3915	27,7810	8,2764	43,5350	2,5280	11,0477	131,7500	6,0858
2005m3	2,6300	1,3510	27,8621	8,2764	43,7450	2,6790	11,1703	131,6500	6,2395
2005m2	2,5000	1,2830	27,6750	8,2765	43,6750	2,5875	11,0914	132,8500	5,8175
2005m1	2,2800	1,3345	28,0200	8,2764	43,7200	2,6088	11,1870	132,2500	5,9850
2004m12	2,1600	1,3435	27,7200	8,2765	43,4600	2,6560	11,1470	132,1000	5,6650
2004m11	1,9300	1,4315	28,1300	8,2765	44,6350	2,7200	11,2240	132,9000	5,8033
2004m10	1,7600	1,4780	28,7455	8,2766	45,3875	2,8570	11,5363	132,2500	6,1000
2004m9	1,6100	1,5055	29,2229	8,2765	45,9500	2,8608	11,3820	132,2500	6,4535
2004m8	1,4300	1,5035	29,2620	8,2765	46,3538	2,9270	11,3890	132,2500	6,6313
2004m7	1,2600	1,4660	29,1060	8,2770	46,4700	3,0365	11,4152	132,5000	6,2675
2004m6	1,0300	1,4840	29,0698	8,2766	46,0600	3,0850	11,4865	132,7500	6,1362
2004m5	1,0000	1,4885	28,9940	8,2768	45,4650	3,1890	11,4520	132,5000	6,5150
2004m4	1,0000	1,4214	29,0060	8,2771	44,5000	2,9330	11,4198	134,0400	6,9901
2004m3	1,0000	1,3145	28,5190	8,2770	43,6000	2,8953	11,1251	133,0000	6,2925
2004m2	1,0100	1,3290	28,5105	8,2769	45,2350	2,9059	11,0650	136,4000	6,6328
2004m1	1,0000	1,3405	28,5300	8,2768	45,2650	2,9345	11,0614	136,8500	7,0713
2003m12	0,9800	1,4065	29,2425	8,2767	45,6250	2,8915	11,2285	139,5500	6,6843
2003m11	1,0000	1,4620	29,7405	8,2770	45,7700	2,9460	11,3785	144,1500	6,3926
2003m10	1,0100	1,4830	29,9450	8,2766	45,3200	2,8675	11,0175	132,7500	6,8960
2003m9	1,0100	1,3915	30,5870	8,2770	45,7600	2,9000	10,9860	131,2000	6,9309
2003m8	1,0300	1,4010	30,5120	8,2771	45,8400	2,9760	11,0471	132,0000	7,3770
2003m7	1,0100	1,4275	30,2591	8,2773	46,1420	2,9660	10,6028	128,2000	7,3715
2003m6	1,2200	1,4185	30,3655	8,2775	46,4875	2,8440	10,4570	130,1000	7,4704
2003m5	1,2600	1,4295	30,7250	8,2768	47,0800	2,9675	10,3145	129,7500	8,0830
2003m4	1,2600	1,5655	31,1100	8,2770	47,3250	2,9105	10,2900	135,0000	7,2480
2003m3	1,2500	1,7140	31,3863	8,2774	47,4700	3,3525	10,7700	129,8000	7,8651
2003m2	1,2600	1,5970	31,5845	8,2775	47,6700	3,5685	11,0160	128,0500	8,0800
2003m1	1,2400	1,6501	31,8490	8,2769	47,7950	3,4975	10,9063	129,1000	8,5152
2002m12	1,2400	1,6551	31,9550	8,2770	47,9750	3,5400	10,3700	126,5000	8,5702
2002m11	1,3400	1,5396	31,8650	8,2772	48,3200	3,6530	10,1465	128,8000	9,2600
2002m10	1,7500	1,6781	31,7850	8,2772	48,3600	3,6300	10,2025	127,3500	10,0050
2002m9	1,7500	1,6641	31,6900	8,2772	48,3750	3,7395	10,2065	126,2500	10,5400
2002m8	1,7400	1,6351	31,6330	8,2768	48,5100	3,0060	9,9350	127,2500	10,5600
2002m7	1,7300	1,6925	31,4750	8,2766	48,6700	3,4600	9,8695	134,0000	10,2100
2002m6	1,7500	1,5875	31,4750	8,2771	48,8850	2,8175	9,9465	119,8500	10,2950
2002m5	1,7500	1,4455	31,3350	8,2765	49,0450	2,5130	9,6450	114,4500	9,8330
2002m4	1,7500	1,3420	31,2000	8,2773	48,9500	2,3610	9,3950	114,4500	10,6650
2002m3	1,7300	1,3491	31,2100	8,2774	48,8150	2,3250	9,0350	117,2500	11,3300
2002m2	1,7400	1,3975	30,9620	8,2765	48,7400	2,3635	9,1190	117,3000	11,3650
2002m1	1,7300	1,3165	30,7100	8,2766	48,5200	2,4130	9,1475	114,5000	11,4150
2001m12	1,8200	1,4501	30,5050	8,2765	48,2450	2,3105	9,1575	119,5000	11,9610
2001m11	2,0900	1,4795	29,9150	8,2774	47,9250	2,4985	9,2240	120,5000	10,2555
2001m10	2,4900	1,5918	29,7290	8,2768	48,0050	2,6965	9,2590	112,1600	9,4420
2001m9	3,0700	1,5351	29,4670	8,2768	47,8600	2,6700	9,5140	115,5000	9,0265
2001m8	3,6500	1,3676	29,4230	8,2769	47,1350	2,5635	9,2040	112,2600	8,4390
2001m7	3,7700	1,3296	29,3550	8,2770	47,1350	2,4665	9,1415	118,0000	8,2575
2001m6	3,9700	1,2550	29,1470	8,2767	47,0400	2,3105	9,0410	112,5500	8,0450
2001m5	4,2100	1,1700	29,1620	8,2770	47,0000	2,3820	9,1735	114,5000	8,0010

DATE Stata	FED RATE	USDTRY	USDRUB	USDCNY	USDINR	USDBRL	USDMXN	USDNGN	USDZAR
2001m4	4,8000	1,1401	28,9300	8,2774	46,8300	2,2000	9,2390	119,8500	8,0330
2001m3	5,3100	1,0425	28,7600	8,2777	46,6150	2,1525	9,4615	122,0000	8,0125
2001m2	5,4900	0,9630	28,6700	8,2783	46,5500	2,0460	9,6881	114,6000	7,6713
2001m1	5,9800	0,6724	28,3700	8,2781	46,4000	1,9720	9,6775	110,3500	7,7350
2000m12	6,4000	0,6685	28,1600	8,2774	46,6750	1,9500	9,6225	110,0000	7,5788
2000m11	6,5100	0,6828	27,9340	8,2777	46,8650	1,9800	9,4160	116,0000	7,7444
2000m10	6,5100	0,6812	27,8820	8,2775	46,7300	1,9010	9,5665	109,6000	7,5500
2000m9	6,5200	0,6649	27,7820	8,2798	46,0400	1,8440	9,4370	108,7000	7,2350
2000m8	6,5000	0,6558	27,7750	8,2786	45,7900	1,8235	9,2020	103,3500	6,9785
2000m7	6,5400	0,6351	27,8600	8,2792	45,0100	1,7815	9,3520	105,3000	6,9538
2000m6	6,5300	0,6193	28,0700	8,2782	44,6750	1,8060	9,8300	105,1000	6,7950
2000m5	6,2700	0,6156	28,2525	8,2773	44,5750	1,8240	9,5070	101,9500	6,9680
2000m4	6,0200	0,6111	28,4300	8,2799	43,6700	1,8070	9,3925	100,8000	6,7885
2000m3	5,8500	0,5899	28,6600	8,2787	43,6200	1,7360	9,2530	102,9000	6,5250
2000m2	5,7300	0,5744	28,7000	8,2786	43,6200	1,7665	9,3690	102,1000	6,3340
2000m1	5,4500	0,5583	28,6350	8,2777	43,6350	1,7840	9,5925	99,3500	6,3060
1999m12	5,3000	0,5443	27,5500	8,2795	43,5500	1,7990	9,5050	99,4000	6,1548
1999m11	5,4200	0,5183	26,7000	8,2789	43,4125	1,9230	9,4375	99,5000	6,1755
1999m10	5,2000	0,4808	26,1050	8,2778	43,3800	1,9490	9,5975	95,3400	6,1465
1999m9	5,2200	0,4614	25,2350	8,2778	43,6200	1,9375	9,3600	95,2500	6,0075
1999m8	5,0700	0,4461	25,0850	8,2770	43,4800	1,9190	9,3550	100,1000	6,0850
1999m7	4,9900	0,4297	24,2450	8,2774	43,3000	1,8010	9,4050	100,0000	6,1705
1999m6	4,7600	0,4220	24,2550	8,2787	43,3700	1,7525	9,3550	100,0300	6,0125
1999m5	4,7400	0,4067	24,7250	8,2785	42,8500	1,7210	9,7150	97,7800	6,2200
1999m4	4,7400	0,3880	24,5900	8,2790	42,8000	1,6650	9,2889	87,6100	6,0713
1999m3	4,8100	0,3731	24,8750	8,2800	42,4300	1,7175	9,5619	87,5800	6,1578
1999m2	4,7600	0,3543	23,0750	8,2789	42,5070	2,0350	9,9855	86,5000	6,1925
1999m1	4,6300	0,3337	22,9500	8,2778	42,4900	2,0500	10,1675	86,8000	6,0623
1998m12	4,6800	0,3155	20,6200	8,2789	42,4900	1,2083	9,8970	21,8900	5,8675
1998m11	4,8300	0,3034	18,2250	8,2782	42,5750	1,2008	9,9850	21,8900	5,6920
1998m10	5,0700	0,2862	16,6500	8,2780	42,4500	1,1928	10,0950	21,8900	5,5953
1998m9	5,5100	0,2777	15,9100	8,2780	42,4500	1,1856	10,2200	21,8900	5,9250
1998m8	5,5500	0,2775	10,0500	8,2800	42,4900	1,1765	9,9600	21,8900	6,4503
1998m7	5,5400	0,2703	6,2380	8,2799	42,5300	1,1630	8,9350	21,8900	6,1253
1998m6	5,5600	0,2664	6,1980	8,2797	42,4100	1,1565	8,9580	22,0000	5,9653
1998m5	5,4900	0,2583	6,1600	8,2793	41,6800	1,1501	8,8550	22,0000	5,1560
1998m4	5,4500	0,2500	6,1330	8,2779	39,7200	1,1443	8,4900	22,0000	5,0535
1998m3	5,4900	0,2427	6,1060	8,2793	39,4900	1,1370	8,5200	22,0000	5,0345
1998m2	5,5000	0,2293	6,0700	8,2789	39,3400	1,1300	8,6100	22,0000	4,9465
1998m1	5,5600	0,2182	6,0210	8,2785	38,7000	1,1234	8,4500	22,0000	4,9330
1997m12	5,5000	0,2060	5,9580	8,2795	39,2000	1,1160	8,0550	22,0000	4,8665
1997m11	5,5200	0,1956	5,9170	8,2800	38,8500	1,1095	8,2050	22,0000	4,8525

Appendix 2: STATA code (.dofile)

1	clear
2	import excel "C:\Users\simon\OneDrive\Bureau\1997-2019 DATA.xlsx", sheet("ALL CCY") firstrow
3	ssc install fcstats
4	ssc install tsmktim
5	sort DATEStata
6	tsmktim Time, start (1997m11)
7	tsset Time
8	gen logUSDTRY = log(USDTRY)
9	gen logUSDRUB = log(USDRUB)
10	gen logUSDCNY = log(USDCNY)
11	gen logUSDINR = log(USDINR)
12	gen logUSDBRL = log(USDBRL)
13	gen logUSDMXN = log(USDMXN)
14	gen logUSDNGN = log(USDNGN)
15	gen logUSDZAR = log(USDZAR)
16	reg logUSDTRY FEDRATE
17	reg L3.logUSDTRY FEDRATE
18	reg L6.logUSDTRY FEDRATE
19	reg L9.logUSDTRY FEDRATE
20	reg L12.logUSDTRY FEDRATE
21	reg logUSDRUB FEDRATE
22	reg L3.logUSDRUB FEDRATE
23	reg L6.logUSDRUB FEDRATE
24	reg L9.logUSDRUB FEDRATE
25	reg L12.logUSDRUB FEDRATE
26	reg logUSDCNY FEDRATE
27	reg L3.logUSDCNY FEDRATE
28	reg L6.logUSDCNY FEDRATE
29	reg L9.logUSDCNY FEDRATE
30	reg L12.logUSDCNY FEDRATE
31	reg logUSDINR FEDRATE
32	reg L3.logUSDINR FEDRATE

33	reg L6.logUSDINR FEDRATE
34	reg L9.logUSDINR FEDRATE
35	reg L12.logUSDINR FEDRATE
36	reg logUSDBRL FEDRATE
37	reg L3.logUSDBRL FEDRATE
38	reg L6.logUSDBRL FEDRATE
39	reg L9.logUSDBRL FEDRATE
40	reg L12.logUSDBRL FEDRATE
41	reg logUSDMXN FEDRATE
42	reg L3.logUSDMXN FEDRATE
43	reg L6.logUSDMXN FEDRATE
44	reg L9.logUSDMXN FEDRATE
45	reg L12.logUSDMXN FEDRATE
46	reg logUSDNGN FEDRATE
47	reg L3.logUSDNGN FEDRATE
48	reg L6.logUSDNGN FEDRATE
49	reg L9.logUSDNGN FEDRATE
50	reg L12.logUSDNGN FEDRATE
51	reg logUSDZAR FEDRATE
52	reg L3.logUSDZAR FEDRATE
53	reg L6.logUSDZAR FEDRATE
54	reg L9.logUSDZAR FEDRATE
55	reg L12.logUSDZAR FEDRATE
56	
57	*1997-2007
58	clear
59	import excel "C:\Users\simon\OneDrive\Bureau\1997-2007 DATA.xlsx", sheet("ALL CCY") firstrow
60	ssc install fcstats
61	ssc install tsmktim
62	sort DATEstata
63	tsmktim Time, start (1997m11)
64	tsset Time
65	gen logUSDTRY = log(USDTRY)
66	gen logUSDRUB = log(USDRUB)

67	gen logUSDCNY = log(USDCNY)
68	gen logUSDINR = log(USDINR)
69	gen logUSDBRL = log(USDBRL)
70	gen logUSDMXN = log(USDMXN)
71	gen logUSDNGN = log(USDNGN)
72	gen logUSDZAR = log(USDZAR)
73	reg logUSDTRY FEDRATE
74	reg L3.logUSDTRY FEDRATE
75	reg L6.logUSDTRY FEDRATE
76	reg L9.logUSDTRY FEDRATE
77	reg L12.logUSDTRY FEDRATE
78	reg logUSDRUB FEDRATE
79	reg L3.logUSDRUB FEDRATE
80	reg L6.logUSDRUB FEDRATE
81	reg L9.logUSDRUB FEDRATE
82	reg L12.logUSDRUB FEDRATE
83	reg logUSDCNY FEDRATE
84	reg L3.logUSDCNY FEDRATE
85	reg L6.logUSDCNY FEDRATE
86	reg L9.logUSDCNY FEDRATE
87	reg L12.logUSDCNY FEDRATE
88	reg logUSDINR FEDRATE
89	reg L3.logUSDINR FEDRATE
90	reg L6.logUSDINR FEDRATE
91	reg L9.logUSDINR FEDRATE
92	reg L12.logUSDINR FEDRATE
93	reg logUSDBRL FEDRATE
94	reg L3.logUSDBRL FEDRATE
95	reg L6.logUSDBRL FEDRATE
96	reg L9.logUSDBRL FEDRATE
97	reg L12.logUSDBRL FEDRATE
98	reg logUSDMXN FEDRATE
99	reg L3.logUSDMXN FEDRATE
100	reg L6.logUSDMXN FEDRATE
101	reg L9.logUSDMXN FEDRATE

102	reg L12.logUSDMXN FEDRATE
103	reg logUSDNGN FEDRATE
104	reg L3.logUSDNGN FEDRATE
105	reg L6.logUSDNGN FEDRATE
106	reg L9.logUSDNGN FEDRATE
107	reg L12.logUSDNGN FEDRATE
108	reg logUSDZAR FEDRATE
109	reg L3.logUSDZAR FEDRATE
110	reg L6.logUSDZAR FEDRATE
111	reg L9.logUSDZAR FEDRATE
112	reg L12.logUSDZAR FEDRATE
113	
114	*2008-2019
115	clear
116	import excel "C:\Users\simon\OneDrive\Bureau\2008-2019 DATA.xlsx", sheet("ALL CCY") firstrow
117	ssc install fcstats
118	ssc install tsmktim
119	sort DATEstata
120	tsmktim Time, start (2008m1)
121	tsset Time
122	gen logUSDTRY = log(USDTRY)
123	gen logUSDRUB = log(USDRUB)
124	gen logUSDCNY = log(USDCNY)
125	gen logUSDINR = log(USDINR)
126	gen logUSDBRL = log(USDBRL)
127	gen logUSDMXN = log(USDMXN)
128	gen logUSDNGN = log(USDNGN)
129	gen logUSDZAR = log(USDZAR)
130	reg logUSDTRY FEDRATE
131	reg L3.logUSDTRY FEDRATE
132	reg L6.logUSDTRY FEDRATE
133	reg L9.logUSDTRY FEDRATE
134	reg L12.logUSDTRY FEDRATE
135	reg logUSDRUB FEDRATE

136	reg L3.logUSDRUB FEDRATE
137	reg L6.logUSDRUB FEDRATE
138	reg L9.logUSDRUB FEDRATE
139	reg L12.logUSDRUB FEDRATE
140	reg logUSDCNY FEDRATE
141	reg L3.logUSDCNY FEDRATE
142	reg L6.logUSDCNY FEDRATE
143	reg L9.logUSDCNY FEDRATE
144	reg L12.logUSDCNY FEDRATE
145	reg logUSDINR FEDRATE
146	reg L3.logUSDINR FEDRATE
147	reg L6.logUSDINR FEDRATE
148	reg L9.logUSDINR FEDRATE
149	reg L12.logUSDINR FEDRATE
150	reg logUSDBRL FEDRATE
151	reg L3.logUSDBRL FEDRATE
152	reg L6.logUSDBRL FEDRATE
153	reg L9.logUSDBRL FEDRATE
154	reg L12.logUSDBRL FEDRATE
155	reg logUSDMXN FEDRATE
156	reg L3.logUSDMXN FEDRATE
157	reg L6.logUSDMXN FEDRATE
158	reg L9.logUSDMXN FEDRATE
159	reg L12.logUSDMXN FEDRATE
160	reg logUSDNGN FEDRATE
161	reg L3.logUSDNGN FEDRATE
162	reg L6.logUSDNGN FEDRATE
163	reg L9.logUSDNGN FEDRATE
164	reg L12.logUSDNGN FEDRATE
165	reg logUSDZAR FEDRATE
166	reg L3.logUSDZAR FEDRATE
167	reg L6.logUSDZAR FEDRATE
168	reg L9.logUSDZAR FEDRATE
169	reg L12.logUSDZAR FEDRATE
170	

171	*WITH CURRENT ACCOUNTS
172	*1997-2007
173	clear
174	import excel "C:\Users\simon\OneDrive\Bureau\1997-2007 CURRENT ACCOUNTS.xlsx", sheet("ALL CCY") firstrow
175	ssc install fcstats
176	ssc install tsmktim
177	sort DATEStata
178	tsmktim Time, start (1998q4)
179	tsset Time
180	gen logUSDTRY = log(USDTRY)
181	gen logUSDRUB = log(USDRUB)
182	gen logUSDCNY = log(USDCNY)
183	gen logUSDINR = log(USDINR)
184	gen logUSDBRL = log(USDBRL)
185	gen logUSDMXN = log(USDMXN)
186	gen logUSDNGN = log(USDNGN)
187	gen logUSDZAR = log(USDZAR)
188	reg logUSDTRY FEDRATE TRYQCURREACC
189	reg L3.logUSDTRY FEDRATE TRYQCURREACC
190	reg L6.logUSDTRY FEDRATE TRYQCURREACC
191	reg L9.logUSDTRY FEDRATE TRYQCURREACC
192	reg L12.logUSDTRY FEDRATE TRYQCURREACC
193	reg logUSDRUB FEDRATE RUBQCURREACC
194	reg L3.logUSDRUB FEDRATE RUBQCURREACC
195	reg L6.logUSDRUB FEDRATE RUBQCURREACC
196	reg L9.logUSDRUB FEDRATE RUBQCURREACC
197	reg L12.logUSDRUB FEDRATE RUBQCURREACC
198	reg logUSDCNY FEDRATE CNYQCURREACC
199	reg L3.logUSDCNY FEDRATE CNYQCURREACC
200	reg L6.logUSDCNY FEDRATE CNYQCURREACC
201	reg L9.logUSDCNY FEDRATE CNYQCURREACC
202	reg L12.logUSDCNY FEDRATE CNYQCURREACC
203	reg logUSDINR FEDRATE INRQCURREACC
204	reg L3.logUSDINR FEDRATE INRQCURREACC

205	reg L6.logUSDINR FEDRATE INRQCURREACC
206	reg L9.logUSDINR FEDRATE INRQCURREACC
207	reg L12.logUSDINR FEDRATE INRQCURREACC
208	reg logUSDBRL FEDRATE BRLQCURREACC
209	reg L3.logUSDBRL FEDRATE BRLQCURREACC
210	reg L6.logUSDBRL FEDRATE BRLQCURREACC
211	reg L9.logUSDBRL FEDRATE BRLQCURREACC
212	reg L12.logUSDBRL FEDRATE BRLQCURREACC
213	reg logUSDMXN FEDRATE MXNQCURREACC
214	reg L3.logUSDMXN FEDRATE MXNQCURREACC
215	reg L6.logUSDMXN FEDRATE MXNQCURREACC
216	reg L9.logUSDMXN FEDRATE MXNQCURREACC
217	reg L12.logUSDMXN FEDRATE MXNQCURREACC
218	reg logUSDNGN FEDRATE NGNQCURREACC
219	reg L3.logUSDNGN FEDRATE NGNQCURREACC
220	reg L6.logUSDNGN FEDRATE NGNQCURREACC
221	reg L9.logUSDNGN FEDRATE NGNQCURREACC
222	reg L12.logUSDNGN FEDRATE NGNQCURREACC
223	reg logUSDZAR FEDRATE ZARQCURREACC
224	reg L3.logUSDZAR FEDRATE ZARQCURREACC
225	reg L6.logUSDZAR FEDRATE ZARQCURREACC
226	reg L9.logUSDZAR FEDRATE ZARQCURREACC
227	reg L12.logUSDZAR FEDRATE ZARQCURREACC
228	
229	*With no lags in Current account (1998-2008)
230	reg logUSDTRY FEDRATE TRYQCURREACC
231	reg L3.logUSDTRY FEDRATE L3.TRYQCURREACC
232	reg L6.logUSDTRY FEDRATE L6.TRYQCURREACC
233	reg L9.logUSDTRY FEDRATE L9.TRYQCURREACC
234	reg L12.logUSDTRY FEDRATE L12.TRYQCURREACC
235	reg logUSDRUB FEDRATE RUBQCURREACC
236	reg L3.logUSDRUB FEDRATE L3.RUBQCURREACC
237	reg L6.logUSDRUB FEDRATE L6.RUBQCURREACC
238	reg L9.logUSDRUB FEDRATE L9.RUBQCURREACC
239	reg L12.logUSDRUB FEDRATE L12.RUBQCURREACC

240	reg logUSDCNY FEDRATE CNYQCURRACC
241	reg L3.logUSDCNY FEDRATE L3.CNYQCURRACC
242	reg L6.logUSDCNY FEDRATE L6.CNYQCURRACC
243	reg L9.logUSDCNY FEDRATE L9.CNYQCURRACC
244	reg L12.logUSDCNY FEDRATE L12.CNYQCURRACC
245	reg logUSDINR FEDRATE INRQCURRACC
246	reg L3.logUSDINR FEDRATE L3.INRQCURRACC
247	reg L6.logUSDINR FEDRATE L6.INRQCURRACC
248	reg L9.logUSDINR FEDRATE L9.INRQCURRACC
249	reg L12.logUSDINR FEDRATE L12.INRQCURRACC
250	reg logUSDBRL FEDRATE BRLQCURRACC
251	reg L3.logUSDBRL FEDRATE L3.BRLQCURRACC
252	reg L6.logUSDBRL FEDRATE L6.BRLQCURRACC
253	reg L9.logUSDBRL FEDRATE L9.BRLQCURRACC
254	reg L12.logUSDBRL FEDRATE L12.BRLQCURRACC
255	reg logUSDMXN FEDRATE MXNQCURRACC
256	reg L3.logUSDMXN FEDRATE L3.MXNQCURRACC
257	reg L6.logUSDMXN FEDRATE L6.MXNQCURRACC
258	reg L9.logUSDMXN FEDRATE L9.MXNQCURRACC
259	reg L12.logUSDMXN FEDRATE L12.MXNQCURRACC
260	reg logUSDNGN FEDRATE NGNQCURRACC
261	reg L3.logUSDNGN FEDRATE L3.NGNQCURRACC
262	reg L6.logUSDNGN FEDRATE L6.NGNQCURRACC
263	reg L9.logUSDNGN FEDRATE L9.NGNQCURRACC
264	reg L12.logUSDNGN FEDRATE L12.NGNQCURRACC
265	reg logUSDZAR FEDRATE ZARQCURRACC
266	reg L3.logUSDZAR FEDRATE L3.ZARQCURRACC
267	reg L6.logUSDZAR FEDRATE L6.ZARQCURRACC
268	reg L9.logUSDZAR FEDRATE L9.ZARQCURRACC
269	reg L12.logUSDZAR FEDRATE L12.ZARQCURRACC
270	
271	
272	*WITH CURRENT ACCOUNTS
273	*2008-2019
274	clear

275	import excel "C:\Users\simon\OneDrive\Bureau\2008-2019 CURRENT ACCOUNTS.xlsx", sheet("ALL CCY") firstrow
276	ssc install fcstats
277	ssc install tsmktim
278	sort DATEStata
279	tsmktim Time, start (2008q1)
280	tsset Time
281	gen logUSDTRY = log(USDTRY)
282	gen logUSDRUB = log(USDRUB)
283	gen logUSDCNY = log(USDCNY)
284	gen logUSDINR = log(USDINR)
285	gen logUSDBRL = log(USDBRL)
286	gen logUSDMXN = log(USDMXN)
287	gen logUSDNGN = log(USDNGN)
288	gen logUSDZAR = log(USDZAR)
289	reg logUSDTRY FEDRATE TRYQCURRACC
290	reg L3.logUSDTRY FEDRATE TRYQCURRACC
291	reg L6.logUSDTRY FEDRATE TRYQCURRACC
292	reg L9.logUSDTRY FEDRATE TRYQCURRACC
293	reg L12.logUSDTRY FEDRATE TRYQCURRACC
294	reg logUSDRUB FEDRATE RUBQCURRACC
295	reg L3.logUSDRUB FEDRATE RUBQCURRACC
296	reg L6.logUSDRUB FEDRATE RUBQCURRACC
297	reg L9.logUSDRUB FEDRATE RUBQCURRACC
298	reg L12.logUSDRUB FEDRATE RUBQCURRACC
299	reg logUSDCNY FEDRATE CNYQCURRACC
300	reg L3.logUSDCNY FEDRATE CNYQCURRACC
301	reg L6.logUSDCNY FEDRATE CNYQCURRACC
302	reg L9.logUSDCNY FEDRATE CNYQCURRACC
303	reg L12.logUSDCNY FEDRATE CNYQCURRACC
304	reg logUSDINR FEDRATE INRQCURRACC
305	reg L3.logUSDINR FEDRATE INRQCURRACC
306	reg L6.logUSDINR FEDRATE INRQCURRACC
307	reg L9.logUSDINR FEDRATE INRQCURRACC
308	reg L12.logUSDINR FEDRATE INRQCURRACC

309	reg logUSDBRL FEDRATE BRLQCURRACC
310	reg L3.logUSDBRL FEDRATE BRLQCURRACC
311	reg L6.logUSDBRL FEDRATE BRLQCURRACC
312	reg L9.logUSDBRL FEDRATE BRLQCURRACC
313	reg L12.logUSDBRL FEDRATE BRLQCURRACC
314	reg logUSDMXN FEDRATE MXNQCURRACC
315	reg L3.logUSDMXN FEDRATE MXNQCURRACC
316	reg L6.logUSDMXN FEDRATE MXNQCURRACC
317	reg L9.logUSDMXN FEDRATE MXNQCURRACC
318	reg L12.logUSDMXN FEDRATE MXNQCURRACC
319	reg logUSDNGN FEDRATE NGNQCURRACC
320	reg L3.logUSDNGN FEDRATE NGNQCURRACC
321	reg L6.logUSDNGN FEDRATE NGNQCURRACC
322	reg L9.logUSDNGN FEDRATE NGNQCURRACC
323	reg L12.logUSDNGN FEDRATE NGNQCURRACC
324	reg logUSDZAR FEDRATE ZARQCURRACC
325	reg L3.logUSDZAR FEDRATE ZARQCURRACC
326	reg L6.logUSDZAR FEDRATE ZARQCURRACC
327	reg L9.logUSDZAR FEDRATE ZARQCURRACC
328	reg L12.logUSDZAR FEDRATE ZARQCURRACC
329	
330	*With no lags in Current account (2008-2019)
331	reg logUSDTRY FEDRATE TRYQCURRACC
332	reg L3.logUSDTRY FEDRATE L3.TRYQCURRACC
333	reg L6.logUSDTRY FEDRATE L6.TRYQCURRACC
334	reg L9.logUSDTRY FEDRATE L9.TRYQCURRACC
335	reg L12.logUSDTRY FEDRATE L12.TRYQCURRACC
336	reg logUSDRUB FEDRATE RUBQCURRACC
337	reg L3.logUSDRUB FEDRATE L3.RUBQCURRACC
338	reg L6.logUSDRUB FEDRATE L6.RUBQCURRACC
339	reg L9.logUSDRUB FEDRATE L9.RUBQCURRACC
340	reg L12.logUSDRUB FEDRATE L12.RUBQCURRACC
341	reg logUSDCNY FEDRATE CNYQCURRACC
342	reg L3.logUSDCNY FEDRATE L3.CNYQCURRACC
343	reg L6.logUSDCNY FEDRATE L6.CNYQCURRACC

344	reg L9.logUSDCNY FEDRATE L9.CNYQCURREACC
345	reg L12.logUSDCNY FEDRATE L12.CNYQCURREACC
346	reg logUSDINR FEDRATE INRQCURREACC
347	reg L3.logUSDINR FEDRATE L3.INRQCURREACC
348	reg L6.logUSDINR FEDRATE L6.INRQCURREACC
349	reg L9.logUSDINR FEDRATE L9.INRQCURREACC
350	reg L12.logUSDINR FEDRATE L12.INRQCURREACC
351	reg logUSDBRL FEDRATE BRLQCURREACC
352	reg L3.logUSDBRL FEDRATE L3.BRLQCURREACC
353	reg L6.logUSDBRL FEDRATE L6.BRLQCURREACC
354	reg L9.logUSDBRL FEDRATE L9.BRLQCURREACC
355	reg L12.logUSDBRL FEDRATE L12.BRLQCURREACC
356	reg logUSDMXN FEDRATE MXNQCURREACC
357	reg L3.logUSDMXN FEDRATE L3.MXNQCURREACC
358	reg L6.logUSDMXN FEDRATE L6.MXNQCURREACC
359	reg L9.logUSDMXN FEDRATE L9.MXNQCURREACC
360	reg L12.logUSDMXN FEDRATE L12.MXNQCURREACC
361	reg logUSDNGN FEDRATE NGNQCURREACC
362	reg L3.logUSDNGN FEDRATE L3.NGNQCURREACC
363	reg L6.logUSDNGN FEDRATE L6.NGNQCURREACC
364	reg L9.logUSDNGN FEDRATE L9.NGNQCURREACC
365	reg L12.logUSDNGN FEDRATE L12.NGNQCURREACC
366	reg logUSDZAR FEDRATE ZARQCURREACC
367	reg L3.logUSDZAR FEDRATE L3.ZARQCURREACC
368	reg L6.logUSDZAR FEDRATE L6.ZARQCURREACC
369	reg L9.logUSDZAR FEDRATE L9.ZARQCURREACC
370	reg L12.logUSDZAR FEDRATE L12.ZARQCURREACC

Appendix 3: STATA output

```

      _ _ _ _ _      (R)
     / / / / /      16.0
    / / / / /
   / / / / /
  / / / / /
 / / / / /
Statistics/Data Analysis

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979-696-4600      stata@stata.com
979-696-4601 (fax)

```

```

Single-user Stata license expires 10 Feb 2020:
  Serial number: 301609220714
  Licensed to: Simon

```

Notes:

1. Unicode is supported; see help unicode_advice.

```

Checking for updates...
(contacting http://www.stata.com)

```

Update status

```

Last check for updates: 19 Aug 2019
New update available:  none      (as of 19 Aug 2019)
Current update level:  01 Aug 2019 (what's new)

```

Possible actions

Do nothing; all files are up to date.

Click to edit automatic update checking preferences

```

. doedit "C:\Users\simon\OneDrive\Bureau\em FINALE.do"
. do "C:\Users\simon\OneDrive\Bureau\em FINALE.do"
. clear
. import excel "C:\Users\simon\OneDrive\Bureau\1997-2019 DATA.xlsx", sheet("ALL
CCY") firstrow
(15 vars, 258 obs)
. ssc install fcstats
checking fcstats consistency and verifying not already installed...
all files already exist and are up to date.
. ssc install tsmktim
checking tsmktim consistency and verifying not already installed...
all files already exist and are up to date.
. sort DATEStata
. tsmktim Time, start (1997m11)
      time variable: Time, 1997m11 to 2019m4
      delta: 1 month
. tsset Time
      time variable: Time, 1997m11 to 2019m4
      delta: 1 month
. gen logUSDTRY = log( USDTRY)
. gen logUSDRUB = log( USDRUB)
. gen logUSDCNY = log( USDCNY)
. gen logUSDINR = log( USDINR)
. gen logUSDBRL = log( USDBRL)
. gen logUSDMXN = log( USDMXN)

```

. gen logUSDNGN = log(USDNGN)

. gen logUSDZAR = log(USDZAR)

. reg logUSDTRY FEDRATE

Source	SS	df	MS	Number of obs	=	
Model	53.4819041	1	53.4819041	F(1, 256)	=	201.84
Residual	67.8316057	256	.26496721	Prob > F	=	0.0000
				R-squared	=	0.4409
				Adj R-squared	=	0.4387
Total	121.31351	257	.472037003	Root MSE	=	.51475

logUSDTRY	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
FEDRATE	-.2154458	.0151646	-14.21	0.000	-.245309 - .1855825
_cons	.8550822	.045388	18.84	0.000	.7657009 .9444635

. reg L3.logUSDTRY FEDRATE

Source	SS	df	MS	Number of obs	=	
Model	50.5945123	1	50.5945123	F(1, 253)	=	195.84
Residual	65.3625291	253	.258349917	Prob > F	=	0.0000
				R-squared	=	0.4363
				Adj R-squared	=	0.4341
Total	115.957041	254	.456523785	Root MSE	=	.50828

L3.logUSDTRY	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
FEDRATE	-.2128291	.0152084	-13.99	0.000	-.2427803 - .1828779
_cons	.8253856	.0448692	18.40	0.000	.7370209 .9137504

. reg L6.logUSDTRY FEDRATE

Source	SS	df	MS	Number of obs	=	
Model	47.2792454	1	47.2792454	F(1, 250)	=	185.32
Residual	63.779533	250	.255118132	Prob > F	=	0.0000
				R-squared	=	0.4257
				Adj R-squared	=	0.4234
Total	111.058778	251	.442465252	Root MSE	=	.50509

L6.logUSDTRY	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
FEDRATE	-.2090494	.0153562	-13.61	0.000	-.2392935 - .1788054
_cons	.7939416	.0446397	17.79	0.000	.7060237 .8818595

. reg L9.logUSDTRY FEDRATE

Source	SS	df	MS	Number of obs	=	
Model	43.8007445	1	43.8007445	F(1, 247)	=	177.30
Residual	61.0209708	247	.247048465	Prob > F	=	0.0000
				R-squared	=	0.4179
				Adj R-squared	=	0.4155
Total	104.821715	248	.422668207	Root MSE	=	.49704

L9.logUSDTRY	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
FEDRATE	-.2047445	.0153767	-13.32	0.000	-.2350306 - .1744583
_cons	.7593013	.0439883	17.26	0.000	.6726612 .8459413

. reg L12.logUSDTRY FEDRATE

Source	SS	df	MS	Number of obs	=	
Model	40.0756423	1	40.0756423	F(1, 244)	=	161.82
Residual	60.4295125	244	.247661936	Prob > F	=	0.0000
				R-squared	=	0.3987
				Adj R-squared	=	0.3963
Total	100.505155	245	.410225122	Root MSE	=	.49766

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L12.		Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
logUSDTRY							
FEDRATE		-.1991927	.015659	-12.72	0.000	-.2300366	-.1683487
_cons		.7254715	.0440971	16.45	0.000	.638612	.8123309

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. reg logUSDRUB FEDRATE
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```

Source	SS	df	MS	Number of obs	=	
Model	15.3064317	1	15.3064317	F(1, 256)	=	97.95
Residual	40.0055093	256	.156271521	Prob > F	=	0.0000
				R-squared	=	0.2767
				Adj R-squared	=	0.2739
Total	55.311941	257	.21522156	Root MSE	=	.39531

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logUSDRUB	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]		
FEDRATE							
FEDRATE		-.1152581	.0116459	-9.90	0.000	-.1381922	-.0923241
_cons		3.708778	.0348566	106.40	0.000	3.640136	3.77742

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. reg L3.logUSDRUB FEDRATE
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Source	SS	df	MS	Number of obs	=	
Model	13.6904616	1	13.6904616	F(1, 253)	=	86.45
Residual	40.0657942	253	.158362823	Prob > F	=	0.0000
				R-squared	=	0.2547
				Adj R-squared	=	0.2517
Total	53.7562558	254	.211638802	Root MSE	=	.39795

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L3.logUSDRUB	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]		
FEDRATE							
FEDRATE		-.1107104	.0119071	-9.30	0.000	-.13416	-.0872607
_cons		3.68628	.0351294	104.93	0.000	3.617096	3.755463

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. reg L6.logUSDRUB FEDRATE
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Source	SS	df	MS	Number of obs	=	
Model	11.8637901	1	11.8637901	F(1, 250)	=	73.84
Residual	40.1658118	250	.160663247	Prob > F	=	0.0000
				R-squared	=	0.2280
				Adj R-squared	=	0.2249
Total	52.0296019	251	.207289251	Root MSE	=	.40083

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L6.logUSDRUB	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]		
FEDRATE							
FEDRATE		-.104719	.0121863	-8.59	0.000	-.1287199	-.0807181
_cons		3.660609	.0354249	103.33	0.000	3.590839	3.730378

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. reg L9.logUSDRUB FEDRATE
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Source	SS	df	MS	Number of obs	=	
Model	10.3078246	1	10.3078246	F(1, 247)	=	63.61
Residual	40.0252835	247	.162045682	Prob > F	=	0.0000
				R-squared	=	0.2048
				Adj R-squared	=	0.2016
Total	50.333108	248	.202956081	Root MSE	=	.40255

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L9.logUSDRUB	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]		
FEDRATE							
FEDRATE		-.0993242	.0124535	-7.98	0.000	-.1238527	-.0747956
_cons		3.636427	.0356258	102.07	0.000	3.566258	3.706596

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. reg L12.logUSDRUB FEDRATE
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Source	SS	df	MS	Number of obs	=	

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```

Model		9.07584694	1	9.07584694	F(1, 244)	=	55.67
Residual		39.7780672	244	.163024866	Prob > F	=	0.0000
					R-squared	=	0.1858
					Adj R-squared	=	0.1824
Total		48.8539142	245	.199403731	Root MSE	=	.40376

logUSDRUB	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE	-.0947931	.0127046	-7.46	0.000	-.1198177	-.0697685
_cons	3.61496	.0357772	101.04	0.000	3.544489	3.685432

. reg logUSDCNY FEDRATE

Source		SS	df	MS	Number of obs	=	258
Model		1.88512779	1	1.88512779	F(1, 256)	=	289.71
Residual		1.66579253	256	.006507002	Prob > F	=	0.0000
					R-squared	=	0.5309
					Adj R-squared	=	0.5291
Total		3.55092032	257	.013816811	Root MSE	=	.08067

logUSDCNY	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE	.0404487	.0023764	17.02	0.000	.0357689	.0451286
_cons	1.896745	.0071127	266.67	0.000	1.882739	1.910752

. reg L3.logUSDCNY FEDRATE

Source		SS	df	MS	Number of obs	=	255
Model		1.90269192	1	1.90269192	F(1, 253)	=	295.40
Residual		1.62958687	253	.006441055	Prob > F	=	0.0000
					R-squared	=	0.5387
					Adj R-squared	=	0.5368
Total		3.53227879	254	.013906609	Root MSE	=	.08026

L3.logUSDCNY	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE	.0412728	.0024014	17.19	0.000	.0365435	.046002
_cons	1.897575	.0070847	267.84	0.000	1.883622	1.911527

. reg L6.logUSDCNY FEDRATE

Source		SS	df	MS	Number of obs	=	252
Model		1.89628596	1	1.89628596	F(1, 250)	=	291.85
Residual		1.6243706	250	.006497482	Prob > F	=	0.0000
					R-squared	=	0.5386
					Adj R-squared	=	0.5368
Total		3.52065656	251	.01402652	Root MSE	=	.08061

L6.logUSDCNY	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE	.0418664	.0024507	17.08	0.000	.0370398	.046693
_cons	1.898747	.007124	266.53	0.000	1.884717	1.912778

. reg L9.logUSDCNY FEDRATE

Source		SS	df	MS	Number of obs	=	249
Model		1.86693754	1	1.86693754	F(1, 247)	=	280.38
Residual		1.64470023	247	.006658705	Prob > F	=	0.0000
					R-squared	=	0.5316
					Adj R-squared	=	0.5297
Total		3.51163777	248	.01415983	Root MSE	=	.0816

L9.logUSDCNY	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE	.0422704	.0025244	16.74	0.000	.0372982	.0472426
_cons	1.90035	.0072217	263.14	0.000	1.886126	1.914574

. reg L12.logUSDCNY FEDRATE

Source	SS	df	MS	Number of obs	=	
Model	1.82170686	1	1.82170686	F(1, 244)	=	267.72
Residual	1.66031186	244	.006804557	Prob > F	=	0.0000
				R-squared	=	0.5232
				Adj R-squared	=	0.5212
Total	3.48201872	245	.014212321	Root MSE	=	.08249

L12.		Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
logUSDCNY						
FEDRATE		.042469	.0025956	16.36	0.000	.0373564 .0475816
_cons		1.902869	.0073094	260.33	0.000	1.888471 1.917266

. reg logUSDINR FEDRATE

Source	SS	df	MS	Number of obs	=	
Model	2.42987569	1	2.42987569	F(1, 256)	=	116.85
Residual	5.3234058	256	.020794554	Prob > F	=	0.0000
				R-squared	=	0.3134
				Adj R-squared	=	0.3107
Total	7.75328149	257	.03016841	Root MSE	=	.1442

logUSDINR		Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
FEDRATE		-.0459226	.0042482	-10.81	0.000	-.0542886 -.0375567
_cons		4.017501	.0127151	315.96	0.000	3.992461 4.04254

. reg L3.logUSDINR FEDRATE

Source	SS	df	MS	Number of obs	=	
Model	2.16613147	1	2.16613147	F(1, 253)	=	104.09
Residual	5.2649661	253	.020810143	Prob > F	=	0.0000
				R-squared	=	0.2915
				Adj R-squared	=	0.2887
Total	7.43109758	254	.02925629	Root MSE	=	.14426

L3.logUSDINR		Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
FEDRATE		-.0440374	.0043164	-10.20	0.000	-.052538 -.0355368
_cons		4.007909	.0127345	314.73	0.000	3.98283 4.032988

. reg L6.logUSDINR FEDRATE

Source	SS	df	MS	Number of obs	=	
Model	1.89449816	1	1.89449816	F(1, 250)	=	91.13
Residual	5.19725944	250	.020789038	Prob > F	=	0.0000
				R-squared	=	0.2671
				Adj R-squared	=	0.2642
Total	7.0917576	251	.028254014	Root MSE	=	.14418

L6.logUSDINR		Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
FEDRATE		-.0418467	.0043836	-9.55	0.000	-.0504802 -.0332132
_cons		3.997681	.0127429	313.72	0.000	3.972583 4.022778

. reg L9.logUSDINR FEDRATE

Source	SS	df	MS	Number of obs	=	
Model	1.62239571	1	1.62239571	F(1, 247)	=	79.34
Residual	5.05103778	247	.020449546	Prob > F	=	0.0000
				R-squared	=	0.2431
				Adj R-squared	=	0.2400
Total	6.67343348	248	.026909006	Root MSE	=	.143

L9.logUSDINR	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE	-.0394049	.004424	-8.91	0.000	-.0481184	-.0306913
_cons	3.986577	.0126558	315.00	0.000	3.96165	4.011504

. reg L12.logUSDINR FEDRATE

Source	SS	df	MS	Number of obs	=	
Model	1.37570676	1	1.37570676	F(1, 244)	=	67.15
Residual	4.99888836	244	.020487247	Prob > F	=	0.0000
Total	6.37459511	245	.026018756	R-squared	=	0.2158
				Adj R-squared	=	0.2126
				Root MSE	=	.14313

L12.	logUSDINR	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
	FEDRATE	-.0369059	.0045038	-8.19	0.000	-.0457771	-.0280347
	_cons	3.976241	.012683	313.51	0.000	3.951259	4.001223

. reg logUSDBRL FEDRATE

Source	SS	df	MS	Number of obs	=	
Model	3.88203366	1	3.88203366	F(1, 256)	=	48.52
Residual	20.4840647	256	.080015878	Prob > F	=	0.0000
Total	24.3660984	257	.094809721	R-squared	=	0.1593
				Adj R-squared	=	0.1560
				Root MSE	=	.28287

logUSDBRL	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE	-.0580449	.0083334	-6.97	0.000	-.0744557	-.0416342
_cons	.9524067	.0249421	38.18	0.000	.903289	1.001525

. reg L3.logUSDBRL FEDRATE

Source	SS	df	MS	Number of obs	=	
Model	3.19561454	1	3.19561454	F(1, 253)	=	39.75
Residual	20.3400938	253	.080395628	Prob > F	=	0.0000
Total	23.5357084	254	.092660269	R-squared	=	0.1358
				Adj R-squared	=	0.1324
				Root MSE	=	.28354

L3.logUSDBRL	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE	-.053488	.0084839	-6.30	0.000	-.0701961	-.0367799
_cons	.9344554	.02503	37.33	0.000	.8851617	.983749

. reg L6.logUSDBRL FEDRATE

Source	SS	df	MS	Number of obs	=	
Model	2.40486546	1	2.40486546	F(1, 250)	=	29.56
Residual	20.3379931	250	.081351972	Prob > F	=	0.0000
Total	22.7428585	251	.090608998	R-squared	=	0.1057
				Adj R-squared	=	0.1022
				Root MSE	=	.28522

L6.logUSDBRL	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE	-.0471476	.0086716	-5.44	0.000	-.0642262	-.0300689
_cons	.9132874	.0252078	36.23	0.000	.8636407	.9629341

. reg L9.logUSDBRL FEDRATE

Source	SS	df	MS	Number of obs	=	
Model	1.69046249	1	1.69046249	F(1, 247)	=	20.76
Residual	20.1167223	247	.08144422	Prob > F	=	0.0000
Total				R-squared	=	0.0775

```
-----+-----
Total | 21.8071848      248 .087932197  Adj R-squared = 0.0738
Root MSE = .28538
```

```
-----+-----
L9.logUSDBRL |      Coef.  Std. Err.      t    P>|t|    [95% Conf. Interval]
-----+-----
FEDRATE |   -.040223   .0088288   -4.56   0.000   -.0576123   -.0228336
_cons |   .8908056   .0252567   35.27   0.000    .8410596    .9405515
```

```
. reg L12.logUSDBRL FEDRATE
```

```
-----+-----
Source |      SS      df      MS    Number of obs = 246
-----+-----
Model | 1.11345078      1 1.11345078    F(1, 244) = 13.67
Residual | 19.8696725    244 .081433084    Prob > F = 0.0003
-----+-----
Total | 20.9831233    245 .085645401    R-squared = 0.0531
Adj R-squared = 0.0492
Root MSE = .28536
```

```
-----+-----
L12.
logUSDBRL |      Coef.  Std. Err.      t    P>|t|    [95% Conf. Interval]
-----+-----
FEDRATE |  -.0332023   .0089791   -3.70   0.000   -.0508888   -.0155159
_cons |   .8690683   .025286    34.37   0.000    .8192616    .918875
```

```
. reg logUSDMXN FEDRATE
```

```
-----+-----
Source |      SS      df      MS    Number of obs = 258
-----+-----
Model | 5.29555337      1 5.29555337    F(1, 256) = 146.93
Residual | 9.22671967    256 .036041874    Prob > F = 0.0000
-----+-----
Total | 14.522273     257 .056506899    R-squared = 0.3647
Adj R-squared = 0.3622
Root MSE = .18985
```

```
-----+-----
logUSDMXN |      Coef.  Std. Err.      t    P>|t|    [95% Conf. Interval]
-----+-----
FEDRATE |  -.0677938   .0055929  -12.12   0.000   -.0788078   -.0567799
_cons |   2.652231   .0167397  158.44   0.000    2.619265    2.685196
```

```
. reg L3.logUSDMXN FEDRATE
```

```
-----+-----
Source |      SS      df      MS    Number of obs = 255
-----+-----
Model | 4.59801139      1 4.59801139    F(1, 253) = 124.86
Residual | 9.31671444    253 .036824958    Prob > F = 0.0000
-----+-----
Total | 13.9147258    254 .054782385    R-squared = 0.3304
Adj R-squared = 0.3278
Root MSE = .1919
```

```
-----+-----
L3.logUSDMXN |      Coef.  Std. Err.      t    P>|t|    [95% Conf. Interval]
-----+-----
FEDRATE |  -.06416     .0057418  -11.17   0.000   -.0754679   -.0528521
_cons |   2.636695   .0169401  155.65   0.000    2.603333    2.670056
```

```
. reg L6.logUSDMXN FEDRATE
```

```
-----+-----
Source |      SS      df      MS    Number of obs = 252
-----+-----
Model | 3.88712657      1 3.88712657    F(1, 250) = 104.12
Residual | 9.33372624    250 .037334905    Prob > F = 0.0000
-----+-----
Total | 13.2208528    251 .05267272    R-squared = 0.2940
Adj R-squared = 0.2912
Root MSE = .19322
```

```
-----+-----
L6.logUSDMXN |      Coef.  Std. Err.      t    P>|t|    [95% Conf. Interval]
-----+-----
FEDRATE |  -.0599416   .0058745  -10.20   0.000   -.0715114   -.0483717
_cons |   2.619813   .0170769  153.41   0.000    2.58618     2.653446
```

```
. reg L9.logUSDMXN FEDRATE
```


Source	SS	df	MS	Number of obs	=	249
Model	3.26402599	1	3.26402599	F(1, 247)	=	86.75
Residual	9.29359504	247	.037625891	Prob > F	=	0.0000
				R-squared	=	0.2599
				Adj R-squared	=	0.2569
Total	12.557621	248	.050635569	Root MSE	=	.19397

L9.logUSDMXN	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
FEDRATE	-.0558918	.0060009	-9.31	0.000	-.0677112 - .0440724
_cons	2.60359	.0171668	151.66	0.000	2.569778 2.637402

. reg L12.logUSDMXN FEDRATE

Source	SS	df	MS	Number of obs	=	246
Model	2.69948477	1	2.69948477	F(1, 244)	=	71.88
Residual	9.16324716	244	.037554292	Prob > F	=	0.0000
				R-squared	=	0.2276
				Adj R-squared	=	0.2244
Total	11.8627319	245	.048419314	Root MSE	=	.19379

L12.	logUSDMXN	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
	FEDRATE	-.051698	.0060977	-8.48	0.000	-.0637087 - .0396872
	_cons	2.587263	.0171716	150.67	0.000	2.55344 2.621086

. reg logUSDNGN FEDRATE

Source	SS	df	MS	Number of obs	=	258
Model	25.7737447	1	25.7737447	F(1, 256)	=	114.51
Residual	57.6221038	256	.225086343	Prob > F	=	0.0000
				R-squared	=	0.3091
				Adj R-squared	=	0.3064
Total	83.3958485	257	.324497465	Root MSE	=	.47443

logUSDNGN	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
FEDRATE	-.1495627	.0139768	-10.70	0.000	-.1770869 - .1220385
_cons	5.262589	.041833	125.80	0.000	5.180208 5.34497

. reg L3.logUSDNGN FEDRATE

Source	SS	df	MS	Number of obs	=	255
Model	22.9893149	1	22.9893149	F(1, 253)	=	100.79
Residual	57.7091992	253	.228099602	Prob > F	=	0.0000
				R-squared	=	0.2849
				Adj R-squared	=	0.2821
Total	80.698514	254	.317710685	Root MSE	=	.4776

L3.logUSDNGN	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
FEDRATE	-.1434638	.0142903	-10.04	0.000	-.1716069 - .1153207
_cons	5.232821	.0421606	124.12	0.000	5.149791 5.315852

. reg L6.logUSDNGN FEDRATE

Source	SS	df	MS	Number of obs	=	252
Model	20.5083983	1	20.5083983	F(1, 250)	=	89.35
Residual	57.3815744	250	.229526298	Prob > F	=	0.0000
				R-squared	=	0.2633
				Adj R-squared	=	0.2604
Total	77.8899727	251	.310318616	Root MSE	=	.47909

L6.logUSDNGN	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
FEDRATE	-.1376828	.0145657	-9.45	0.000	-.1663698 - .1089957

```

      _cons |   5.203776   .0423416   122.90   0.000   5.120384   5.287168
-----+-----
. reg L9.logUSDNGN FEDRATE

      Source |           SS           df           MS      Number of obs   =
-----+-----+-----+-----+-----+-----
      Model |   18.549855           1   18.549855      F(1, 247)       =
      Residual |  56.4822095        247   .228672913      Prob > F         =
-----+-----+-----+-----+-----
      Total |   75.0320645        248   .302548647      R-squared        =
                                           Adj R-squared    =
                                           Root MSE        =

L9.logUSDNGN |           Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-----+-----+-----+-----+-----+-----
      FEDRATE |  -0.1332422   .0147938   -9.01   0.000   -0.1623802   -0.1041041
      _cons   |   5.177428   .0423208   122.34   0.000   5.094073    5.260784
-----+-----+-----+-----+-----+-----

. reg L12.logUSDNGN FEDRATE

      Source |           SS           df           MS      Number of obs   =
-----+-----+-----+-----+-----
      Model |   17.1834069           1   17.1834069      F(1, 244)       =
      Residual |  54.9388605        244   .225159264      Prob > F         =
-----+-----+-----+-----+-----
      Total |   72.1222674        245   .294376602      R-squared        =
                                           Adj R-squared    =
                                           Root MSE        =

L12.
logUSDNGN |           Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-----+-----+-----+-----+-----+-----
      FEDRATE |  -0.1304331   .0149306   -8.74   0.000   -0.1598424   -0.1010237
      _cons   |   5.154505   .042046   122.59   0.000   5.071686    5.237325
-----+-----+-----+-----+-----+-----

. reg logUSDZAR FEDRATE

      Source |           SS           df           MS      Number of obs   =
-----+-----+-----+-----+-----
      Model |   6.39842196           1   6.39842196      F(1, 256)       =
      Residual |  16.1939445        256   .063257596      Prob > F         =
-----+-----+-----+-----+-----
      Total |   22.5923665        257   .087908041      R-squared        =
                                           Adj R-squared    =
                                           Root MSE        =

logUSDZAR |           Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-----+-----+-----+-----+-----+-----
      FEDRATE |  -0.0745197   .0074095  -10.06   0.000   -0.0891111   -0.0599283
      _cons   |   2.298223   .0221769   103.63   0.000   2.254551    2.341896
-----+-----+-----+-----+-----+-----

. reg L3.logUSDZAR FEDRATE

      Source |           SS           df           MS      Number of obs   =
-----+-----+-----+-----+-----
      Model |   6.5433956           1   6.5433956      F(1, 253)       =
      Residual |  15.2292138        253   .060194521      Prob > F         =
-----+-----+-----+-----+-----
      Total |   21.7726094        254   .085718935      R-squared        =
                                           Adj R-squared    =
                                           Root MSE        =

L3.logUSDZAR |           Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-----+-----+-----+-----+-----+-----
      FEDRATE |  -0.0765387   .007341   -10.43   0.000   -0.090996   -0.0620813
      _cons   |   2.293322   .0216582   105.89   0.000   2.250669    2.335976
-----+-----+-----+-----+-----+-----

. reg L6.logUSDZAR FEDRATE

      Source |           SS           df           MS      Number of obs   =
-----+-----+-----+-----+-----
      Model |   6.48714582           1   6.48714582      F(1, 250)       =
      Residual |  14.548408         250   .058193632      Prob > F         =
-----+-----+-----+-----+-----
      Total |   21.0355538        251   .083806987      R-squared        =
                                           Adj R-squared    =
                                           Root MSE        =

```

L6.logUSDZAR	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE	-.0774356	.0073342	-10.56	0.000	-.0918802	-.0629909
_cons	2.286199	.0213201	107.23	0.000	2.244209	2.328189

```
. reg L9.logUSDZAR FEDRATE
```

Source	SS	df	MS	Number of obs	=	249
Model	6.41919551	1	6.41919551	F(1, 247)	=	115.71
Residual	13.702369	247	.055475178	Prob > F	=	0.0000
Total	20.1215645	248	.081135341	R-squared	=	0.3190
				Adj R-squared	=	0.3163
				Root MSE	=	.23553

L9.logUSDZAR	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE	-.0783812	.0072865	-10.76	0.000	-.0927328	-.0640295
_cons	2.278224	.0208447	109.30	0.000	2.237168	2.31928

```
. reg L12.logUSDZAR FEDRATE
```

Source	SS	df	MS	Number of obs	=	246
Model	6.16522167	1	6.16522167	F(1, 244)	=	113.03
Residual	13.3093419	244	.054546483	Prob > F	=	0.0000
Total	19.4745636	245	.079488015	R-squared	=	0.3166
				Adj R-squared	=	0.3138
				Root MSE	=	.23355

L12.logUSDZAR	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE	-.0781281	.0073488	-10.63	0.000	-.0926033	-.063653
_cons	2.268883	.0206949	109.63	0.000	2.228119	2.309646

```
.
. *1997-2007
. clear

. import excel "C:\Users\simon\OneDrive\Bureau\1997-2007 DATA.xlsx", sheet("ALL
CCY") firstrow
(13 vars, 122 obs)

. ssc install fcstats
checking fcstats consistency and verifying not already installed...
all files already exist and are up to date.

. ssc install tsmktim
checking tsmktim consistency and verifying not already installed...
all files already exist and are up to date.

. sort DATEStata

. tsmktim Time, start (1997m11)
time variable: Time, 1997m11 to 2007m12
delta: 1 month

. tsset Time
time variable: Time, 1997m11 to 2007m12
delta: 1 month

. gen logUSDTRY = log( USDTRY)

. gen logUSDRUB = log( USDRUB)

. gen logUSDCNY = log( USDCNY)

. gen logUSDINR = log( USDINR)

. gen logUSDBRL = log( USDBRL)
```

```

. gen logUSDMXN = log( USDMXN)
. gen logUSDNGN = log( USDNGN)
. gen logUSDZAR = log( USDZAR)
. reg logUSDTRY FEDRATE

```

Source	SS	df	MS	Number of obs	=	
Model	17.8578189	1	17.8578189	F(1, 120)	=	71.16
Residual	30.1162792	120	.250968993	Prob > F	=	0.0000
				R-squared	=	0.3722
				Adj R-squared	=	0.3670
Total	47.9740981	121	.396480149	Root MSE	=	.50097

logUSDTRY	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
FEDRATE	-.2097654	.0248674	-8.44	0.000	-.2590011 -.1605298
_cons	.7362257	.1049733	7.01	0.000	.5283859 .9440654

```

. reg L3.logUSDTRY FEDRATE

```

Source	SS	df	MS	Number of obs	=	
Model	17.9834362	1	17.9834362	F(1, 117)	=	70.51
Residual	29.8387698	117	.255032221	Prob > F	=	0.0000
				R-squared	=	0.3760
				Adj R-squared	=	0.3707
Total	47.822206	118	.405272932	Root MSE	=	.50501

L3.logUSDTRY	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
FEDRATE	-.2129017	.0253536	-8.40	0.000	-.2631132 -.1626901
_cons	.7333331	.1060582	6.91	0.000	.5232903 .9433759

```

. reg L6.logUSDTRY FEDRATE

```

Source	SS	df	MS	Number of obs	=	
Model	17.4327043	1	17.4327043	F(1, 114)	=	66.00
Residual	30.1094797	114	.264118243	Prob > F	=	0.0000
				R-squared	=	0.3667
				Adj R-squared	=	0.3611
Total	47.542184	115	.413410296	Root MSE	=	.51392

L6.logUSDTRY	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
FEDRATE	-.2120537	.0261013	-8.12	0.000	-.2637602 -.1603471
_cons	.7129706	.1081701	6.59	0.000	.4986865 .9272546

```

. reg L9.logUSDTRY FEDRATE

```

Source	SS	df	MS	Number of obs	=	
Model	16.0803085	1	16.0803085	F(1, 111)	=	57.47
Residual	31.0585588	111	.279806836	Prob > F	=	0.0000
				R-squared	=	0.3411
				Adj R-squared	=	0.3352
Total	47.1388674	112	.420882744	Root MSE	=	.52897

L9.logUSDTRY	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
FEDRATE	-.2063683	.0272223	-7.58	0.000	-.2603112 -.1524255
_cons	.6723119	.1116406	6.02	0.000	.4510887 .8935352

```

. reg L12.logUSDTRY FEDRATE

```

Source	SS	df	MS	Number of obs	=	
Model	14.3930162	1	14.3930162	F(1, 108)	=	48.30
Residual	32.1855664	108	.298014504	Prob > F	=	0.0000
				R-squared	=	0.3090

```
-----+-----
Total | 46.5785827      109 .427326446  Adj R-squared = 0.3026
Root MSE = .54591
```

```
-----+-----
L12.
logUSDTRY |          Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-----+-----
FEDRATE |  -.1976392   .0284391    -6.95  0.000   -0.2540104  -0.1412679
_cons |   .6194479   .1154772     5.36  0.000    .390552     .8483438
```

```
. reg logUSDRUB FEDRATE
```

```
-----+-----
Source |          SS           df           MS       Number of obs =      122
-----+-----
Model |  3.48549529           1    3.48549529   F(1, 120) =      23.33
Residual | 17.9252975          120   .149377479   Prob > F =      0.0000
-----+-----
Total | 21.4107928          121   .176948701   R-squared =      0.1628
Adj R-squared =      0.1558
Root MSE =      .38649
```

```
-----+-----
logUSDRUB |          Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-----+-----
FEDRATE |  -.0926727   .019185    -4.83  0.000   -0.1306577  -0.0546877
_cons |   3.553699   .0809862   43.88  0.000    3.393352    3.714047
```

```
. reg L3.logUSDRUB FEDRATE
```

```
-----+-----
Source |          SS           df           MS       Number of obs =      119
-----+-----
Model |  3.3512991           1    3.3512991   F(1, 117) =      21.71
Residual | 18.0594684          117   .154354431   Prob > F =      0.0000
-----+-----
Total | 21.4107675          118   .181447183   R-squared =      0.1565
Adj R-squared =      0.1493
Root MSE =      .39288
```

```
-----+-----
L3.logUSDRUB |          Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-----+-----
FEDRATE |  -.0919072   .0197243   -4.66  0.000   -0.1309702  -0.0528442
_cons |   3.546769   .08251     42.99  0.000    3.383362    3.710175
```

```
. reg L6.logUSDRUB FEDRATE
```

```
-----+-----
Source |          SS           df           MS       Number of obs =      116
-----+-----
Model |  2.98837352           1    2.98837352   F(1, 114) =      18.50
Residual | 18.4186403          114   .16156702   Prob > F =      0.0000
-----+-----
Total | 21.4070138          115   .186147946   R-squared =      0.1396
Adj R-squared =      0.1321
Root MSE =      .40195
```

```
-----+-----
L6.logUSDRUB |          Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-----+-----
FEDRATE |  -.0877972   .0204145   -4.30  0.000   -0.1282383  -0.0473562
_cons |   3.526574   .0846027   41.68  0.000    3.358977    3.694171
```

```
. reg L9.logUSDRUB FEDRATE
```

```
-----+-----
Source |          SS           df           MS       Number of obs =      113
-----+-----
Model |  2.69988576           1    2.69988576   F(1, 111) =      16.03
Residual | 18.6996167          111   .168465016   Prob > F =      0.0001
-----+-----
Total | 21.3995025          112   .191066987   R-squared =      0.1262
Adj R-squared =      0.1183
Root MSE =      .41044
```

```
-----+-----
L9.logUSDRUB |          Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-----+-----
FEDRATE |  -.0845607   .0211228   -4.00  0.000   -0.1264169  -0.0427045
_cons |   3.509163   .0866259   40.51  0.000    3.337508    3.680818
```

```
. reg L12.logUSDRUB FEDRATE
```

Source	SS	df	MS	Number of obs	=	110
Model	2.62668782	1	2.62668782	F(1, 108)	=	15.12
Residual	18.758946	108	.173693944	Prob > F	=	0.0002
				R-squared	=	0.1228
				Adj R-squared	=	0.1147
Total	21.3856338	109	.196198475	Root MSE	=	.41677

logUSDRUB	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE	-.0844309	.0217115	-3.89	0.000	-.1274668	-.041395
_cons	3.502942	.0881597	39.73	0.000	3.328194	3.677689

. reg logUSDCNY FEDRATE

Source	SS	df	MS	Number of obs	=	122
Model	.007655285	1	.007655285	F(1, 120)	=	10.27
Residual	.089470337	120	.000745586	Prob > F	=	0.0017
				R-squared	=	0.0788
				Adj R-squared	=	0.0711
Total	.097125622	121	.000802691	Root MSE	=	.02731

logUSDCNY	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE	-.0043431	.0013554	-3.20	0.002	-.0070267	-.0016595
_cons	2.116432	.0057216	369.90	0.000	2.105103	2.12776

. reg L3.logUSDCNY FEDRATE

Source	SS	df	MS	Number of obs	=	119
Model	.005874252	1	.005874252	F(1, 117)	=	11.44
Residual	.06005467	117	.000513288	Prob > F	=	0.0010
				R-squared	=	0.0891
				Adj R-squared	=	0.0813
Total	.065928922	118	.00055872	Root MSE	=	.02266

L3.logUSDCNY	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE	-.0038479	.0011374	-3.38	0.001	-.0061005	-.0015952
_cons	2.116909	.004758	444.91	0.000	2.107486	2.126332

. reg L6.logUSDCNY FEDRATE

Source	SS	df	MS	Number of obs	=	116
Model	.004310817	1	.004310817	F(1, 114)	=	12.00
Residual	.040968852	114	.000359376	Prob > F	=	0.0008
				R-squared	=	0.0952
				Adj R-squared	=	0.0873
Total	.045279669	115	.000393736	Root MSE	=	.01896

L6.logUSDCNY	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE	-.0033346	.0009628	-3.46	0.001	-.0052419	-.0014273
_cons	2.116946	.0039901	530.55	0.000	2.109042	2.12485

. reg L9.logUSDCNY FEDRATE

Source	SS	df	MS	Number of obs	=	113
Model	.002994772	1	.002994772	F(1, 111)	=	12.11
Residual	.027459767	111	.000247385	Prob > F	=	0.0007
				R-squared	=	0.0983
				Adj R-squared	=	0.0902
Total	.030454539	112	.000271916	Root MSE	=	.01573

L9.logUSDCNY	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE	-.0028163	.0008094	-3.48	0.001	-.0044202	-.0012123

```

      _cons |    2.116721    .0033196    637.65    0.000    2.110143    2.123299
-----+-----
. reg L12.logUSDCNY FEDRATE

      Source |           SS           df           MS      Number of obs   =          110
-----+-----+-----+-----+-----+-----
      Model |    .001896589            1    .001896589      F(1, 108)       =          11.46
      Residual |    .017877605           108    .000165533      Prob > F         =          0.0010
-----+-----+-----+-----+-----+-----
      Total |    .019774194           109    .000181415      R-squared        =          0.0959
                                           Adj R-squared    =          0.0875
                                           Root MSE        =          .01287

-----+-----
L12. |
logUSDCNY |           Coef.    Std. Err.      t    P>|t|     [95% Conf. Interval]
-----+-----+-----+-----+-----+-----
      FEDRATE |   -.0022687    .0006703     -3.38   0.001    - .0035973   - .0009402
      _cons |    2.116209    .0027216    777.57   0.000     2.110815    2.121604
-----+-----

. reg logUSDINR FEDRATE

      Source |           SS           df           MS      Number of obs   =          122
-----+-----+-----+-----+-----
      Model |    .110832769            1    .110832769      F(1, 120)       =          42.92
      Residual |    .309886334           120    .002582386      Prob > F         =          0.0000
-----+-----+-----+-----+-----
      Total |    .420719103           121    .003477017      R-squared        =          0.2634
                                           Adj R-squared    =          0.2573
                                           Root MSE        =          .05082

-----+-----
logUSDINR |           Coef.    Std. Err.      t    P>|t|     [95% Conf. Interval]
-----+-----+-----+-----+-----+-----
      FEDRATE |   -.0165255    .0025225     -6.55   0.000    - .0215198   - .0115311
      _cons |    3.860538    .0106483    362.55   0.000     3.839455    3.881621
-----+-----

. reg L3.logUSDINR FEDRATE

      Source |           SS           df           MS      Number of obs   =          119
-----+-----+-----+-----+-----
      Model |    .127292913            1    .127292913      F(1, 117)       =          60.27
      Residual |    .247090708           117    .002111886      Prob > F         =          0.0000
-----+-----+-----+-----+-----
      Total |    .374383621           118    .003172743      R-squared        =          0.3400
                                           Adj R-squared    =          0.3344
                                           Root MSE        =          .04596

-----+-----
L3.logUSDINR |           Coef.    Std. Err.      t    P>|t|     [95% Conf. Interval]
-----+-----+-----+-----+-----+-----
      FEDRATE |   -.017912    .0023072     -7.76   0.000    - .0224812   - .0133428
      _cons |    3.868134    .0096512    400.79   0.000     3.84902     3.887247
-----+-----

. reg L6.logUSDINR FEDRATE

      Source |           SS           df           MS      Number of obs   =          116
-----+-----+-----+-----+-----
      Model |    .146238209            1    .146238209      F(1, 114)       =          85.28
      Residual |    .195497998           114    .001714895      Prob > F         =          0.0000
-----+-----+-----+-----+-----
      Total |    .341736207           115    .002971619      R-squared        =          0.4279
                                           Adj R-squared    =          0.4229
                                           Root MSE        =          .04141

-----+-----
L6.logUSDINR |           Coef.    Std. Err.      t    P>|t|     [95% Conf. Interval]
-----+-----+-----+-----+-----+-----
      FEDRATE |   -.019422    .0021032     -9.23   0.000    - .0235884   - .0152556
      _cons |    3.875603    .0087162    444.64   0.000     3.858337    3.89287
-----+-----

. reg L9.logUSDINR FEDRATE

      Source |           SS           df           MS      Number of obs   =          113
-----+-----+-----+-----+-----
      Model |    .157779842            1    .157779842      F(1, 111)       =          111.72
      Residual |    .156756241           111    .001412218      Prob > F         =          0.0000
-----+-----+-----+-----+-----
      Total |    .314536083           112    .002808358      R-squared        =          0.5016
                                           Adj R-squared    =          0.4971
                                           Root MSE        =          .03758

```

```
-----
```

L9.logUSDINR	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE	-.0204419	.001934	-10.57	0.000	-.0242742	-.0166097
_cons	3.880904	.0079313	489.32	0.000	3.865188	3.89662

```
-----
```

. reg L12.logUSDINR FEDRATE

```
-----
```

Source	SS	df	MS	Number of obs	=	
Model	.171505392	1	.171505392	F(1, 108)	=	131.06
Residual	.141324259	108	.001308558	Prob > F	=	0.0000
Total	.312829651	109	.002869997	R-squared	=	0.5482
				Adj R-squared	=	0.5441
				Root MSE	=	.03617

```
-----
```

```
-----
```

L12.logUSDINR	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE	-.0215743	.0018845	-11.45	0.000	-.0253096	-.0178389
_cons	3.88466	.007652	507.67	0.000	3.869492	3.899827

```
-----
```

. reg logUSDBRL FEDRATE

```
-----
```

Source	SS	df	MS	Number of obs	=	
Model	6.74275143	1	6.74275143	F(1, 120)	=	194.97
Residual	4.14996207	120	.034583017	Prob > F	=	0.0000
Total	10.8927135	121	.090022426	R-squared	=	0.6190
				Adj R-squared	=	0.6158
				Root MSE	=	.18597

```
-----
```

```
-----
```

logUSDBRL	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE	-.1288957	.0092311	-13.96	0.000	-.1471725	-.1106188
_cons	1.258759	.0389673	32.30	0.000	1.181607	1.335912

```
-----
```

. reg L3.logUSDBRL FEDRATE

```
-----
```

Source	SS	df	MS	Number of obs	=	
Model	6.47501615	1	6.47501615	F(1, 117)	=	176.30
Residual	4.29719505	117	.036728163	Prob > F	=	0.0000
Total	10.7722112	118	.091289925	R-squared	=	0.6011
				Adj R-squared	=	0.5977
				Root MSE	=	.19165

```
-----
```

```
-----
```

L3.logUSDBRL	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE	-.1277507	.0096215	-13.28	0.000	-.1468055	-.1086958
_cons	1.25384	.0402482	31.15	0.000	1.174131	1.33355

```
-----
```

. reg L6.logUSDBRL FEDRATE

```
-----
```

Source	SS	df	MS	Number of obs	=	
Model	5.80814721	1	5.80814721	F(1, 114)	=	134.98
Residual	4.90528625	114	.043028827	Prob > F	=	0.0000
Total	10.7134335	115	.093160291	R-squared	=	0.5421
				Adj R-squared	=	0.5381
				Root MSE	=	.20743

```
-----
```

```
-----
```

L6.logUSDBRL	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE	-.1224002	.0105352	-11.62	0.000	-.1432704	-.1015301
_cons	1.231773	.0436604	28.21	0.000	1.145282	1.318263

```
-----
```

. reg L9.logUSDBRL FEDRATE

```
-----
```

Source	SS	df	MS	Number of obs	=	
Model				F(1, 111)	=	93.76

```
-----
```


Model		4.89001603		1	4.89001603	Prob > F	=	0.0000
Residual		5.78905633		111	.052153661	R-squared	=	0.4579

Total		10.6790724		112	.09534886	Adj R-squared	=	0.4530
						Root MSE	=	.22837

L9.logUSDBRL		Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
FEDRATE		-.1138023	.0117527	-9.68	0.000	-.1370911 - .0905135
_cons		1.197047	.0481987	24.84	0.000	1.101538 1.292556

. reg L12.logUSDBRL FEDRATE

Source		SS	df	MS	Number of obs	=	110

Model		4.00589478	1	4.00589478	F(1, 108)	=	64.88
Residual		6.66837078	108	.061744174	Prob > F	=	0.0000

Total		10.6742656	109	.097929042	R-squared	=	0.3753
					Adj R-squared	=	0.3695
					Root MSE	=	.24848

L12.logUSDBRL		Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
FEDRATE		-.104267	.0129448	-8.05	0.000	-.1299258 - .0786082
_cons		1.1582	.0525625	22.03	0.000	1.054012 1.262388

. reg logUSDMXN FEDRATE

Source		SS	df	MS	Number of obs	=	122

Model		.166396376	1	.166396376	F(1, 120)	=	26.15
Residual		.763618164	120	.006363485	Prob > F	=	0.0000

Total		.93001454	121	.007686071	R-squared	=	0.1789
					Adj R-squared	=	0.1721
					Root MSE	=	.07977

logUSDMXN		Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
FEDRATE		-.0202484	.0039597	-5.11	0.000	-.0280885 - .0124084
_cons		2.394094	.0167154	143.23	0.000	2.360998 2.427189

. reg L3.logUSDMXN FEDRATE

Source		SS	df	MS	Number of obs	=	119

Model		.112509493	1	.112509493	F(1, 117)	=	16.37
Residual		.804241719	117	.006873861	Prob > F	=	0.0001

Total		.916751212	118	.007769078	R-squared	=	0.1227
					Adj R-squared	=	0.1152
					Root MSE	=	.08291

L3.logUSDMXN		Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
FEDRATE		-.0168398	.0041624	-4.05	0.000	-.0250832 - .0085964
_cons		2.378755	.0174119	136.62	0.000	2.344272 2.413239

. reg L6.logUSDMXN FEDRATE

Source		SS	df	MS	Number of obs	=	116

Model		.060225595	1	.060225595	F(1, 114)	=	8.21
Residual		.83627094	114	.00733571	Prob > F	=	0.0050

Total		.896496535	115	.007795622	R-squared	=	0.0672
					Adj R-squared	=	0.0590
					Root MSE	=	.08565

L6.logUSDMXN		Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
FEDRATE		-.0124639	.00435	-2.87	0.005	-.0210811 - .0038467
_cons		2.359636	.0180272	130.89	0.000	2.323925 2.395348

. reg L9.logUSDMXN FEDRATE

Source	SS	df	MS	Number of obs	=	
Model	.021464538	1	.021464538	F(1, 111)	=	2.77
Residual	.859804848	111	.00774599	Prob > F	=	0.0988
Total	.881269386	112	.007868477	R-squared	=	0.0244
				Adj R-squared	=	0.0156
				Root MSE	=	.08801

L9.logUSDMXN	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
FEDRATE	-.0075397	.0045293	-1.66	0.099	-.0165149 .0014354
_cons	2.339107	.0185751	125.93	0.000	2.302299 2.375915

. reg L12.logUSDMXN FEDRATE

Source	SS	df	MS	Number of obs	=	
Model	.001830012	1	.001830012	F(1, 108)	=	0.23
Residual	.852372972	108	.007892342	Prob > F	=	0.6311
Total	.854202985	109	.007836725	R-squared	=	0.0021
				Adj R-squared	=	-0.0071
				Root MSE	=	.08884

L12.logUSDMXN	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
FEDRATE	-.0022286	.0046281	-0.48	0.631	-.0114022 .0069451
_cons	2.316953	.0187923	123.29	0.000	2.279704 2.354203

. reg logUSDNGN FEDRATE

Source	SS	df	MS	Number of obs	=	
Model	6.20147498	1	6.20147498	F(1, 120)	=	23.89
Residual	31.1442546	120	.259535455	Prob > F	=	0.0000
Total	37.3457296	121	.308642393	R-squared	=	0.1661
				Adj R-squared	=	0.1591
				Root MSE	=	.50945

logUSDNGN	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
FEDRATE	-.1236139	.0252882	-4.89	0.000	-.1736828 -.073545
_cons	5.065432	.1067498	47.45	0.000	4.854075 5.276789

. reg L3.logUSDNGN FEDRATE

Source	SS	df	MS	Number of obs	=	
Model	5.47367687	1	5.47367687	F(1, 117)	=	20.16
Residual	31.7641582	117	.271488532	Prob > F	=	0.0000
Total	37.2378351	118	.315574873	R-squared	=	0.1470
				Adj R-squared	=	0.1397
				Root MSE	=	.52105

L3.logUSDNGN	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
FEDRATE	-.1174579	.0261588	-4.49	0.000	-.1692641 -.0656517
_cons	5.032191	.1094265	45.99	0.000	4.815477 5.248904

. reg L6.logUSDNGN FEDRATE

Source	SS	df	MS	Number of obs	=	
Model	4.8420493	1	4.8420493	F(1, 114)	=	17.14
Residual	32.2072074	114	.282519363	Prob > F	=	0.0001
Total	37.0492567	115	.32216745	R-squared	=	0.1307
				Adj R-squared	=	0.1231
				Root MSE	=	.53153

L6.logUSDNGN	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
--------------	-------	-----------	---	------	----------------------

	FEDRATE	_cons					
	-0.1117578	4.999377	0.0269953	0.1118747	-4.14	44.69	0.000
					-0.1652352	4.777754	-0.0582804
							5.221

. reg L9.logUSDNGN FEDRATE

Source	SS	df	MS	Number of obs	=	
Model	4.42754631	1	4.42754631	F(1, 111)	=	15.17
Residual	32.4070685	111	.291955572	Prob > F	=	0.0002
				R-squared	=	0.1202
				Adj R-squared	=	0.1123
Total	36.8346148	112	.328880489	Root MSE	=	.54033

L9.logUSDNGN	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
FEDRATE	-0.1082873	0.027807	-3.89	0.000	-0.1633887 -0.0531858
_cons	4.974255	0.1140384	43.62	0.000	4.74828 5.200229

. reg L12.logUSDNGN FEDRATE

Source	SS	df	MS	Number of obs	=	
Model	4.30614109	1	4.30614109	F(1, 108)	=	14.40
Residual	32.2931054	108	.299010235	Prob > F	=	0.0002
				R-squared	=	0.1177
				Adj R-squared	=	0.1095
Total	36.5992465	109	.335772904	Root MSE	=	.54682

L12.	logUSDNGN	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
	FEDRATE	-0.1081039	0.0284866	-3.79	0.000	-0.1645692 -0.0516385
	_cons	4.961016	0.11567	42.89	0.000	4.731738 5.190294

. reg logUSDZAR FEDRATE

Source	SS	df	MS	Number of obs	=	
Model	0.710791278	1	0.710791278	F(1, 120)	=	23.02
Residual	3.70561207	120	0.030880101	Prob > F	=	0.0000
				R-squared	=	0.1609
				Adj R-squared	=	0.1540
Total	4.41640335	121	0.036499201	Root MSE	=	0.17573

logUSDZAR	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
FEDRATE	-0.0418495	0.0087229	-4.80	0.000	-0.0591202 -0.0245789
_cons	2.105358	0.0368221	57.18	0.000	2.032453 2.178263

. reg L3.logUSDZAR FEDRATE

Source	SS	df	MS	Number of obs	=	
Model	1.14160188	1	1.14160188	F(1, 117)	=	40.87
Residual	3.26791717	117	0.027930916	Prob > F	=	0.0000
				R-squared	=	0.2589
				Adj R-squared	=	0.2526
Total	4.40951905	118	0.037368806	Root MSE	=	0.16713

L3.logUSDZAR	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
FEDRATE	-0.0536414	0.0083905	-6.39	0.000	-0.0702583 -0.0370245
_cons	2.148957	0.0350986	61.23	0.000	2.079446 2.218468

. reg L6.logUSDZAR FEDRATE

Source	SS	df	MS	Number of obs	=	
Model	1.59455615	1	1.59455615	F(1, 114)	=	64.60
Residual	2.81383359	114	0.024682751	Prob > F	=	0.0000
				R-squared	=	0.3617
				Adj R-squared	=	0.3561

```

Total | 4.40838974      115 .038333824  Root MSE      =      .15711
-----+-----
L6.logUSDZAR |      Coef.  Std. Err.      t    P>|t|      [95% Conf. Interval]
-----+-----
FEDRATE |  -.0641333  .0079792   -8.04  0.000   - .07994   - .0483265
_cons |  2.185441   .0330678   66.09  0.000   2.119934   2.250948
-----+-----

```

```
. reg L9.logUSDZAR FEDRATE
```

```

Source |      SS      df      MS      Number of obs =      113
-----+-----
Model |  2.03921214      1  2.03921214  F(1, 111) =      95.56
Residual |  2.36879084     111  .021340458  Prob > F =      0.0000
-----+-----
Total |  4.40800297     112  .039357169  R-squared =      0.4626
Adj R-squared =      0.4578
Root MSE =      .14608

```

```

-----+-----
L9.logUSDZAR |      Coef.  Std. Err.      t    P>|t|      [95% Conf. Interval]
-----+-----
FEDRATE |  -.0734898  .0075179   -9.78  0.000   -.0883871  -.0585925
_cons |  2.216431   .0308315   71.89  0.000   2.155337   2.277526
-----+-----

```

```
. reg L12.logUSDZAR FEDRATE
```

```

Source |      SS      df      MS      Number of obs =      110
-----+-----
Model |  2.4699826      1  2.4699826  F(1, 108) =     137.88
Residual |  1.93471367     108  .017914015  Prob > F =      0.0000
-----+-----
Total |  4.40469627     109  .040410058  R-squared =      0.5608
Adj R-squared =      0.5567
Root MSE =      .13384

```

```

-----+-----
L12.
logUSDZAR |      Coef.  Std. Err.      t    P>|t|      [95% Conf. Interval]
-----+-----
FEDRATE |  -.0818736  .0069726  -11.74  0.000   -.0956945  -.0680528
_cons |  2.242511   .0283122   79.21  0.000   2.186391   2.298631
-----+-----

```

```
.
. *2008-2019
. clear
```

```
. import excel "C:\Users\simon\OneDrive\Bureau\2008-2019 DATA.xlsx", sheet("ALL
CCY") firstrow
(13 vars, 136 obs)
```

```
. ssc install fcstats
checking fcstats consistency and verifying not already installed...
all files already exist and are up to date.
```

```
. ssc install tsmktim
checking tsmktim consistency and verifying not already installed...
all files already exist and are up to date.
```

```
. sort DATEStata
```

```
. tsmktim Time, start (2008m1)
time variable: Time, 2008m1 to 2019m4
delta: 1 month
```

```
. tsset Time
time variable: Time, 2008m1 to 2019m4
delta: 1 month
```

```
. gen logUSDTRY = log( USDTRY)
```

```
. gen logUSD RUB = log( USDRUB)
```

```
. gen logUSD CNY = log( USDCNY)
```

```
. gen logUSD INR = log( USDINR)
```

```

. gen logUSDBRL = log( USDBRL)
. gen logUSDMXN = log( USDMXN)
. gen logUSDNGN = log( USDNGN)
. gen logUSDZAR = log( USDZAR)
. reg logUSDTRY FEDRATE

```

Source	SS	df	MS	Number of obs	=	
Model	3.25370653	1	3.25370653	F(1, 134)	=	20.82
Residual	20.9443652	134	.156301233	Prob > F	=	0.0000
Total	24.1980717	135	.179244975	R-squared	=	0.1345
				Adj R-squared	=	0.1280
				Root MSE	=	.39535

logUSDTRY	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
FEDRATE	.193033	.0423081	4.56	0.000	.1093549 .276711
_cons	.6948747	.0424976	16.35	0.000	.6108219 .7789275

```

. reg L3.logUSDTRY FEDRATE

```

Source	SS	df	MS	Number of obs	=	
Model	6.67575981	1	6.67575981	F(1, 131)	=	58.49
Residual	14.9516425	131	.114134676	Prob > F	=	0.0000
Total	21.6274023	132	.163843957	R-squared	=	0.3087
				Adj R-squared	=	0.3034
				Root MSE	=	.33784

L3.logUSDTRY	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
FEDRATE	.3177932	.0415531	7.65	0.000	.2355913 .3999951
_cons	.617109	.0370971	16.63	0.000	.5437222 .6904959

```

. reg L6.logUSDTRY FEDRATE

```

Source	SS	df	MS	Number of obs	=	
Model	9.03927943	1	9.03927943	F(1, 128)	=	112.25
Residual	10.3079776	128	.080531075	Prob > F	=	0.0000
Total	19.3472571	129	.149978737	R-squared	=	0.4672
				Adj R-squared	=	0.4631
				Root MSE	=	.28378

L6.logUSDTRY	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
FEDRATE	.39226	.0370245	10.59	0.000	.3190008 .4655193
_cons	.5703918	.0312895	18.23	0.000	.5084801 .6323035

```

. reg L9.logUSDTRY FEDRATE

```

Source	SS	df	MS	Number of obs	=	
Model	10.1682357	1	10.1682357	F(1, 125)	=	214.71
Residual	5.91968972	125	.047357518	Prob > F	=	0.0000
Total	16.0879255	126	.127681948	R-squared	=	0.6320
				Adj R-squared	=	0.6291
				Root MSE	=	.21762

L9.logUSDTRY	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
FEDRATE	.4402557	.0300453	14.65	0.000	.3807923 .4997191
_cons	.5363705	.0240732	22.28	0.000	.4887267 .5840143

```

. reg L12.logUSDTRY FEDRATE

```

Source	SS	df	MS	Number of obs	=	
Model	9.37998808	1	9.37998808	F(1, 122)	=	240.35
				Prob > F	=	0.0000

Residual		4.76118447		122	.039026102	R-squared	=	0.6633
Total		14.1411726		123	.114968883	Adj R-squared	=	0.6606
						Root MSE	=	.19755

```
L12.
```

	logUSDTRY	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
	FEDRATE	.4242685	.0273664	15.50	0.000	.370094	.4784429
	_cons	.5250704	.0220376	23.83	0.000	.4814447	.5686962

```
. reg logUSDRUB FEDRATE
```

Source		SS		df	MS	Number of obs	=	136
Model		.688771667		1	.688771667	F(1, 134)	=	5.39
Residual		17.1317214		134	.127848667	Prob > F	=	0.0218
Total		17.8204931		135	.132003652	R-squared	=	0.0387
						Adj R-squared	=	0.0315
						Root MSE	=	.35756

	logUSDRUB	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
	FEDRATE	.0888137	.038264	2.32	0.022	.0131342	.1644932
	_cons	3.647149	.0384354	94.89	0.000	3.57113	3.723167

```
. reg L3.logUSDRUB FEDRATE
```

Source		SS		df	MS	Number of obs	=	133
Model		2.35112145		1	2.35112145	F(1, 131)	=	20.86
Residual		14.7641125		131	.112703149	Prob > F	=	0.0000
Total		17.115234		132	.129660864	R-squared	=	0.1374
						Adj R-squared	=	0.1308
						Root MSE	=	.33571

	L3.logUSDRUB	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
	FEDRATE	.1885957	.0412917	4.57	0.000	.106911	.2702804
	_cons	3.58683	.0368637	97.30	0.000	3.513905	3.659755

```
. reg L6.logUSDRUB FEDRATE
```

Source		SS		df	MS	Number of obs	=	130
Model		4.09576094		1	4.09576094	F(1, 128)	=	43.01
Residual		12.1885729		128	.095223226	Prob > F	=	0.0000
Total		16.2843338		129	.126235146	R-squared	=	0.2515
						Adj R-squared	=	0.2457
						Root MSE	=	.30858

	L6.logUSDRUB	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
	FEDRATE	.2640429	.0402604	6.56	0.000	.1843807	.3437051
	_cons	3.54291	.0340243	104.13	0.000	3.475587	3.610233

```
. reg L9.logUSDRUB FEDRATE
```

Source		SS		df	MS	Number of obs	=	127
Model		6.21740496		1	6.21740496	F(1, 125)	=	84.04
Residual		9.24767869		125	.07398143	Prob > F	=	0.0000
Total		15.4650837		126	.122738759	R-squared	=	0.4020
						Adj R-squared	=	0.3972
						Root MSE	=	.272

	L9.logUSDRUB	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
	FEDRATE	.3442602	.0375529	9.17	0.000	.2699383	.418582
	_cons	3.501241	.0300885	116.36	0.000	3.441692	3.560789

. reg L12.logUSDRUB FEDRATE

Source	SS	df	MS	Number of obs	=	
Model	6.90792349	1	6.90792349	F(1, 122)	=	106.97
Residual	7.87816519	122	.064575125	Prob > F	=	0.0000
Total	14.7860887	123	.120212103	R-squared	=	0.4672
				Adj R-squared	=	0.4628
				Root MSE	=	.25412

L12.	logUSDRUB	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
	FEDRATE	.3640939	.0352024	10.34	0.000	.2944072 .4337805
	_cons	3.480627	.0283479	122.78	0.000	3.42451 3.536745

. reg logUSDCNY FEDRATE

Source	SS	df	MS	Number of obs	=	
Model	.072094401	1	.072094401	F(1, 134)	=	50.67
Residual	.190641867	134	.001422701	Prob > F	=	0.0000
Total	.262736268	135	.001946195	R-squared	=	0.2744
				Adj R-squared	=	0.2690
				Root MSE	=	.03772

logUSDCNY	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
FEDRATE	.0287338	.0040364	7.12	0.000	.0207504 .0367172
_cons	1.859737	.0040545	458.68	0.000	1.851718 1.867757

. reg L3.logUSDCNY FEDRATE

Source	SS	df	MS	Number of obs	=	
Model	.056606285	1	.056606285	F(1, 131)	=	36.37
Residual	.203874352	131	.001556293	Prob > F	=	0.0000
Total	.260480637	132	.001973338	R-squared	=	0.2173
				Adj R-squared	=	0.2113
				Root MSE	=	.03945

L3.logUSDCNY	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
FEDRATE	.0292635	.0048522	6.03	0.000	.0196647 .0388624
_cons	1.860504	.0043319	429.49	0.000	1.851935 1.869074

. reg L6.logUSDCNY FEDRATE

Source	SS	df	MS	Number of obs	=	
Model	.033825283	1	.033825283	F(1, 128)	=	19.76
Residual	.219097863	128	.001711702	Prob > F	=	0.0000
Total	.252923146	129	.001960645	R-squared	=	0.1337
				Adj R-squared	=	0.1270
				Root MSE	=	.04137

L6.logUSDCNY	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
FEDRATE	.0239954	.0053979	4.45	0.000	.0133148 .034676
_cons	1.863158	.0045618	408.43	0.000	1.854132 1.872184

. reg L9.logUSDCNY FEDRATE

Source	SS	df	MS	Number of obs	=	
Model	.009129292	1	.009129292	F(1, 125)	=	4.87
Residual	.234311992	125	.001874496	Prob > F	=	0.0291
Total	.243441284	126	.001932074	R-squared	=	0.0375
				Adj R-squared	=	0.0298
				Root MSE	=	.0433

L9.logUSDCNY	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
--------------	-------	-----------	---	------	----------------------

FEDRATE		.0131917	.0059776	2.21	0.029	.0013614	.025022
_cons		1.86784	.0047894	389.99	0.000	1.858361	1.877319

. reg L12.logUSDCNY FEDRATE

Source		SS	df	MS	Number of obs	=	124
					F(1, 122)	=	3.26
Model		.006270591	1	.006270591	Prob > F	=	0.0734
Residual		.234586266	122	.001922838	R-squared	=	0.0260
					Adj R-squared	=	0.0181
Total		.240856857	123	.001958186	Root MSE	=	.04385

L12.							
logUSDCNY		Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE		.0109697	.0060745	1.81	0.073	-.0010554	.0229948
_cons		1.868547	.0048917	381.98	0.000	1.858863	1.87823

. reg logUSDINR FEDRATE

Source		SS	df	MS	Number of obs	=	136
					F(1, 134)	=	1.10
Model		.031296581	1	.031296581	Prob > F	=	0.2970
Residual		3.82582997	134	.02855097	R-squared	=	0.0081
					Adj R-squared	=	0.0007
Total		3.85712655	135	.028571308	Root MSE	=	.16897

logUSDINR		Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE		.0189318	.0180823	1.05	0.297	-.0168318	.0546953
_cons		4.018628	.0181632	221.25	0.000	3.982704	4.054551

. reg L3.logUSDINR FEDRATE

Source		SS	df	MS	Number of obs	=	133
					F(1, 131)	=	9.48
Model		.250603018	1	.250603018	Prob > F	=	0.0025
Residual		3.46347366	131	.02643873	R-squared	=	0.0675
					Adj R-squared	=	0.0604
Total		3.71407668	132	.028136945	Root MSE	=	.1626

L3.logUSDINR		Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE		.0615726	.0199993	3.08	0.003	.0220092	.101136
_cons		3.991503	.0178546	223.56	0.000	3.956182	4.026824

. reg L6.logUSDINR FEDRATE

Source		SS	df	MS	Number of obs	=	130
					F(1, 128)	=	22.93
Model		.540452455	1	.540452455	Prob > F	=	0.0000
Residual		3.01754088	128	.023574538	R-squared	=	0.1519
					Adj R-squared	=	0.1453
Total		3.55799334	129	.027581344	Root MSE	=	.15354

L6.logUSDINR		Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE		.0959149	.0200322	4.79	0.000	.0562777	.135552
_cons		3.970906	.0169293	234.56	0.000	3.937409	4.004404

. reg L9.logUSDINR FEDRATE

Source		SS	df	MS	Number of obs	=	127
					F(1, 125)	=	48.21
Model		.930827438	1	.930827438	Prob > F	=	0.0000
Residual		2.41368504	125	.01930948	R-squared	=	0.2783
					Adj R-squared	=	0.2725

Total | 3.34451248 126 .02654375 Root MSE = .13896

```
-----+-----
L9.logUSDINR |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-----+-----
    FEDRATE |   .1332039   .0191853     6.94  0.000   .0952339   .1711738
    _cons   |   3.950085   .0153718    256.97  0.000   3.919663   3.980508
-----+-----
```

. reg L12.logUSDINR FEDRATE

```
-----+-----
Source |      SS          df           MS       Number of obs   =       124
-----+-----
Model |   1.0185849         1   1.0185849       F(1, 122)       =       56.66
Residual |  2.19321124       122   .017977141     Prob > F         =       0.0000
-----+-----
Total |  3.21179614       123   .026112164     R-squared        =       0.3171
                                           Adj R-squared    =       0.3115
                                           Root MSE        =       .13408
-----+-----
```

```
-----+-----
L12.      |
logUSDINR |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-----+-----
    FEDRATE |   .13981     .0185738     7.53  0.000   .1030414   .1765786
    _cons   |   3.941996   .0149571    263.55  0.000   3.912387   3.971605
-----+-----
```

. reg logUSDBRL FEDRATE

```
-----+-----
Source |      SS          df           MS       Number of obs   =       136
-----+-----
Model |   1.00795364         1   1.00795364       F(1, 134)       =       11.65
Residual | 11.5950927       134   .086530542     Prob > F         =       0.0009
-----+-----
Total | 12.6030463       135   .093355899     R-squared        =       0.0800
                                           Adj R-squared    =       0.0731
                                           Root MSE        =       .29416
-----+-----
```

```
-----+-----
logUSDBRL |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-----+-----
    FEDRATE |   .1074392   .0314794     3.41  0.001   .0451783   .1697
    _cons   |   .8193115   .0316204    25.91  0.000   .7567718   .8818511
-----+-----
```

. reg L3.logUSDBRL FEDRATE

```
-----+-----
Source |      SS          df           MS       Number of obs   =       133
-----+-----
Model |   2.23792713         1   2.23792713       F(1, 131)       =       30.25
Residual |  9.69300469       131   .073992402     Prob > F         =       0.0000
-----+-----
Total | 11.9309318       132   .090385847     R-squared        =       0.1876
                                           Adj R-squared    =       0.1814
                                           Root MSE        =       .27202
-----+-----
```

```
-----+-----
L3.logUSDBRL |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-----+-----
    FEDRATE |   .1839998   .0334571     5.50  0.000   .1178137   .2501858
    _cons   |   .7730578   .0298693    25.88  0.000   .7139692   .8321463
-----+-----
```

. reg L6.logUSDBRL FEDRATE

```
-----+-----
Source |      SS          df           MS       Number of obs   =       130
-----+-----
Model |   3.41148645         1   3.41148645       F(1, 128)       =       55.50
Residual |  7.86853929       128   .061472963     Prob > F         =       0.0000
-----+-----
Total | 11.2800257       129   .08744206     R-squared        =       0.3024
                                           Adj R-squared    =       0.2970
                                           Root MSE        =       .24794
-----+-----
```

```
-----+-----
L6.logUSDBRL |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-----+-----
    FEDRATE |   .2409789   .0323481     7.45  0.000   .1769726   .3049852
    _cons   |   .7398163   .0273376    27.06  0.000   .6857243   .7939084
-----+-----
```

. reg L9.logUSDBRL FEDRATE

```
-----+-----
Source |      SS          df           MS       Number of obs   =       127
```

Model	4.38195526	1	4.38195526	F(1, 125)	=	89.77
Residual	6.10193094	125	.048815448	Prob > F	=	0.0000
				R-squared	=	0.4180
				Adj R-squared	=	0.4133
Total	10.4838862	126	.083205446	Root MSE	=	.22094

L9.logUSDBRL	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE	.2890122	.0305043	9.47	0.000	.2286404	.349384
_cons	.7129725	.0244409	29.17	0.000	.6646008	.7613441

. reg L12.logUSDBRL FEDRATE

Source	SS	df	MS	Number of obs	=	124
Model	4.32106091	1	4.32106091	F(1, 122)	=	96.65
Residual	5.45430675	122	.044707432	Prob > F	=	0.0000
				R-squared	=	0.4420
				Adj R-squared	=	0.4375
Total	9.77536767	123	.079474534	Root MSE	=	.21144

L12.	logUSDBRL	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
	FEDRATE	.2879617	.0292907	9.83	0.000	.2299779	.3459456
	_cons	.7020613	.0235873	29.76	0.000	.6553679	.7487546

. reg logUSDMXN FEDRATE

Source	SS	df	MS	Number of obs	=	136
Model	.275921552	1	.275921552	F(1, 134)	=	7.66
Residual	4.82591598	134	.036014298	Prob > F	=	0.0064
				R-squared	=	0.0541
				Adj R-squared	=	0.0470
Total	5.10183753	135	.037791389	Root MSE	=	.18977

logUSDMXN	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE	.0562128	.0203086	2.77	0.006	.0160459	.0963796
_cons	2.646308	.0203995	129.72	0.000	2.605962	2.686655

. reg L3.logUSDMXN FEDRATE

Source	SS	df	MS	Number of obs	=	133
Model	.944396797	1	.944396797	F(1, 131)	=	31.53
Residual	3.92434869	131	.02995686	Prob > F	=	0.0000
				R-squared	=	0.1940
				Adj R-squared	=	0.1878
Total	4.86874549	132	.036884436	Root MSE	=	.17308

L3.logUSDMXN	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE	.1195285	.0212884	5.61	0.000	.077415	.161642
_cons	2.608674	.0190055	137.26	0.000	2.571077	2.646271

. reg L6.logUSDMXN FEDRATE

Source	SS	df	MS	Number of obs	=	130
Model	1.67257227	1	1.67257227	F(1, 128)	=	73.68
Residual	2.90575834	128	.022701237	Prob > F	=	0.0000
				R-squared	=	0.3653
				Adj R-squared	=	0.3604
Total	4.57833062	129	.035490935	Root MSE	=	.15067

L6.logUSDMXN	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE	.1687328	.0196577	8.58	0.000	.1298368	.2076289
_cons	2.580654	.0166128	155.34	0.000	2.547783	2.613526

```
-----
. reg L9.logUSDMXN FEDRATE
```

Source	SS	df	MS	Number of obs	=	
Model	2.47897988	1	2.47897988	F(1, 125)	=	169.75
Residual	1.82547418	125	.014603793	Prob > F	=	0.0000
				R-squared	=	0.5759
				Adj R-squared	=	0.5725
Total	4.30445406	126	.034162334	Root MSE	=	.12085

L9.logUSDMXN	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE	.2173796	.0166846	13.03	0.000	.1843587	.2504004
_cons	2.556066	.0133682	191.21	0.000	2.529609	2.582523

```
. reg L12.logUSDMXN FEDRATE
```

Source	SS	df	MS	Number of obs	=	
Model	2.55641366	1	2.55641366	F(1, 122)	=	214.91
Residual	1.45123392	122	.01189536	Prob > F	=	0.0000
				R-squared	=	0.6379
				Adj R-squared	=	0.6349
Total	4.00764758	123	.032582501	Root MSE	=	.10907

L12.logUSDMXN	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE	.2214905	.0151087	14.66	0.000	.1915813	.2513998
_cons	2.546768	.0121668	209.32	0.000	2.522682	2.570853

```
. reg logUSDNGN FEDRATE
```

Source	SS	df	MS	Number of obs	=	
Model	2.51789355	1	2.51789355	F(1, 134)	=	22.41
Residual	15.0584186	134	.112376258	Prob > F	=	0.0000
				R-squared	=	0.1433
				Adj R-squared	=	0.1369
Total	17.5763122	135	.130194905	Root MSE	=	.33523

logUSDNGN	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE	.1698091	.035874	4.73	0.000	.0988566	.2407616
_cons	5.157379	.0360346	143.12	0.000	5.086109	5.228649

```
. reg L3.logUSDNGN FEDRATE
```

Source	SS	df	MS	Number of obs	=	
Model	5.653066	1	5.653066	F(1, 131)	=	69.12
Residual	10.7132558	131	.081780579	Prob > F	=	0.0000
				R-squared	=	0.3454
				Adj R-squared	=	0.3404
Total	16.3663218	132	.123987286	Root MSE	=	.28597

L3.logUSDNGN	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE	.2924397	.0351738	8.31	0.000	.2228575	.3620219
_cons	5.08589	.0314019	161.96	0.000	5.023769	5.14801

```
. reg L6.logUSDNGN FEDRATE
```

Source	SS	df	MS	Number of obs	=	
Model	8.19804963	1	8.19804963	F(1, 128)	=	152.74
Residual	6.87038104	128	.053674852	Prob > F	=	0.0000
				R-squared	=	0.5441
				Adj R-squared	=	0.5405
Total	15.0684307	129	.11680954	Root MSE	=	.23168

L6.logUSDNGN	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE	.3735618	.0302268	12.36	0.000	.3137528	.4333707
_cons	5.039745	.0255448	197.29	0.000	4.9892	5.090289

. reg L9.logUSDNGN FEDRATE

Source	SS	df	MS	Number of obs	=	
Model	10.8295555	1	10.8295555	F(1, 125)	=	468.03
Residual	2.89231662	125	.023138533	Prob > F	=	0.0000
Total	13.7218721	126	.108903747	R-squared	=	0.7892
				Adj R-squared	=	0.7875
				Root MSE	=	.15211

L9.logUSDNGN	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE	.4543468	.0210015	21.63	0.000	.4127823	.4959114
_cons	4.998052	.016827	297.03	0.000	4.96475	5.031355

. reg L12.logUSDNGN FEDRATE

Source	SS	df	MS	Number of obs	=	
Model	10.4198655	1	10.4198655	F(1, 122)	=	668.10
Residual	1.90273039	122	.015596151	Prob > F	=	0.0000
Total	12.3225959	123	.100183707	R-squared	=	0.8456
				Adj R-squared	=	0.8443
				Root MSE	=	.12488

L12.logUSDNGN	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE	.4471679	.0173001	25.85	0.000	.4129207	.4814152
_cons	4.985466	.0139314	357.86	0.000	4.957887	5.013044

. reg logUSDZAR FEDRATE

Source	SS	df	MS	Number of obs	=	
Model	.558441305	1	.558441305	F(1, 134)	=	8.42
Residual	8.88536462	134	.066308691	Prob > F	=	0.0043
Total	9.44380593	135	.069954118	R-squared	=	0.0591
				Adj R-squared	=	0.0521
				Root MSE	=	.2575

logUSDZAR	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE	.0799707	.0275567	2.90	0.004	.0254683	.1344731
_cons	2.266084	.0276801	81.87	0.000	2.211337	2.32083

. reg L3.logUSDZAR FEDRATE

Source	SS	df	MS	Number of obs	=	
Model	1.29069982	1	1.29069982	F(1, 131)	=	21.71
Residual	7.78690132	131	.059441995	Prob > F	=	0.0000
Total	9.07760114	132	.068769706	R-squared	=	0.1422
				Adj R-squared	=	0.1356
				Root MSE	=	.24381

L3.logUSDZAR	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE	.1397355	.0299875	4.66	0.000	.080413	.1990581
_cons	2.230196	.0267718	83.30	0.000	2.177235	2.283157

. reg L6.logUSDZAR FEDRATE

Source	SS	df	MS	Number of obs	=	
Model	2.06621022	1	2.06621022	F(1, 128)	=	39.50
				Prob > F	=	0.0000

```

Residual | 6.69567644      128 .052309972  R-squared      = 0.2358
-----+-----
Total    | 8.76188666      129 .067921602  Adj R-squared  = 0.2298
                                         Root MSE      = .22871

```

```

-----+-----
L6.logUSDZAR |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-----+-----
FEDRATE |   .1875402   .02984      6.28  0.000   .1284966   .2465838
_cons |   2.203322   .025218   87.37  0.000   2.153424   2.25322

```

```
. reg L9.logUSDZAR FEDRATE
```

```

Source |      SS          df           MS       Number of obs = 127
-----+-----
Model | 2.79389706         1   2.79389706   F(1, 125) = 63.16
Residual | 5.529766         125   .044238128   Prob > F = 0.0000
Total | 8.32366307         126   .066060818   R-squared = 0.3357
                                         Adj R-squared = 0.3303
                                         Root MSE = .21033

```

```

-----+-----
L9.logUSDZAR |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-----+-----
FEDRATE |   .2307743   .0290389    7.95  0.000   .1733026   .2882459
_cons |   2.180052   .0232668   93.70  0.000   2.134004   2.2261

```

```
. reg L12.logUSDZAR FEDRATE
```

```

Source |      SS          df           MS       Number of obs = 124
-----+-----
Model | 3.17081723         1   3.17081723   F(1, 122) = 79.14
Residual | 4.88826567         122   .040067751   Prob > F = 0.0000
Total | 8.05908289         123   .065520999   R-squared = 0.3934
                                         Adj R-squared = 0.3885
                                         Root MSE = .20017

```

```

-----+-----
L12.
logUSDZAR |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-----+-----
FEDRATE |   .246675   .0277292    8.90  0.000   .1917823   .3015677
_cons |   2.165554   .0223298   96.98  0.000   2.12135   2.209758

```

```

.
. *WITH CURRENT ACCOUNTS
. *1997-2007
. clear

. import excel "C:\Users\simon\OneDrive\Bureau\1997-2007 CURRENT ACCOUNTS.xlsx",
sheet("ALL CCY") firstrow
(25 vars, 37 obs)

. ssc install fcstats
checking fcstats consistency and verifying not already installed...
all files already exist and are up to date.

. ssc install tsmktim
checking tsmktim consistency and verifying not already installed...
all files already exist and are up to date.

. sort DATEStata

. tsmktim Time, start (1998q4)
      time variable:  Time, 1998q4 to 2007q4
              delta:  1 quarter

. tsset Time
      time variable:  Time, 1998q4 to 2007q4
              delta:  1 quarter

. gen logUSDTRY = log( USDTRY)

. gen logUSDRUB = log( USDRUB)

. gen logUSDCNY = log( USDCNY)

```

```

. gen logUSDINR = log( USDINR)
. gen logUSDBRL = log( USDBRL)
. gen logUSDMXN = log( USDMXN)
. gen logUSDNGN = log( USDNGN)
. gen logUSDZAR = log( USDZAR)

```

```

. reg logUSDTRY FEDRATE TRYQCURRACC

```

Source	SS	df	MS	Number of obs	=	
Model	5.48141185	2	2.74070592	F(2, 34)	=	35.98
Residual	2.58962118	34	.076165329	Prob > F	=	0.0000
Total	8.07103303	36	.224195362	R-squared	=	0.6791
				Adj R-squared	=	0.6603
				Root MSE	=	.27598

logUSDTRY	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
FEDRATE	-.1964321	.0260107	-7.55	0.000	-.2492923 - .143572
TRYQCURRACC	-.1194167	.0200831	-5.95	0.000	-.1602304 - .078603
_cons	.5246244	.1023936	5.12	0.000	.3165355 .7327133

```

. reg L3.logUSDTRY FEDRATE TRYQCURRACC

```

Source	SS	df	MS	Number of obs	=	
Model	6.16326447	2	3.08163223	F(2, 31)	=	51.44
Residual	1.85718445	31	.059909176	Prob > F	=	0.0000
Total	8.02044892	33	.243043907	R-squared	=	0.7684
				Adj R-squared	=	0.7535
				Root MSE	=	.24476

L3.logUSDTRY	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
FEDRATE	-.2351712	.0248089	-9.48	0.000	-.2857692 - .1845732
TRYQCURRACC	-.1541065	.0209982	-7.34	0.000	-.1969325 - .1112804
_cons	.5040052	.0910639	5.53	0.000	.3182791 .6897313

```

. reg L6.logUSDTRY FEDRATE TRYQCURRACC

```

Source	SS	df	MS	Number of obs	=	
Model	6.73576896	2	3.36788448	F(2, 28)	=	93.30
Residual	1.01075693	28	.036098462	Prob > F	=	0.0000
Total	7.74652589	30	.25821753	R-squared	=	0.8695
				Adj R-squared	=	0.8602
				Root MSE	=	.19

L6.logUSDTRY	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
FEDRATE	-.278092	.022647	-12.28	0.000	-.3244822 - .2317018
TRYQCURRACC	-.2317527	.0192523	-12.04	0.000	-.2711893 - .1923161
_cons	.324729	.0709142	4.58	0.000	.1794678 .4699902

```

. reg L9.logUSDTRY FEDRATE TRYQCURRACC

```

Source	SS	df	MS	Number of obs	=	
Model	5.91446085	2	2.95723043	F(2, 25)	=	49.09
Residual	1.50598699	25	.06023948	Prob > F	=	0.0000
Total	7.42044784	27	.274831401	R-squared	=	0.7970
				Adj R-squared	=	0.7808
				Root MSE	=	.24544

L9.logUSDTRY	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
FEDRATE	-.2258368	.0388106	-5.82	0.000	-.3057688 - .1459049
TRYQCURRACC	-.2710951	.0275534	-9.84	0.000	-.3278423 - .2143478
_cons	-.0617683	.0973738	-0.63	0.532	-.2623133 .1387767

. reg L12.logUSDTRY FEDRATE TRYQCURRACC

Source	SS	df	MS	Number of obs	=	25
Model	6.1746818	2	3.0873409	F(2, 22)	=	68.94
Residual	.985255452	22	.044784339	Prob > F	=	0.0000
				R-squared	=	0.8624
				Adj R-squared	=	0.8499
Total	7.15993725	24	.298330719	Root MSE	=	.21162

L12.

logUSDTRY	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE	-.0399567	.0392095	-1.02	0.319	-.1212723	.0413589
TRYQCURRACC	-.2326929	.0275291	-8.45	0.000	-.2897848	-.175601
_cons	-.5883094	.0852705	-6.90	0.000	-.7651496	-.4114692

. reg logUSDRUB FEDRATE RUBQCURRACC

Source	SS	df	MS	Number of obs	=	37
Model	.241878824	2	.120939412	F(2, 34)	=	76.00
Residual	.054106867	34	.001591378	Prob > F	=	0.0000
				R-squared	=	0.8172
				Adj R-squared	=	0.8064
Total	.295985691	36	.008221825	Root MSE	=	.03989

logUSDRUB	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE	-.0402403	.0037788	-10.65	0.000	-.0479198	-.0325609
RUBQCURRACC	.0159632	.0017273	9.24	0.000	.0124529	.0194734
_cons	3.310365	.0199668	165.79	0.000	3.269787	3.350942

. reg L3.logUSDRUB FEDRATE RUBQCURRACC

Source	SS	df	MS	Number of obs	=	34
Model	.142855389	2	.071427695	F(2, 31)	=	19.55
Residual	.113234791	31	.003652735	Prob > F	=	0.0000
				R-squared	=	0.5578
				Adj R-squared	=	0.5293
Total	.256090181	33	.007760309	Root MSE	=	.06044

L3.logUSDRUB

Coef.	Std. Err.	t	P> t	[95% Conf. Interval]		
FEDRATE	-.0392024	.0064572	-6.07	0.000	-.0523719	-.0260328
RUBQCURRACC	.0066566	.003594	1.85	0.074	-.0006733	.0139865
_cons	3.404843	.0355615	95.75	0.000	3.332315	3.477371

. reg L6.logUSDRUB FEDRATE RUBQCURRACC

Source	SS	df	MS	Number of obs	=	31
Model	.156930479	2	.078465239	F(2, 28)	=	26.30
Residual	.083529025	28	.002983179	Prob > F	=	0.0000
				R-squared	=	0.6526
				Adj R-squared	=	0.6278
Total	.240459504	30	.008015317	Root MSE	=	.05462

L6.logUSDRUB

Coef.	Std. Err.	t	P> t	[95% Conf. Interval]		
FEDRATE	-.0261814	.0062375	-4.20	0.000	-.0389583	-.0134045
RUBQCURRACC	-.0091847	.0033139	-2.77	0.010	-.0159729	-.0023964
_cons	3.534966	.032386	109.15	0.000	3.468626	3.601305

. reg L9.logUSDRUB FEDRATE RUBQCURRACC

Source	SS	df	MS	Number of obs	=	28
Model	.119449777	2	.059724889	F(2, 25)	=	12.77
Residual	.116888893	25	.004675556	Prob > F	=	0.0002
				R-squared	=	0.5054

```
-----+-----
Total | .236338671      27 .008753284  Adj R-squared = 0.4659
Root MSE = .06838
```

```
-----+-----
L9.logUSDRUB |      Coef.  Std. Err.      t    P>|t|    [95% Conf. Interval]
-----+-----
FEDRATE |   -.004565   .008301   -0.55   0.587   - .0216612   .0125312
RUBQCURRACC |  -.021962   .0047295  -4.64   0.000   - .0317025  -.0122214
_cons |   3.588519   .0494276  72.60   0.000    3.486721   3.690317
```

```
. reg L12.logUSDRUB FEDRATE RUBQCURRACC
```

```
-----+-----
Source |      SS      df      MS      Number of obs =      25
-----+-----
Model |   .04649951      2   .023249755  F(2, 22) =      2.70
Residual |   .189325577     22   .008605708  Prob > F =      0.0893
Total |   .235825087     24   .009826045  R-squared =      0.1972
Adj R-squared =      0.1242
Root MSE =      .09277
```

```
-----+-----
L12.
logUSDRUB |      Coef.  Std. Err.      t    P>|t|    [95% Conf. Interval]
-----+-----
FEDRATE |   .0255466   .0114116    2.24   0.036    .0018803   .0492129
RUBQCURRACC |  -.0101084   .0107042   -0.94   0.355   - .0323076   .0120907
_cons |   3.372183   .1037031   32.52   0.000    3.157116   3.58725
```

```
. reg logUSDCNY FEDRATE CNYQCURRACC
```

```
-----+-----
Source |      SS      df      MS      Number of obs =      37
-----+-----
Model |   .028823546      2   .014411773  F(2, 34) =      66.52
Residual |   .007366712     34   .000216668  Prob > F =      0.0000
Total |   .036190258     36   .001005285  R-squared =      0.7964
Adj R-squared =      0.7845
Root MSE =      .01472
```

```
-----+-----
logUSDCNY |      Coef.  Std. Err.      t    P>|t|    [95% Conf. Interval]
-----+-----
FEDRATE |  -.0014457   .0013831   -1.05   0.303   - .0042565   .0013651
CNYQCURRACC |  -.009537   .000892   -10.69   0.000   - .0113499  -.0077242
_cons |   2.140421   .0057616  371.50   0.000    2.128712   2.15213
```

```
. reg L3.logUSDCNY FEDRATE CNYQCURRACC
```

```
-----+-----
Source |      SS      df      MS      Number of obs =      34
-----+-----
Model |   .007817599      2   .0039088    F(2, 31) =      35.80
Residual |   .003384731     31   .000109185  Prob > F =      0.0000
Total |   .011202331     33   .000339465  R-squared =      0.6979
Adj R-squared =      0.6784
Root MSE =      .01045
```

```
-----+-----
L3.logUSDCNY |      Coef.  Std. Err.      t    P>|t|    [95% Conf. Interval]
-----+-----
FEDRATE |  -.0006779   .0010164   -0.67   0.510   - .0027509   .001395
CNYQCURRACC |  -.0050747   .0006585   -7.71   0.000   - .0064177  -.0037316
_cons |   2.128389   .0041011  518.98   0.000    2.120025   2.136753
```

```
. reg L6.logUSDCNY FEDRATE CNYQCURRACC
```

```
-----+-----
Source |      SS      df      MS      Number of obs =      31
-----+-----
Model |   .00142222      2   .00071111    F(2, 28) =      12.90
Residual |   .001543744     28   .000055134  Prob > F =      0.0001
Total |   .002965964     30   .000098865  R-squared =      0.4795
Adj R-squared =      0.4423
Root MSE =      .00743
```

```
-----+-----
L6.logUSDCNY |      Coef.  Std. Err.      t    P>|t|    [95% Conf. Interval]
-----+-----
FEDRATE |  3.14e-06   .0008007    0.00   0.997   - .0016371   .0016433
```


CNYQCURRACC		-0.0022914	.0005031	-4.55	0.000	-0.003322	-0.0012608
_cons		2.11973	.002916	726.92	0.000	2.113757	2.125703

. reg L9.logUSDCNY FEDRATE CNYQCURRACC

Source		SS	df	MS	Number of obs	=	28
					F(2, 25)	=	1.79
Model		.000062022	2	.000031011	Prob > F	=	0.1883
Residual		.000433953	25	.000017358	R-squared	=	0.1251
					Adj R-squared	=	0.0551
Total		.000495975	27	.000018369	Root MSE	=	.00417

L9.logUSDCNY		Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
FEDRATE		.0005299	.0007277	0.73	0.473	-0.0009689 .0020287
CNYQCURRACC		-0.0006753	.0003965	-1.70	0.101	-0.0014919 .0001412
_cons		2.114243	.0016629	1271.39	0.000	2.110818 2.117668

. reg L12.logUSDCNY FEDRATE CNYQCURRACC

Source		SS	df	MS	Number of obs	=	25
					F(2, 22)	=	12.60
Model		2.1210e-07	2	1.0605e-07	Prob > F	=	0.0002
Residual		1.8517e-07	22	8.4169e-09	R-squared	=	0.5339
					Adj R-squared	=	0.4915
Total		3.9727e-07	24	1.6553e-08	Root MSE	=	9.2e-05

L12.		Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
logUSDCNY						
FEDRATE		.0000521	.0000332	1.57	0.130	-0.0000167 .0001209
CNYQCURRACC		-0.0000573	.0000186	-3.08	0.005	-0.0000958 -0.0000188
_cons		2.113691	.000037	5.7e+04	0.000	2.113615 2.113768

. reg logUSDINR FEDRATE INRQCURRACC

Source		SS	df	MS	Number of obs	=	37
					F(2, 34)	=	5.73
Model		.02583854	2	.01291927	Prob > F	=	0.0071
Residual		.076611614	34	.002253283	R-squared	=	0.2522
					Adj R-squared	=	0.2082
Total		.102450154	36	.002845838	Root MSE	=	.04747

logUSDINR		Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
FEDRATE		.00018	.0081995	0.02	0.983	-0.0164833 .0168434
INRQCURRACC		.0230196	.0129192	1.78	0.084	-0.0032354 .0492745
_cons		3.808995	.028821	132.16	0.000	3.750424 3.867567

. reg L3.logUSDINR FEDRATE INRQCURRACC

Source		SS	df	MS	Number of obs	=	34
					F(2, 31)	=	23.02
Model		.034269858	2	.017134929	Prob > F	=	0.0000
Residual		.023076046	31	.000744389	R-squared	=	0.5976
					Adj R-squared	=	0.5716
Total		.057345904	33	.001737755	Root MSE	=	.02728

L3.logUSDINR		Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
FEDRATE		-.0143803	.0047865	-3.00	0.005	-.0241425 -.004618
INRQCURRACC		.0046854	.007699	0.61	0.547	-.0110167 .0203876
_cons		3.866914	.016922	228.51	0.000	3.832401 3.901427

. reg L6.logUSDINR FEDRATE INRQCURRACC

Source		SS	df	MS	Number of obs	=	31
					F(2, 28)	=	41.55

Model		.040830561	2	.020415281	Prob > F	=	0.0000		
Residual		.013758634	28	.00049138	R-squared	=	0.7480		
-----							Adj R-squared	=	0.7300
Total		.054589195	30	.00181964	Root MSE	=	.02217		

L6.logUSDINR		Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE		-.0182357	.0040946	-4.45	0.000	-.0266231	-.0098482
INRQCURRACC		.0023329	.0063548	0.37	0.716	-.0106844	.0153502
_cons		3.878624	.0141141	274.81	0.000	3.849713	3.907536

. reg L9.logUSDINR FEDRATE INRQCURRACC

Source		SS	df	MS	Number of obs	=	28		
-----							F(2, 25)	=	5.59
Model		.016685336	2	.008342668	Prob > F	=	0.0098		
Residual		.037278122	25	.001491125	R-squared	=	0.3092		
-----							Adj R-squared	=	0.2539
Total		.053963458	27	.001998647	Root MSE	=	.03862		

L9.logUSDINR		Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE		-.020659	.0089971	-2.30	0.030	-.039189	-.002129
INRQCURRACC		-.0094727	.0121614	-0.78	0.443	-.0345197	.0155743
_cons		3.881168	.028906	134.27	0.000	3.821635	3.940701

. reg L12.logUSDINR FEDRATE INRQCURRACC

Source		SS	df	MS	Number of obs	=	25		
-----							F(2, 22)	=	0.74
Model		.003067913	2	.001533956	Prob > F	=	0.4878		
Residual		.045492671	22	.002067849	R-squared	=	0.0632		
-----							Adj R-squared	=	-0.0220
Total		.048560584	24	.002023358	Root MSE	=	.04547		

L12.logUSDINR		Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE		-.0063874	.0120562	-0.53	0.602	-.0313904	.0186156
INRQCURRACC		-.015238	.0156419	-0.97	0.341	-.0476774	.0172014
_cons		3.842887	.0371175	103.53	0.000	3.76591	3.919864

. reg logUSDBRL FEDRATE BRLQCURRACC

Source		SS	df	MS	Number of obs	=	37		
-----							F(2, 34)	=	36.18
Model		1.40645274	2	.703226372	Prob > F	=	0.0000		
Residual		.660923288	34	.01943892	R-squared	=	0.6803		
-----							Adj R-squared	=	0.6615
Total		2.06737603	36	.057427112	Root MSE	=	.13942		

logUSDBRL		Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE		-.1004924	.0132052	-7.61	0.000	-.1273286	-.0736562
BRLQCURRACC		.0118892	.009731	1.22	0.230	-.0078865	.0316649
_cons		1.204217	.0510717	23.58	0.000	1.100427	1.308007

. reg L3.logUSDBRL FEDRATE BRLQCURRACC

Source		SS	df	MS	Number of obs	=	34		
-----							F(2, 31)	=	63.69
Model		1.54105747	2	.770528735	Prob > F	=	0.0000		
Residual		.375047901	31	.012098319	R-squared	=	0.8043		
-----							Adj R-squared	=	0.7916
Total		1.91610537	33	.058063799	Root MSE	=	.10999		

L3.logUSDBRL		Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
--------------	--	-------	-----------	---	------	----------------------	--

	FEDRATE	BRLQCURRACC	_cons
	-.0757438	.0104496	1.157518
	-7.25	6.37	28.73
	0.000	0.000	0.000
	-.097056	.0352209	1.075342
	-.0544317	.0683739	1.239695

. reg L6.logUSDBRL FEDRATE BRLQCURRACC

Source	SS	df	MS	Number of obs	=	
Model	1.50136414	2	.750682072	F(2, 28)	=	31
Residual	.384836647	28	.013744166	Prob > F	=	54.62
Total	1.88620079	30	.06287336	R-squared	=	0.0000
				Adj R-squared	=	0.7960
				Root MSE	=	0.7814

L6.logUSDBRL	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
FEDRATE	-.0423031	.0114777	-3.69	0.001	-.0658142 - .0187921
BRLQCURRACC	.0845552	.0093207	9.07	0.000	.0654626 .1036477
_cons	1.042622	.0433279	24.06	0.000	.9538689 1.131375

. reg L9.logUSDBRL FEDRATE BRLQCURRACC

Source	SS	df	MS	Number of obs	=	
Model	1.43900132	2	.719500661	F(2, 25)	=	28
Residual	.4327632	25	.017310528	Prob > F	=	41.56
Total	1.87176452	27	.069324612	R-squared	=	0.0000
				Adj R-squared	=	0.7688
				Root MSE	=	0.7503

L9.logUSDBRL	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
FEDRATE	.010341	.0153902	0.67	0.508	-.0213558 .0420379
BRLQCURRACC	.1042998	.0116655	8.94	0.000	.0802743 .1283253
_cons	.8520575	.0528358	16.13	0.000	.7432401 .9608749

. reg L12.logUSDBRL FEDRATE BRLQCURRACC

Source	SS	df	MS	Number of obs	=	
Model	1.53661357	2	.768306784	F(2, 22)	=	25
Residual	.315638785	22	.014347217	Prob > F	=	53.55
Total	1.85225235	24	.077177181	R-squared	=	0.0000
				Adj R-squared	=	0.8296
				Root MSE	=	0.8141

L12.logUSDBRL	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
FEDRATE	.0903471	.0157764	5.73	0.000	.0576289 .1230652
BRLQCURRACC	.0871681	.0150895	5.78	0.000	.0558743 .1184619
_cons	.5754149	.050019	11.50	0.000	.4716819 .6791479

. reg logUSDMXN FEDRATE MXNQCURRACC

Source	SS	df	MS	Number of obs	=	
Model	.174396301	2	.087198151	F(2, 34)	=	37
Residual	.038362012	34	.001128294	Prob > F	=	77.28
Total	.212758313	36	.005909953	R-squared	=	0.0000
				Adj R-squared	=	0.8197
				Root MSE	=	0.8091

logUSDMXN	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
FEDRATE	-.0024439	.0031794	-0.77	0.447	-.0089052 .0040174
MXNQCURRACC	.0766651	.0066373	11.55	0.000	.0631765 .0901537
_cons	2.461664	.0140562	175.13	0.000	2.433098 2.49023

. reg L3.logUSDMXN FEDRATE MXNQCURRACC

Source	SS	df	MS	Number of obs	=	34
Model	.152786648	2	.076393324	F(2, 31)	=	47.33
Residual	.050040127	31	.001614198	Prob > F	=	0.0000
				R-squared	=	0.7533
				Adj R-squared	=	0.7374
Total	.202826774	33	.006146266	Root MSE	=	.04018

L3.logUSDMXN	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
FEDRATE	.0074165	.0038046	1.95	0.060	-.0003431 .015176
MXNQCURRACC	.0885274	.0091157	9.71	0.000	.0699358 .107119
_cons	2.428617	.0175783	138.16	0.000	2.392766 2.464469

. reg L6.logUSDMXN FEDRATE MXNQCURRACC

Source	SS	df	MS	Number of obs	=	31
Model	.132357994	2	.066178997	F(2, 28)	=	33.10
Residual	.05598207	28	.00199936	Prob > F	=	0.0000
				R-squared	=	0.7028
				Adj R-squared	=	0.6815
Total	.188340064	30	.006278002	Root MSE	=	.04471

L6.logUSDMXN	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
FEDRATE	.0184516	.004376	4.22	0.000	.0094877 .0274154
MXNQCURRACC	.0808735	.0107373	7.53	0.000	.0588791 .1028679
_cons	2.368243	.0205344	115.33	0.000	2.32618 2.410305

. reg L9.logUSDMXN FEDRATE MXNQCURRACC

Source	SS	df	MS	Number of obs	=	28
Model	.144060048	2	.072030024	F(2, 25)	=	72.75
Residual	.02475119	25	.000990048	Prob > F	=	0.0000
				R-squared	=	0.8534
				Adj R-squared	=	0.8416
Total	.168811238	27	.006252268	Root MSE	=	.03147

L9.logUSDMXN	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
FEDRATE	.0368758	.0037073	9.95	0.000	.0292404 .0445112
MXNQCURRACC	.0441239	.0087879	5.02	0.000	.0260248 .062223
_cons	2.256288	.0177741	126.94	0.000	2.219681 2.292894

. reg L12.logUSDMXN FEDRATE MXNQCURRACC

Source	SS	df	MS	Number of obs	=	25
Model	.120801125	2	.060400563	F(2, 22)	=	47.08
Residual	.028222982	22	.001282863	Prob > F	=	0.0000
				R-squared	=	0.8106
				Adj R-squared	=	0.7934
Total	.149024107	24	.006209338	Root MSE	=	.03582

L12.logUSDMXN	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
FEDRATE	.0435932	.004909	8.88	0.000	.0334126 .0537739
MXNQCURRACC	-.0089262	.0146604	-0.61	0.549	-.0393299 .0214776
_cons	2.169442	.0264177	82.12	0.000	2.114655 2.224229

. reg logUSDNGN FEDRATE NGNQCURRACC

Source	SS	df	MS	Number of obs	=	10
Model	1.35330086	2	.676650432	F(2, 7)	=	3.40
Residual	1.39297295	7	.198996136	Prob > F	=	0.0929
				R-squared	=	0.4928
				Adj R-squared	=	0.3479
Total	2.74627381	9	.305141535	Root MSE	=	.44609

logUSDNGN	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE	-.1410371	.0810026	-1.74	0.125	-.3325778	.0505037
NGNQCURRACC	.0459322	.0195003	2.36	0.051	-.0001787	.0920431
_cons	4.764182	.324246	14.69	0.000	3.997462	5.530902

. reg L3.logUSDNGN FEDRATE NGNQCURRACC

Source	SS	df	MS	Number of obs	=	9
Model	.133142029	2	.066571014	F(2, 6)	=	16.87
Residual	.023682158	6	.003947026	Prob > F	=	0.0034
Total	.156824187	8	.019603023	R-squared	=	0.8490
				Adj R-squared	=	0.7987
				Root MSE	=	.06283

L3.logUSDNGN	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE	-.0613376	.012406	-4.94	0.003	-.091694	-.0309812
NGNQCURRACC	.016388	.0033407	4.91	0.003	.0082136	.0245624
_cons	4.839258	.0460946	104.99	0.000	4.726468	4.952047

. reg L6.logUSDNGN FEDRATE NGNQCURRACC

Source	SS	df	MS	Number of obs	=	8
Model	.052039333	2	.026019666	F(2, 5)	=	3.75
Residual	.034728193	5	.006945639	Prob > F	=	0.1013
Total	.086767526	7	.012395361	R-squared	=	0.5998
				Adj R-squared	=	0.4397
				Root MSE	=	.08334

L6.logUSDNGN	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE	-.0393054	.0215192	-1.83	0.127	-.0946224	.0160115
NGNQCURRACC	.0164876	.0060248	2.74	0.041	.0010003	.031975
_cons	4.739582	.061295	77.32	0.000	4.582018	4.897146

. reg L9.logUSDNGN FEDRATE NGNQCURRACC

Source	SS	df	MS	Number of obs	=	7
Model	.057765787	2	.028882893	F(2, 4)	=	3.41
Residual	.033889537	4	.008472384	Prob > F	=	0.1367
Total	.091655324	6	.015275887	R-squared	=	0.6303
				Adj R-squared	=	0.4454
				Root MSE	=	.09205

L9.logUSDNGN	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE	.0197528	.0380196	0.52	0.631	-.0858064	.125312
NGNQCURRACC	.0089955	.0083077	1.08	0.340	-.0140703	.0320614
_cons	4.63246	.072252	64.12	0.000	4.431857	4.833064

. reg L12.logUSDNGN FEDRATE NGNQCURRACC

Source	SS	df	MS	Number of obs	=	7
Model	.586899348	2	.293449674	F(2, 4)	=	0.59
Residual	1.98212999	4	.495532497	Prob > F	=	0.5953
Total	2.56902933	6	.428171556	R-squared	=	0.2285
				Adj R-squared	=	-0.1573
				Root MSE	=	.70394

L12.	logUSDNGN	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
	FEDRATE	.0377922	.2907638	0.13	0.903	-.7694975	.8450819
	NGNQCURRACC	.0336452	.063535	0.53	0.624	-.1427564	.2100468
	_cons	4.093847	.5525645	7.41	0.002	2.559682	5.628012

. reg logUSDZAR FEDRATE ZARQCURRACC

Source	SS	df	MS	Number of obs	=	
Model	.300722256	2	.150361128	F(2, 34)	=	5.46
Residual	.935851809	34	.027525053	Prob > F	=	0.0088
				R-squared	=	0.2432
				Adj R-squared	=	0.1987
Total	1.23657407	36	.03434928	Root MSE	=	.16591

logUSDZAR	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
FEDRATE	-.0138851	.0159698	-0.87	0.391	-.0463396 .0185694
ZARQCURRACC	.042143	.0157863	2.67	0.012	.0100615 .0742246
_cons	2.092918	.0607873	34.43	0.000	1.969383 2.216452

. reg L3.logUSDZAR FEDRATE ZARQCURRACC

Source	SS	df	MS	Number of obs	=	
Model	.598074347	2	.299037173	F(2, 31)	=	14.65
Residual	.632972232	31	.020418459	Prob > F	=	0.0000
				R-squared	=	0.4858
				Adj R-squared	=	0.4527
Total	1.23104658	33	.037304442	Root MSE	=	.14289

L3.logUSDZAR	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
FEDRATE	-.0541308	.0140685	-3.85	0.001	-.0828237 -.0254378
ZARQCURRACC	.0289314	.0136888	2.11	0.043	.0010129 .05685
_cons	2.216239	.0523676	42.32	0.000	2.109434 2.323043

. reg L6.logUSDZAR FEDRATE ZARQCURRACC

Source	SS	df	MS	Number of obs	=	
Model	.805031066	2	.402515533	F(2, 28)	=	26.87
Residual	.41946766	28	.014980988	Prob > F	=	0.0000
				R-squared	=	0.6574
				Adj R-squared	=	0.6330
Total	1.22449873	30	.040816624	Root MSE	=	.1224

L6.logUSDZAR	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
FEDRATE	-.0860468	.0132333	-6.50	0.000	-.1131539 -.0589397
ZARQCURRACC	.0014005	.0123366	0.11	0.910	-.02387 .0266709
_cons	2.266409	.0452505	50.09	0.000	2.173718 2.359101

. reg L9.logUSDZAR FEDRATE ZARQCURRACC

Source	SS	df	MS	Number of obs	=	
Model	.77802533	2	.389012665	F(2, 25)	=	24.20
Residual	.401819274	25	.016072771	Prob > F	=	0.0000
				R-squared	=	0.6594
				Adj R-squared	=	0.6322
Total	1.1798446	27	.043697948	Root MSE	=	.12678

L9.logUSDZAR	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
FEDRATE	-.1410442	.0203644	-6.93	0.000	-.1829855 -.0991028
ZARQCURRACC	-.0696927	.0161723	-4.31	0.000	-.1030001 -.0363853
_cons	2.28105	.0517416	44.09	0.000	2.174487 2.387614

. reg L12.logUSDZAR FEDRATE ZARQCURRACC

Source	SS	df	MS	Number of obs	=	
Model	.343825711	2	.171912856	F(2, 22)	=	4.86
Residual	.778862897	22	.035402859	Prob > F	=	0.0179
				R-squared	=	0.3063
				Adj R-squared	=	0.2432
Total	1.12268861	24	.046778692	Root MSE	=	.18816

```

-----
L12. |
logUSDZAR |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-----+-----
      FEDRATE |  -.1303106   .0452067   -2.88   0.009   - .2240635   - .0365577
      ZARQCURRACC |  -.1127101   .0365315   -3.09   0.005   - .1884717   - .0369485
      _cons |   2.138873   .0833912   25.65   0.000    1.96593    2.311816
-----

```

```

. *With no lags in Current account (1998-2008)
. reg logUSDTRY FEDRATE TRYQCURRACC

```

```

-----
Source |      SS      df      MS      Number of obs =      37
-----+-----
      Model |  5.48141185      2   2.74070592   F(2, 34) =      35.98
      Residual |  2.58962118     34   .076165329   Prob > F =      0.0000
-----+-----
      Total |  8.07103303     36   .224195362   R-squared =      0.6791
                          Adj R-squared =      0.6603
                          Root MSE =      .27598
-----

```

```

-----
logUSDTRY |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-----+-----
      FEDRATE |  -.1964321   .0260107   -7.55   0.000   - .2492923   - .143572
      TRYQCURRACC |  -.1194167   .0200831   -5.95   0.000   - .1602304   - .078603
      _cons |   .5246244   .1023936    5.12   0.000    .3165355    .7327133
-----

```

```

. reg L3.logUSDTRY FEDRATE L3.TRYQCURRACC

```

```

-----
Source |      SS      df      MS      Number of obs =      34
-----+-----
      Model |  5.30414611      2   2.65207305   F(2, 31) =      30.27
      Residual |  2.71630282     31   .087622671   Prob > F =      0.0000
-----+-----
      Total |  8.02044892     33   .243043907   R-squared =      0.6613
                          Adj R-squared =      0.6395
                          Root MSE =      .29601
-----

```

```

-----
L3.logUSDTRY |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-----+-----
      FEDRATE |  -.1927425   .027949    -6.90   0.000   - .2497448   - .1357402
      TRYQCURRACC |
      L3. |  -.1190439   .022901    -5.20   0.000   - .1657507   - .0723371
      _cons |   .5142129   .110423    4.66   0.000    .2890036    .7394222
-----

```

```

. reg L6.logUSDTRY FEDRATE L6.TRYQCURRACC

```

```

-----
Source |      SS      df      MS      Number of obs =      31
-----+-----
      Model |  2.9426684      2   1.4713342   F(2, 28) =      8.58
      Residual |  4.80385749     28   .171566339   Prob > F =      0.0012
-----+-----
      Total |  7.74652589     30   .25821753    R-squared =      0.3799
                          Adj R-squared =      0.3356
                          Root MSE =      .41421
-----

```

```

-----
L6.logUSDTRY |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-----+-----
      FEDRATE |  -.1420951   .0408542   -3.48   0.002   - .2257811   - .0584091
      TRYQCURRACC |
      L6. |  -.1054469   .0364258   -2.89   0.007   - .1800618   - .0308321
      _cons |   .3460688   .1568344    2.21   0.036    .0248081    .6673295
-----

```

```

. reg L9.logUSDTRY FEDRATE L9.TRYQCURRACC

```

```

-----
Source |      SS      df      MS      Number of obs =      28
-----+-----
      Model |  .566040916      2   .283020458   F(2, 25) =      1.03
      Residual |  6.85440692     25   .274176277   Prob > F =      0.3709
-----+-----
      Total |  7.42044784     27   .274831401   R-squared =      0.0763
                          Adj R-squared =      0.0024
                          Root MSE =      .52362
-----

```

L9.logUSDTRY	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE	-.0031323	.0667412	-0.05	0.963	-.1405885	.1343238
TRYQCURRACC						
L9.	-.0748069	.056361	-1.33	0.196	-.1908847	.0412708
_cons	-.0761589	.2077679	-0.37	0.717	-.5040648	.351747

. reg L12.logUSDTRY FEDRATE L12.TRYQCURRACC

Source	SS	df	MS	Number of obs	=	25
Model	2.99129726	2	1.49564863	F(2, 22)	=	7.89
Residual	4.16863999	22	.189483636	Prob > F	=	0.0026
Total	7.15993725	24	.298330719	R-squared	=	0.4178
				Adj R-squared	=	0.3649
				Root MSE	=	.4353

L12.logUSDTRY	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE	.2055442	.0550482	3.73	0.001	.0913811	.3197072
TRYQCURRACC						
L12.	-.0143875	.0490474	-0.29	0.772	-.1161056	.0873306
_cons	-.622526	.1755148	-3.55	0.002	-.9865215	-.2585305

. reg logUSDTRUB FEDRATE RUBQCURRACC

Source	SS	df	MS	Number of obs	=	37
Model	.241878824	2	.120939412	F(2, 34)	=	76.00
Residual	.054106867	34	.001591378	Prob > F	=	0.0000
Total	.295985691	36	.008221825	R-squared	=	0.8172
				Adj R-squared	=	0.8064
				Root MSE	=	.03989

logUSDTRUB	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE	-.0402403	.0037788	-10.65	0.000	-.0479198	-.0325609
RUBQCURRACC	.0159632	.0017273	9.24	0.000	.0124529	.0194734
_cons	3.310365	.0199668	165.79	0.000	3.269787	3.350942

. reg L3.logUSDTRUB FEDRATE L3.RUBQCURRACC

Source	SS	df	MS	Number of obs	=	34
Model	.1580859	2	.07904295	F(2, 31)	=	25.00
Residual	.098004281	31	.003161428	Prob > F	=	0.0000
Total	.256090181	33	.007760309	R-squared	=	0.6173
				Adj R-squared	=	0.5926
				Root MSE	=	.05623

L3.logUSDTRUB	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE	-.0316123	.0051654	-6.12	0.000	-.0421472	-.0210775
RUBQCURRACC						
L3.	.0071823	.0024237	2.96	0.006	.0022391	.0121255
_cons	3.374467	.0344655	97.91	0.000	3.304175	3.44476

. reg L6.logUSDTRUB FEDRATE L6.RUBQCURRACC

Source	SS	df	MS	Number of obs	=	31
Model	.134167583	2	.067083792	F(2, 28)	=	17.67
Residual	.10629192	28	.00379614	Prob > F	=	0.0000
Total	.240459503	30	.008015317	R-squared	=	0.5580

-----+-----					Adj R-squared	=	0.5264
Total		.240459504	30	.008015317	Root MSE	=	.06161
-----+-----							
L6.logUSDRUB		Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE		-.0361956	.0071948	-5.03	0.000	-.0509335	-.0214578
RUBQCURRACC							
L6.		-.0006416	.0032016	-0.20	0.843	-.0071997	.0059165
_cons		3.47437	.053057	65.48	0.000	3.365687	3.583052
-----+-----							

. reg L9.logUSDRUB FEDRATE L9.RUBQCURRACC

-----+-----					Number of obs	=	28
Source		SS	df	MS	F(2, 25)	=	2.49
Model		.039246031	2	.019623016	Prob > F	=	0.1033
Residual		.197092639	25	.007883706	R-squared	=	0.1661
Total		.236338671	27	.008753284	Adj R-squared	=	0.0993
					Root MSE	=	.08879

-----+-----							
L9.logUSDRUB		Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE		-.0001774	.0141454	-0.01	0.990	-.0293104	.0289556
RUBQCURRACC							
L9.		.0084866	.0052479	1.62	0.118	-.0023216	.0192947
_cons		3.258803	.0922184	35.34	0.000	3.068876	3.44873
-----+-----							

. reg L12.logUSDRUB FEDRATE L12.RUBQCURRACC

-----+-----					Number of obs	=	25
Source		SS	df	MS	F(2, 22)	=	19.05
Model		.149486915	2	.074743458	Prob > F	=	0.0000
Residual		.086338172	22	.003924462	R-squared	=	0.6339
Total		.235825087	24	.009826045	Adj R-squared	=	0.6006
					Root MSE	=	.06265

-----+-----							
L12.logUSDRUB		Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE		.046079	.0086863	5.30	0.000	.0280648	.0640932
RUBQCURRACC							
L12.		.0163336	.0030759	5.31	0.000	.0099546	.0227127
_cons		3.042461	.0514864	59.09	0.000	2.935685	3.149238
-----+-----							

. reg logUSDCNY FEDRATE CNYQCURRACC

-----+-----					Number of obs	=	37
Source		SS	df	MS	F(2, 34)	=	66.52
Model		.028823546	2	.014411773	Prob > F	=	0.0000
Residual		.007366712	34	.000216668	R-squared	=	0.7964
Total		.036190258	36	.001005285	Adj R-squared	=	0.7845
					Root MSE	=	.01472

-----+-----							
logUSDCNY		Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE		-.0014457	.0013831	-1.05	0.303	-.0042565	.0013651
CNYQCURRACC		-.009537	.000892	-10.69	0.000	-.0113499	-.0077242
_cons		2.140421	.0057616	371.50	0.000	2.128712	2.15213
-----+-----							

. reg L3.logUSDCNY FEDRATE L3.CNYQCURRACC

-----+-----					Number of obs	=	34
Source		SS	df	MS	F(2, 31)	=	68.52
Model		.009135656	2	.004567828	Prob > F	=	0.0000

Residual		.002066674	31	.000066667	R-squared	=	0.8155
Total		.011202331	33	.000339465	Adj R-squared	=	0.8036
					Root MSE	=	.00816

L3.logUSDCNY		Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
FEDRATE		.0002368	.0008168	0.29	0.774	-.0014291 .0019028
CNYQCURREACC						
L3.		-.0070492	.0006516	-10.82	0.000	-.0083781 -.0057202
_cons		2.128494	.0031716	671.11	0.000	2.122026 2.134963

. reg L6.logUSDCNY FEDRATE L6.CNYQCURREACC

Source		SS	df	MS	Number of obs	=	31
Model		.001887811	2	.000943906	F(2, 28)	=	24.51
Residual		.001078153	28	.000038505	Prob > F	=	0.0000
Total		.002965964	30	.000098865	R-squared	=	0.6365
					Adj R-squared	=	0.6105
					Root MSE	=	.00621

L6.logUSDCNY		Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
FEDRATE		.0007948	.0007061	1.13	0.270	-.0006516 .0022412
CNYQCURREACC						
L6.		-.0050792	.0007857	-6.46	0.000	-.0066887 -.0034698
_cons		2.121949	.0025174	842.93	0.000	2.116792 2.127105

. reg L9.logUSDCNY FEDRATE L9.CNYQCURREACC

Source		SS	df	MS	Number of obs	=	28
Model		.000153185	2	.000076592	F(2, 25)	=	5.59
Residual		.00034279	25	.000013712	Prob > F	=	0.0099
Total		.000495975	27	.000018369	R-squared	=	0.3089
					Adj R-squared	=	0.2536
					Root MSE	=	.0037

L9.logUSDCNY		Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
FEDRATE		.000825	.0005738	1.44	0.163	-.0003568 .0020069
CNYQCURREACC						
L9.		-.0024055	.0007487	-3.21	0.004	-.0039475 -.0008634
_cons		2.116331	.0016485	1283.83	0.000	2.112936 2.119726

. reg L12.logUSDCNY FEDRATE L12.CNYQCURREACC

Source		SS	df	MS	Number of obs	=	25
Model		1.3352e-07	2	6.6760e-08	F(2, 22)	=	5.57
Residual		2.6375e-07	22	1.1989e-08	Prob > F	=	0.0110
Total		3.9727e-07	24	1.6553e-08	R-squared	=	0.3361
					Adj R-squared	=	0.2757
					Root MSE	=	.00011

L12.logUSDCNY		Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
FEDRATE		-.0000478	.0000167	-2.86	0.009	-.0000825 -.0000131
CNYQCURREACC						
L12.		.0000148	.0000418	0.35	0.726	-.0000719 .0001016
_cons		2.113661	.0000752	2.8e+04	0.000	2.113505 2.113817

. reg logUSDINR FEDRATE INRQCURRACC

Source	SS	df	MS	Number of obs	=	37
Model	.02583854	2	.01291927	F(2, 34)	=	5.73
Residual	.076611614	34	.002253283	Prob > F	=	0.0071
				R-squared	=	0.2522
				Adj R-squared	=	0.2082
Total	.102450154	36	.002845838	Root MSE	=	.04747

logUSDINR	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE	.00018	.0081995	0.02	0.983	-.0164833	.0168434
INRQCURRACC	.0230196	.0129192	1.78	0.084	-.0032354	.0492745
_cons	3.808995	.028821	132.16	0.000	3.750424	3.867567

. reg L3.logUSDINR FEDRATE L3.INRQCURRACC

Source	SS	df	MS	Number of obs	=	34
Model	.035022508	2	.017511254	F(2, 31)	=	24.32
Residual	.022323396	31	.00072011	Prob > F	=	0.0000
				R-squared	=	0.6107
				Adj R-squared	=	0.5856
Total	.057345904	33	.001737755	Root MSE	=	.02683

L3.logUSDINR	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE	-.020318	.0037909	-5.36	0.000	-.0280497	-.0125864
INRQCURRACC						
L3.	-.0071832	.006011	-1.20	0.241	-.0194429	.0050764
_cons	3.88662	.0136717	284.28	0.000	3.858736	3.914504

. reg L6.logUSDINR FEDRATE L6.INRQCURRACC

Source	SS	df	MS	Number of obs	=	31
Model	.041882317	2	.020941159	F(2, 28)	=	46.14
Residual	.012706878	28	.000453817	Prob > F	=	0.0000
				R-squared	=	0.7672
				Adj R-squared	=	0.7506
Total	.054589195	30	.00181964	Root MSE	=	.0213

L6.logUSDINR	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE	-.0180184	.0022697	-7.94	0.000	-.0226677	-.0133691
INRQCURRACC						
L6.	.0055478	.0035346	1.57	0.128	-.0016926	.0127881
_cons	3.877907	.0084768	457.47	0.000	3.860543	3.895271

. reg L9.logUSDINR FEDRATE L9.INRQCURRACC

Source	SS	df	MS	Number of obs	=	28
Model	.038008792	2	.019004396	F(2, 25)	=	29.78
Residual	.015954666	25	.000638187	Prob > F	=	0.0000
				R-squared	=	0.7043
				Adj R-squared	=	0.6807
Total	.053963458	27	.001998647	Root MSE	=	.02526

L9.logUSDINR	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE	-.0184839	.0030062	-6.15	0.000	-.0246752	-.0122926
INRQCURRACC						
L9.	.0242999	.0041174	5.90	0.000	.0158199	.0327799
_cons	3.871041	.0101343	381.97	0.000	3.850169	3.891913

. reg L12.logUSDINR FEDRATE L12.INRQCURREACC

Source	SS	df	MS	Number of obs	=	25
Model	.02042712	2	.01021356	F(2, 22)	=	7.99
Residual	.028133464	22	.001278794	Prob > F	=	0.0025
				R-squared	=	0.4207
				Adj R-squared	=	0.3680
Total	.048560584	24	.002023358	Root MSE	=	.03576

L12.		Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
logUSDINR							
FEDRATE		-.0242013	.0084709	-2.86	0.009	-.0417688	-.0066338
INRQCURREACC							
L12.		.0463064	.0119129	3.89	0.001	.0216004	.0710123
_cons		3.880753	.0229189	169.33	0.000	3.833222	3.928283

. reg logUSDBRL FEDRATE BRLQCURREACC

Source	SS	df	MS	Number of obs	=	37
Model	1.40645274	2	.703226372	F(2, 34)	=	36.18
Residual	.660923288	34	.01943892	Prob > F	=	0.0000
				R-squared	=	0.6803
				Adj R-squared	=	0.6615
Total	2.06737603	36	.057427112	Root MSE	=	.13942

logUSDBRL		Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE		-.1004924	.0132052	-7.61	0.000	-.1273286	-.0736562
BRLQCURREACC		.0118892	.009731	1.22	0.230	-.0078865	.0316649
_cons		1.204217	.0510717	23.58	0.000	1.100427	1.308007

. reg L3.logUSDBRL FEDRATE L3.BRLQCURREACC

Source	SS	df	MS	Number of obs	=	34
Model	1.4137916	2	.7068958	F(2, 31)	=	43.63
Residual	.502313772	31	.01620367	Prob > F	=	0.0000
				R-squared	=	0.7378
				Adj R-squared	=	0.7209
Total	1.91610537	33	.058063799	Root MSE	=	.12729

L3.logUSDBRL		Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE		-.0927572	.0116461	-7.96	0.000	-.1165096	-.0690048
BRLQCURREACC							
L3.		.0409311	.0086347	4.74	0.000	.0233205	.0585418
_cons		1.225216	.0476796	25.70	0.000	1.127973	1.322459

. reg L6.logUSDBRL FEDRATE L6.BRLQCURREACC

Source	SS	df	MS	Number of obs	=	31
Model	1.28577004	2	.642885021	F(2, 28)	=	29.98
Residual	.600430749	28	.021443955	Prob > F	=	0.0000
				R-squared	=	0.6817
				Adj R-squared	=	0.6589
Total	1.88620079	30	.06287336	Root MSE	=	.14644

L6.logUSDBRL		Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE		-.0907514	.0149751	-6.06	0.000	-.1214265	-.0600763
BRLQCURREACC							
L6.		.0720827	.0110319	6.53	0.000	.0494848	.0946806
_cons		1.267852	.0635192	19.96	0.000	1.137739	1.397965

```
-----
. reg L9.logUSDBRL FEDRATE L9.BRLQCURRACC
```

Source	SS	df	MS	Number of obs	=	
Model	1.116453	2	.558226498	F(2, 25)	=	18.48
Residual	.755311525	25	.030212461	Prob > F	=	0.0000
				R-squared	=	0.5965
				Adj R-squared	=	0.5642
Total	1.87176452	27	.069324612	Root MSE	=	.17382

L9.logUSDBRL	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
FEDRATE	-.1346189	.0339603	-3.96	0.001	-.2045615 -.0646763
BRLQCURRACC					
L9.	.1330895	.0224558	5.93	0.000	.0868409 .1793382
_cons	1.509772	.1413996	10.68	0.000	1.218554 1.80099

```
-----
. reg L12.logUSDBRL FEDRATE L12.BRLQCURRACC
```

Source	SS	df	MS	Number of obs	=	
Model	1.08780456	2	.543902279	F(2, 22)	=	15.65
Residual	.764447795	22	.034747627	Prob > F	=	0.0001
				R-squared	=	0.5873
				Adj R-squared	=	0.5498
Total	1.85225235	24	.077177181	Root MSE	=	.18641

L12.logUSDBRL	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
FEDRATE	.1807584	.0640045	2.82	0.010	.0480213 .3134955
BRLQCURRACC					
L12.	-.043119	.0464327	-0.93	0.363	-.1394145 .0531764
_cons	.2413941	.2869356	0.84	0.409	-.3536739 .8364621

```
-----
. reg logUSDMXN FEDRATE MXNQCURRACC
```

Source	SS	df	MS	Number of obs	=	
Model	.174396301	2	.087198151	F(2, 34)	=	77.28
Residual	.038362012	34	.001128294	Prob > F	=	0.0000
				R-squared	=	0.8197
				Adj R-squared	=	0.8091
Total	.212758313	36	.005909953	Root MSE	=	.03359

logUSDMXN	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
FEDRATE	-.0024439	.0031794	-0.77	0.447	-.0089052 .0040174
MXNQCURRACC	.0766651	.0066373	11.55	0.000	.0631765 .0901537
_cons	2.461664	.0140562	175.13	0.000	2.433098 2.49023

```
-----
. reg L3.logUSDMXN FEDRATE L3.MXNQCURRACC
```

Source	SS	df	MS	Number of obs	=	
Model	.163963227	2	.081981614	F(2, 31)	=	65.39
Residual	.038863547	31	.001253663	Prob > F	=	0.0000
				R-squared	=	0.8084
				Adj R-squared	=	0.7960
Total	.202826774	33	.006146266	Root MSE	=	.03541

L3.logUSDMXN	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
FEDRATE	.0000719	.0032447	0.02	0.982	-.0065457 .0066894
MXNQCURRACC					
L3.	.0778819	.0068215	11.42	0.000	.0639695 .0917944

```

-----
      _cons |    2.454003    .0166292   147.57   0.000    2.420088    2.487918
-----

```

```

. reg L6.logUSDMXN FEDRATE L6.MXNQCURRACC

```

```

-----
      Source |          SS          df           MS       Number of obs   =        31
-----+-----
      Model |    .157983834          2    .078991917       F(2, 28)         =       72.86
      Residual |    .030356229         28    .001084151       Prob > F          =        0.0000
-----+-----
      Total |    .188340064         30    .006278002       R-squared          =        0.8388
                                           Adj R-squared      =        0.8273
                                           Root MSE          =        .03293
-----

```

```

-----
L6.logUSDMXN |          Coef.    Std. Err.      t    P>|t|     [95% Conf. Interval]
-----+-----
      FEDRATE |    .0072802    .0032269     2.26  0.032     .0006703     .0138902
      MXNQCURRACC |
      L6. |    .0790305    .0069783    11.33  0.000     .064736     .0933249
      _cons |    2.433975    .0184828   131.69  0.000     2.396115     2.471836
-----

```

```

. reg L9.logUSDMXN FEDRATE L9.MXNQCURRACC

```

```

-----
      Source |          SS          df           MS       Number of obs   =        28
-----+-----
      Model |    .154019826          2    .077009913       F(2, 25)         =       130.16
      Residual |    .014791413         25    .000591657       Prob > F          =        0.0000
-----+-----
      Total |    .168811238         27    .006252268       R-squared          =        0.9124
                                           Adj R-squared      =        0.9054
                                           Root MSE          =        .02432
-----

```

```

-----
L9.logUSDMXN |          Coef.    Std. Err.      t    P>|t|     [95% Conf. Interval]
-----+-----
      FEDRATE |    .0213103    .0037324     5.71  0.000     .0136233     .0289974
      MXNQCURRACC |
      L9. |    .0567991    .0073934     7.68  0.000     .0415721     .0720262
      _cons |    2.354455    .0231552   101.68  0.000     2.306766     2.402144
-----

```

```

. reg L12.logUSDMXN FEDRATE L12.MXNQCURRACC

```

```

-----
      Source |          SS          df           MS       Number of obs   =        25
-----+-----
      Model |    .124581413          2    .062290706       F(2, 22)         =        56.07
      Residual |    .024442694         22    .001111032       Prob > F          =        0.0000
-----+-----
      Total |    .149024107         24    .006209338       R-squared          =        0.8360
                                           Adj R-squared      =        0.8211
                                           Root MSE          =        .03333
-----

```

```

-----
L12.
logUSDMXN |          Coef.    Std. Err.      t    P>|t|     [95% Conf. Interval]
-----+-----
      FEDRATE |    .0259748    .0092382     2.81  0.010     .0068159     .0451337
      MXNQCURRACC |
      L12. |    .0361921    .018492     1.96  0.063    -.0021579     .0745421
      _cons |    2.300093    .0613535    37.49  0.000     2.172853     2.427332
-----

```

```

. reg logUSDNGN FEDRATE NGNQCURRACC

```

```

-----
      Source |          SS          df           MS       Number of obs   =        10
-----+-----
      Model |    1.35330086          2    .676650432       F(2, 7)          =        3.40
      Residual |    1.39297295          7    .198996136       Prob > F          =        0.0929
-----+-----
      Total |    2.74627381          9    .305141535       R-squared          =        0.4928
                                           Adj R-squared      =        0.3479
                                           Root MSE          =        .44609
-----

```

```

-----
logUSDNGN |          Coef.    Std. Err.      t    P>|t|     [95% Conf. Interval]
-----+-----

```

FEDRATE		-0.1410371	.0810026	-1.74	0.125	-0.3325778	.0505037
NGNQCURRACC		.0459322	.0195003	2.36	0.051	-0.0001787	.0920431
_cons		4.764182	.324246	14.69	0.000	3.997462	5.530902

. reg L3.logUSDNGN FEDRATE L3.NGNQCURRACC

Source		SS	df	MS	Number of obs	=	9

Model		1.41026816	2	.705134079	F(2, 6)	=	3.22
Residual		1.31519336	6	.219198894	Prob > F	=	0.1124

Total		2.72546152	8	.34068269	R-squared	=	0.5174

					Adj R-squared	=	0.3566
					Root MSE	=	.46819

L3.logUSDNGN		Coef.	Std. Err.	t	P> t	[95% Conf. Interval]

FEDRATE		-0.1542618	.0876761	-1.76	0.129	-0.3687975 .060274
NGNQCURRACC						
L3.		.0440073	.0202528	2.17	0.073	-0.0055496 .0935641
_cons		4.831606	.3614843	13.37	0.000	3.947085 5.716126

. reg L6.logUSDNGN FEDRATE L6.NGNQCURRACC

Source		SS	df	MS	Number of obs	=	8

Model		1.80296309	2	.901481545	F(2, 5)	=	5.26
Residual		.857432466	5	.171486493	Prob > F	=	0.0590

Total		2.66039556	7	.380056508	R-squared	=	0.6777

					Adj R-squared	=	0.5488
					Root MSE	=	.41411

L6.logUSDNGN		Coef.	Std. Err.	t	P> t	[95% Conf. Interval]

FEDRATE		-0.1985409	.0773919	-2.57	0.050	-0.3974833 .0004014
NGNQCURRACC						
L6.		.04483	.0191944	2.34	0.067	-0.0045109 .0941709
_cons		4.96815	.3174964	15.65	0.000	4.151999 5.7843

. reg L9.logUSDNGN FEDRATE L9.NGNQCURRACC

Source		SS	df	MS	Number of obs	=	7

Model		1.11476413	2	.557382065	F(2, 4)	=	1.53
Residual		1.4542652	4	.363566301	Prob > F	=	0.3204

Total		2.56902933	6	.428171556	R-squared	=	0.4339

					Adj R-squared	=	0.1509
					Root MSE	=	.60296

L9.logUSDNGN		Coef.	Std. Err.	t	P> t	[95% Conf. Interval]

FEDRATE		-0.1196915	.1298366	-0.92	0.409	-0.4801758 .2407928
NGNQCURRACC						
L9.		.0591078	.0418558	1.41	0.231	-0.0571025 .175318
_cons		4.641158	.516031	8.99	0.001	3.208426 6.07389

. reg L12.logUSDNGN FEDRATE L12.NGNQCURRACC

Source		SS	df	MS	Number of obs	=	7

Model		1.16591029	2	.582955147	F(2, 4)	=	1.66
Residual		1.40311904	4	.35077976	Prob > F	=	0.2983

Total		2.56902933	6	.428171556	R-squared	=	0.4538

					Adj R-squared	=	0.1807
					Root MSE	=	.59227

L12.		Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
logUSDNGN						

FEDRATE	.1460694	.1441635	1.01	0.368	-.2541927	.5463315	
NGNQCURRACC							
L12.	.0588238	.0411166	1.43	0.226	-.0553341	.1729817	
_cons	3.856252	.4919757	7.84	0.001	2.490309	5.222196	

. reg logUSDZAR FEDRATE ZARQCURRACC

Source	SS	df	MS	Number of obs	=	
Model	.300722256	2	.150361128	F(2, 34)	=	5.46
Residual	.935851809	34	.027525053	Prob > F	=	0.0088
				R-squared	=	0.2432
				Adj R-squared	=	0.1987
Total	1.23657407	36	.03434928	Root MSE	=	.16591

logUSDZAR	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE	-.0138851	.0159698	-0.87	0.391	-.0463396	.0185694
ZARQCURRACC	.042143	.0157863	2.67	0.012	.0100615	.0742246
_cons	2.092918	.0607873	34.43	0.000	1.969383	2.216452

. reg L3.logUSDZAR FEDRATE L3.ZARQCURRACC

Source	SS	df	MS	Number of obs	=	
Model	.547688412	2	.273844206	F(2, 31)	=	12.42
Residual	.683358167	31	.022043812	Prob > F	=	0.0001
				R-squared	=	0.4449
				Adj R-squared	=	0.4091
Total	1.23104658	33	.037304442	Root MSE	=	.14847

L3.logUSDZAR	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE	-.0509201	.01713	-2.97	0.006	-.085857	-.0159833
ZARQCURRACC						
L3.	.0276247	.0203	1.36	0.183	-.0137774	.0690267
_cons	2.193616	.0552452	39.71	0.000	2.080942	2.306289

. reg L6.logUSDZAR FEDRATE L6.ZARQCURRACC

Source	SS	df	MS	Number of obs	=	
Model	.806789468	2	.403394734	F(2, 28)	=	27.00
Residual	.417709257	28	.014918188	Prob > F	=	0.0000
				R-squared	=	0.6589
				Adj R-squared	=	0.6345
Total	1.22449873	30	.040816624	Root MSE	=	.12214

L6.logUSDZAR	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE	-.0813534	.0189613	-4.29	0.000	-.120194	-.0425129
ZARQCURRACC						
L6.	.0092618	.025608	0.36	0.720	-.0431937	.0617174
_cons	2.257834	.0507669	44.47	0.000	2.153843	2.361825

. reg L9.logUSDZAR FEDRATE L9.ZARQCURRACC

Source	SS	df	MS	Number of obs	=	
Model	.633947192	2	.316973596	F(2, 25)	=	14.52
Residual	.545897412	25	.021835896	Prob > F	=	0.0001
				R-squared	=	0.5373
				Adj R-squared	=	0.5003
Total	1.1798446	27	.043697948	Root MSE	=	.14777

L9.logUSDZAR	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE	-.0309144	.0253059	-1.22	0.233	-.0830328	.0212041
ZARQCURRACC						
L9.	.0927883	.0348936	2.66	0.013	.0209237	.164653
_cons	2.151196	.0654224	32.88	0.000	2.016456	2.285936

```
. reg L12.logUSDZAR FEDRATE L12.ZARQCURRACC
```

Source	SS	df	MS	Number of obs	=	25
Model	.708348257	2	.354174129	F(2, 22)	=	18.81
Residual	.41434035	22	.018833652	Prob > F	=	0.0000
				R-squared	=	0.6309
				Adj R-squared	=	0.5974
Total	1.12268861	24	.046778692	Root MSE	=	.13724

L12.logUSDZAR	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE	.0049545	.0168831	0.29	0.772	-.030059	.039968
ZARQCURRACC						
L12.	.1853858	.0303755	6.10	0.000	.1223909	.2483806
_cons	2.07892	.0557947	37.26	0.000	1.963209	2.194631

```
.
```

```
.
```

```
. *WITH CURRENT ACCOUNTS
```

```
. *2008-2019
```

```
. clear
```

```
. import excel "C:\Users\simon\OneDrive\Bureau\2008-2019 CURRENT ACCOUNTS.xlsx",
sheet("ALL CCY") firstrow
(25 vars, 44 obs)
```

```
. ssc install fcstats
```

```
checking fcstats consistency and verifying not already installed...
all files already exist and are up to date.
```

```
. ssc install tsmktim
```

```
checking tsmktim consistency and verifying not already installed...
all files already exist and are up to date.
```

```
. sort DATEStata
```

```
. tsmktim Time, start (2008q1)
      time variable: Time, 2008q1 to 2018q4
          delta: 1 quarter
```

```
. tsset Time
      time variable: Time, 2008q1 to 2018q4
          delta: 1 quarter
```

```
. gen logUSDTRY = log( USDTRY)
```

```
. gen logUSDRUB = log( USDRUB)
```

```
. gen logUSDCNY = log( USDCNY)
```

```
. gen logUSDINR = log( USDINR)
```

```
. gen logUSDBRL = log( USDBRL)
```

```
. gen logUSDMXN = log( USDMXN)
```

```
. gen logUSDNGN = log( USDNGN)
```

```
. gen logUSDZAR = log( USDZAR)
```

```
. reg logUSDTRY FEDRATE TRYQCURRACC
```

Source	SS	df	MS	Number of obs	=	44
Model	1.04273596	2	.521367982	F(2, 41)	=	3.61
Residual	5.92726783	41	.144567508	Prob > F	=	0.0361
				R-squared	=	0.1496
				Adj R-squared	=	0.1081
Total	6.9700038	43	.162093112	Root MSE	=	.38022

logUSDTRY	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
FEDRATE	.2080364	.0815612	2.55	0.015	.0433202 .3727527
TRYQCURRACC	.0267191	.0340342	0.79	0.437	-.0420145 .0954527
_cons	.8226677	.1911052	4.30	0.000	.436723 1.208612

. reg L3.logUSDTRY FEDRATE TRYQCURRACC

Source	SS	df	MS	Number of obs	=	41
Model	2.89063815	2	1.44531907	F(2, 38)	=	33.82
Residual	1.62403922	38	.042737874	Prob > F	=	0.0000
				R-squared	=	0.6403
				Adj R-squared	=	0.6213
Total	4.51467737	40	.112866934	Root MSE	=	.20673

L3.logUSDTRY	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
FEDRATE	.4611147	.0571876	8.06	0.000	.3453445 .576885
TRYQCURRACC	.0168444	.0186374	0.90	0.372	-.0208849 .0545738
_cons	.62442	.1057895	5.90	0.000	.4102604 .8385795

. reg L6.logUSDTRY FEDRATE TRYQCURRACC

Source	SS	df	MS	Number of obs	=	38
Model	2.37629301	2	1.1881465	F(2, 35)	=	41.79
Residual	.995104417	35	.028431555	Prob > F	=	0.0000
				R-squared	=	0.7048
				Adj R-squared	=	0.6880
Total	3.37139743	37	.091118849	Root MSE	=	.16862

L6.logUSDTRY	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
FEDRATE	.422554	.0471005	8.97	0.000	.3269349 .5181731
TRYQCURRACC	.0116056	.0156778	0.74	0.464	-.0202221 .0434333
_cons	.5600895	.090952	6.16	0.000	.3754472 .7447319

. reg L9.logUSDTRY FEDRATE TRYQCURRACC

Source	SS	df	MS	Number of obs	=	35
Model	1.64984563	2	.824922814	F(2, 32)	=	42.90
Residual	.615267165	32	.019227099	Prob > F	=	0.0000
				R-squared	=	0.7284
				Adj R-squared	=	0.7114
Total	2.26511279	34	.066620964	Root MSE	=	.13866

L9.logUSDTRY	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
FEDRATE	.3399092	.0399316	8.51	0.000	.2585712 .4212471
TRYQCURRACC	.0255238	.0152766	1.67	0.105	-.0055936 .0566412
_cons	.6173943	.0928005	6.65	0.000	.428366 .8064227

. reg L12.logUSDTRY FEDRATE TRYQCURRACC

Source	SS	df	MS	Number of obs	=	32
Model	1.47007551	2	.735037757	F(2, 29)	=	108.91
Residual	.195729678	29	.006749299	Prob > F	=	0.0000
				R-squared	=	0.8825
				Adj R-squared	=	0.8744
Total	1.66580519	31	.053735651	Root MSE	=	.08215

```
L12.
```

	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
logUSDTRY						
FEDRATE	.2942412	.0241516	12.18	0.000	.2448456	.3436367
TRYQCURRACC	.0460459	.0094664	4.86	0.000	.026685	.0654067
_cons	.707552	.0588707	12.02	0.000	.5871478	.8279561

```
. reg logUSDRUB FEDRATE RUBQCURRACC
```

Source	SS	df	MS	Number of obs	=	
Model	1.05514011	2	.527570053	F(2, 41)	=	4.81
Residual	4.50110926	41	.109783153	Prob > F	=	0.0133
Total	5.55624937	43	.129215102	R-squared	=	0.1899
				Adj R-squared	=	0.1504
				Root MSE	=	.33134

	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE	.1210106	.0714932	1.69	0.098	-.0233729	.2653941
RUBQCURRACC	-.0929351	.0335748	-2.77	0.008	-.1607408	-.0251293
_cons	3.981476	.1392559	28.59	0.000	3.700243	4.262709

```
. reg L3.logUSDRUB FEDRATE RUBQCURRACC
```

Source	SS	df	MS	Number of obs	=	
Model	2.2566208	2	1.1283104	F(2, 38)	=	17.16
Residual	2.49812678	38	.065740178	Prob > F	=	0.0000
Total	4.75474758	40	.11886869	R-squared	=	0.4746
				Adj R-squared	=	0.4470
				Root MSE	=	.2564

	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE	.3621418	.0717283	5.05	0.000	.2169356	.5073481
RUBQCURRACC	-.0587962	.028588	-2.06	0.047	-.1166695	-.0009228
_cons	3.716856	.1209025	30.74	0.000	3.472102	3.961611

```
. reg L6.logUSDRUB FEDRATE RUBQCURRACC
```

Source	SS	df	MS	Number of obs	=	
Model	2.84452851	2	1.42226425	F(2, 35)	=	35.44
Residual	1.40478197	35	.040136628	Prob > F	=	0.0000
Total	4.24931048	37	.114846229	R-squared	=	0.6694
				Adj R-squared	=	0.6505
				Root MSE	=	.20034

	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE	.4348753	.0561074	7.75	0.000	.3209711	.5487794
RUBQCURRACC	-.0566777	.0254749	-2.22	0.033	-.1083945	-.004961
_cons	3.628121	.100599	36.07	0.000	3.423894	3.832348

```
. reg L9.logUSDRUB FEDRATE RUBQCURRACC
```

Source	SS	df	MS	Number of obs	=	
Model	3.22183739	2	1.6109187	F(2, 32)	=	141.48
Residual	.36434905	32	.011385908	Prob > F	=	0.0000
Total	3.58618644	34	.105476072	R-squared	=	0.8984
				Adj R-squared	=	0.8921
				Root MSE	=	.1067

	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE	.4642995	.0301946	15.38	0.000	.4027951	.5258038
RUBQCURRACC	-.0660682	.0136056	-4.86	0.000	-.0937819	-.0383546
_cons	3.595361	.0538253	66.80	0.000	3.485723	3.705

```
. reg L12.logUSDRUB FEDRATE RUBQCURRACC
```

Source	SS	df	MS	Number of obs	=	
Model	2.14301639	2	1.07150819	F(2, 29)	=	95.16
Residual	.326540348	29	.011260012	Prob > F	=	0.0000
				R-squared	=	0.8678
				Adj R-squared	=	0.8587
Total	2.46955673	31	.07966312	Root MSE	=	.10611

L12.		Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
logUSDRUB							
FEDRATE		.4152181	.0301804	13.76	0.000	.3534922	.4769441
RUBQCURRACC		-.0017852	.0152699	-0.12	0.908	-.0330158	.0294453
_cons		3.330427	.0561758	59.29	0.000	3.215534	3.445319

. reg logUSDCNY FEDRATE CNYQCURRACC

Source	SS	df	MS	Number of obs	=	
Model	.033813198	2	.016906599	F(2, 41)	=	14.49
Residual	.047826188	41	.001166492	Prob > F	=	0.0000
				R-squared	=	0.4142
				Adj R-squared	=	0.3856
Total	.081639386	43	.00189859	Root MSE	=	.03415

logUSDCNY	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE	.0271318	.007434	3.65	0.001	.0121185	.0421451
CNYQCURRACC	.0076717	.0023416	3.28	0.002	.0029427	.0124007
_cons	1.837581	.0091333	201.20	0.000	1.819136	1.856026

. reg L3.logUSDCNY FEDRATE CNYQCURRACC

Source	SS	df	MS	Number of obs	=	
Model	.028089759	2	.01404488	F(2, 38)	=	11.22
Residual	.047550239	38	.001251322	Prob > F	=	0.0001
				R-squared	=	0.3714
				Adj R-squared	=	0.3383
Total	.075639998	40	.001891	Root MSE	=	.03537

L3.logUSDCNY	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE	.0379837	.0110534	3.44	0.001	.0156073	.0603601
CNYQCURRACC	.0171294	.0038093	4.50	0.000	.0094179	.0248409
_cons	1.811815	.0139789	129.61	0.000	1.783516	1.840114

. reg L6.logUSDCNY FEDRATE CNYQCURRACC

Source	SS	df	MS	Number of obs	=	
Model	.020329948	2	.010164974	F(2, 35)	=	6.65
Residual	.053505895	35	.00152874	Prob > F	=	0.0036
				R-squared	=	0.2753
				Adj R-squared	=	0.2339
Total	.073835843	37	.001995563	Root MSE	=	.0391

L6.logUSDCNY	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE	.0495024	.0141502	3.50	0.001	.020776	.0782289
CNYQCURRACC	.0249186	.0082117	3.03	0.005	.0082479	.0415892
_cons	1.795055	.0238468	75.27	0.000	1.746644	1.843467

. reg L9.logUSDCNY FEDRATE CNYQCURRACC

Source	SS	df	MS	Number of obs	=	
Model	.005984155	2	.002992077	F(2, 32)	=	1.65
Residual	.057968165	32	.001811505	Prob > F	=	0.2077
				R-squared	=	0.0936
				Adj R-squared	=	0.0369
Total	.06395232	34	.001880951	Root MSE	=	.04256

L9.logUSDCNY	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE	.0126892	.0163225	0.78	0.443	-.0205586	.0459371
CNYQCURREACC	.0194633	.0112352	1.73	0.093	-.003422	.0423485
_cons	1.821751	.030101	60.52	0.000	1.760437	1.883065

. reg L12.logUSDCNY FEDRATE CNYQCURREACC

Source	SS	df	MS	Number of obs	=	
Model	.012659862	2	.006329931	F(2, 29)	=	3.70
Residual	.04964872	29	.001712025	Prob > F	=	0.0371
Total	.062308581	31	.002009954	R-squared	=	0.2032
				Adj R-squared	=	0.1482
				Root MSE	=	.04138

L12.logUSDCNY	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE	-.0364557	.0178316	-2.04	0.050	-.0729255	.0000141
CNYQCURREACC	-.0054301	.0151789	-0.36	0.723	-.0364744	.0256142
_cons	1.895326	.0371692	50.99	0.000	1.819306	1.971346

. reg logUSDINR FEDRATE INRQCURREACC

Source	SS	df	MS	Number of obs	=	
Model	.133483256	2	.066741628	F(2, 41)	=	2.63
Residual	1.04047439	41	.025377424	Prob > F	=	0.0842
Total	1.17395765	43	.027301341	R-squared	=	0.1137
				Adj R-squared	=	0.0705
				Root MSE	=	.1593

logUSDINR	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE	.0010092	.0357737	0.03	0.978	-.0712372	.0732556
INRQCURREACC	.0421634	.0193257	2.18	0.035	.0031344	.0811924
_cons	4.123356	.0583069	70.72	0.000	4.005603	4.24111

. reg L3.logUSDINR FEDRATE INRQCURREACC

Source	SS	df	MS	Number of obs	=	
Model	.53463975	2	.267319875	F(2, 38)	=	21.33
Residual	.476231427	38	.012532406	Prob > F	=	0.0000
Total	1.01087118	40	.025271779	R-squared	=	0.5289
				Adj R-squared	=	0.5041
				Root MSE	=	.11195

L3.logUSDINR	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE	.1170297	.0317727	3.68	0.001	.0527092	.1813501
INRQCURREACC	.059261	.0136085	4.35	0.000	.0317121	.0868098
_cons	4.100542	.0413627	99.14	0.000	4.016808	4.184276

. reg L6.logUSDINR FEDRATE INRQCURREACC

Source	SS	df	MS	Number of obs	=	
Model	.626012979	2	.31300649	F(2, 35)	=	36.25
Residual	.302254426	35	.008635841	Prob > F	=	0.0000
Total	.928267405	37	.025088308	R-squared	=	0.6744
				Adj R-squared	=	0.6558
				Root MSE	=	.09293

L6.logUSDINR	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE	.1372456	.0266223	5.16	0.000	.0831995	.1912916
INRQCURREACC	.060026	.0113487	5.29	0.000	.0369869	.083065
_cons	4.079644	.0352422	115.76	0.000	4.008098	4.151189

. reg L9.logUSDINR FEDRATE INRQCURRACC

Source	SS	df	MS	Number of obs	=	
Model	.720200837	2	.360100419	F(2, 32)	=	124.95
Residual	.092224058	32	.002882002	Prob > F	=	0.0000
				R-squared	=	0.8865
				Adj R-squared	=	0.8794
Total	.812424896	34	.02389485	Root MSE	=	.05368

L9.logUSDINR	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
FEDRATE	.1422522	.0156288	9.10	0.000	.1104174 .1740871
INRQCURRACC	.0668437	.0066441	10.06	0.000	.05331 .0803773
_cons	4.075721	.0212147	192.12	0.000	4.032508 4.118933

. reg L12.logUSDINR FEDRATE INRQCURRACC

Source	SS	df	MS	Number of obs	=	
Model	.492973786	2	.246486893	F(2, 29)	=	44.09
Residual	.162108092	29	.005589934	Prob > F	=	0.0000
				R-squared	=	0.7525
				Adj R-squared	=	0.7355
Total	.655081877	31	.021131673	Root MSE	=	.07477

L12.logUSDINR	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
FEDRATE	.1594287	.0218629	7.29	0.000	.1147139 .2041434
INRQCURRACC	.0375771	.009427	3.99	0.000	.0182967 .0568575
_cons	3.969343	.0295648	134.26	0.000	3.908876 4.02981

. reg logUSDBRL FEDRATE BRLQCURRACC

Source	SS	df	MS	Number of obs	=	
Model	.363194489	2	.181597245	F(2, 41)	=	2.09
Residual	3.55809977	41	.086782921	Prob > F	=	0.1364
				R-squared	=	0.0926
				Adj R-squared	=	0.0484
Total	3.92129426	43	.09119289	Root MSE	=	.29459

logUSDBRL	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
FEDRATE	.0884647	.0918708	0.96	0.341	-.0970722 .2740015
BRLQCURRACC	.0291816	.0538275	0.54	0.591	-.0795253 .1378884
_cons	.9004668	.1699829	5.30	0.000	.5571794 1.243754

. reg L3.logUSDBRL FEDRATE BRLQCURRACC

Source	SS	df	MS	Number of obs	=	
Model	1.35931012	2	.679655059	F(2, 38)	=	14.40
Residual	1.79304416	38	.047185373	Prob > F	=	0.0000
				R-squared	=	0.4312
				Adj R-squared	=	0.4013
Total	3.15235428	40	.078808857	Root MSE	=	.21722

L3.logUSDBRL	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
FEDRATE	.2319502	.0863776	2.69	0.011	.0570879 .4068124
BRLQCURRACC	.0531469	.0413795	1.28	0.207	-.0306216 .1369154
_cons	.8745794	.1329542	6.58	0.000	.6054277 1.143731

. reg L6.logUSDBRL FEDRATE BRLQCURRACC

Source	SS	df	MS	Number of obs	=	
Model	1.71809982	2	.859049911	F(2, 35)	=	28.16
Residual	1.06761263	35	.030503218	Prob > F	=	0.0000
				R-squared	=	0.6168

```
-----+-----
Total | 2.78571245      37 .075289526  Adj R-squared = 0.5949
Root MSE = .17465
```

```
-----+-----
L6.logUSDBRL |      Coef.   Std. Err.    t    P>|t|    [95% Conf. Interval]
-----+-----
FEDRATE | .2349731   .0768324    3.06  0.004    .078995   .3909513
BRLQCURRACC | .0733894   .0376039    1.95  0.059   -.0029505 .1497294
_cons | .8966665   .1250094    7.17  0.000    .6428838  1.150449
```

```
. reg L9.logUSDBRL FEDRATE BRLQCURRACC
```

```
-----+-----
Source |      SS      df      MS      Number of obs = 35
-----+-----
Model | 1.89560615    2  .947803074  F(2, 32) = 62.67
Residual | .483934666   32  .015122958  Prob > F = 0.0000
Total | 2.37954081   34  .069986495  R-squared = 0.7966
Adj R-squared = 0.7839
Root MSE = .12298
```

```
-----+-----
L9.logUSDBRL |      Coef.   Std. Err.    t    P>|t|    [95% Conf. Interval]
-----+-----
FEDRATE | .2298416   .0638678    3.60  0.001    .0997471   .3599362
BRLQCURRACC | .0858807   .0317591    2.70  0.011    .0211894   .1505719
_cons | .9004356   .1097547    8.20  0.000    .6768726  1.123999
```

```
. reg L12.logUSDBRL FEDRATE BRLQCURRACC
```

```
-----+-----
Source |      SS      df      MS      Number of obs = 32
-----+-----
Model | 1.50010686    2  .75005343  F(2, 29) = 74.76
Residual | .29093888    29  .010032375  Prob > F = 0.0000
Total | 1.79104574   31  .057775669  R-squared = 0.8376
Adj R-squared = 0.8264
Root MSE = .10016
```

```
-----+-----
L12.
logUSDBRL |      Coef.   Std. Err.    t    P>|t|    [95% Conf. Interval]
-----+-----
FEDRATE | .33217     .0525031    6.33  0.000    .2247891   .439551
BRLQCURRACC | .0090558   .02614     0.35  0.732   -.0444066   .0625182
_cons | .60688     .0904282    6.71  0.000    .4219336   .7918264
```

```
. reg logUSDMXN FEDRATE MXNQCURRACC
```

```
-----+-----
Source |      SS      df      MS      Number of obs = 44
-----+-----
Model | .613064003    2  .306532002  F(2, 41) = 13.24
Residual | .94931436    41  .023154009  Prob > F = 0.0000
Total | 1.56237836   43  .036334381  R-squared = 0.3924
Adj R-squared = 0.3628
Root MSE = .15216
```

```
-----+-----
logUSDMXN |      Coef.   Std. Err.    t    P>|t|    [95% Conf. Interval]
-----+-----
FEDRATE | .0830143   .0329256    2.52  0.016    .0165197   .149509
MXNQCURRACC | -.1624663  .0339809   -4.78  0.000   -.2310922  -.0938404
_cons | 2.362365   .0652936   36.18  0.000    2.230502   2.494228
```

```
. reg L3.logUSDMXN FEDRATE MXNQCURRACC
```

```
-----+-----
Source |      SS      df      MS      Number of obs = 41
-----+-----
Model | .859145216    2  .429572608  F(2, 38) = 38.01
Residual | .429513343   38  .011302983  Prob > F = 0.0000
Total | 1.28865856   40  .032216464  R-squared = 0.6667
Adj R-squared = 0.6492
Root MSE = .10632
```

```
-----+-----
L3.logUSDMXN |      Coef.   Std. Err.    t    P>|t|    [95% Conf. Interval]
-----+-----
FEDRATE | .2392489   .029359    8.15  0.000    .1798147   .298683
MXNQCURRACC | -.0631058  .024668   -2.56  0.015   -.1130434  -.0131681
```

```

      _cons |    2.445244    .0461813    52.95    0.000    2.351755    2.538733
-----+-----
. reg L6.logUSDMXN FEDRATE MXNQCURRACC

      Source |          SS          df           MS       Number of obs   =        38
-----+-----+-----+-----+-----+-----
      Model |    .799853024         2    .399926512       F(2, 35)         =       57.54
      Residual |    .243254434        35    .006950127       Prob > F         =       0.0000
-----+-----+-----+-----+-----+-----
      Total |    1.04310746        37    .028192093       R-squared        =       0.7668
                                           Adj R-squared    =       0.7535
                                           Root MSE        =       .08337

-----+-----
L6.logUSDMXN |          Coef.    Std. Err.      t    P>|t|     [95% Conf. Interval]
-----+-----+-----+-----+-----+-----
      FEDRATE |    .2428365    .0231777     10.48    0.000     .1957833     .2898896
      MXNQCURRACC |   -.0330865    .0194119     -1.70    0.097    -.0724948     .0063218
      _cons |    2.468216    .0369517     66.80    0.000     2.3932     2.543231
-----+-----

. reg L9.logUSDMXN FEDRATE MXNQCURRACC

      Source |          SS          df           MS       Number of obs   =        35
-----+-----+-----+-----+-----+-----
      Model |    .539109084         2    .269554542       F(2, 32)         =       53.57
      Residual |    .161018498        32    .005031828       Prob > F         =       0.0000
-----+-----+-----+-----+-----+-----
      Total |    .700127582        34    .020591988       R-squared        =       0.7700
                                           Adj R-squared    =       0.7556
                                           Root MSE        =       .07094

-----+-----
L9.logUSDMXN |          Coef.    Std. Err.      t    P>|t|     [95% Conf. Interval]
-----+-----+-----+-----+-----+-----
      FEDRATE |    .2019955    .0199191     10.14    0.000     .1614216     .2425694
      MXNQCURRACC |   -.0336608    .0174381     -1.93    0.062    -.0691811     .0018595
      _cons |    2.450748    .0344459     71.15    0.000     2.380583     2.520912
-----+-----

. reg L12.logUSDMXN FEDRATE MXNQCURRACC

      Source |          SS          df           MS       Number of obs   =        32
-----+-----+-----+-----+-----+-----
      Model |    .227231053         2    .113615526       F(2, 29)         =       19.51
      Residual |    .168865106        29    .005822935       Prob > F         =       0.0000
-----+-----+-----+-----+-----+-----
      Total |    .396096159        31    .012777295       R-squared        =       0.5737
                                           Adj R-squared    =       0.5443
                                           Root MSE        =       .07631

-----+-----
L12.
logUSDMXN |          Coef.    Std. Err.      t    P>|t|     [95% Conf. Interval]
-----+-----+-----+-----+-----+-----
      FEDRATE |    .1359022    .021756     6.25    0.000     .0914063     .1803982
      MXNQCURRACC |   -.0154737    .0238925     -0.65    0.522    -.0643393     .0333919
      _cons |    2.480304    .0497173     49.89    0.000     2.378621     2.581988
-----+-----

. reg logUSDNGN FEDRATE NGNQCURRACC

      Source |          SS          df           MS       Number of obs   =        11
-----+-----+-----+-----+-----+-----
      Model |    1.10550416         2    .552752079       F(2, 8)          =       17.20
      Residual |    .257158697         8    .032144837       Prob > F         =       0.0013
-----+-----+-----+-----+-----+-----
      Total |    1.36266286        10    .136266286       R-squared        =       0.8113
                                           Adj R-squared    =       0.7641
                                           Root MSE        =       .17929

-----+-----
logUSDNGN |          Coef.    Std. Err.      t    P>|t|     [95% Conf. Interval]
-----+-----+-----+-----+-----+-----
      FEDRATE |    .4317192    .0822617     5.25    0.001     .2420233     .621415
      NGNQCURRACC |   -.0381905    .0190334     -2.01    0.080    -.0820816     .0057007
      _cons |    5.19071     .0868772     59.75    0.000     4.990371     5.391049
-----+-----

. reg L3.logUSDNGN FEDRATE NGNQCURRACC

      Source |          SS          df           MS       Number of obs   =        11
-----+-----+-----+-----+-----+-----
                                           F(2, 8)          =       65.16

```


Model		1.06474502		2	.532372511	Prob > F	=	0.0000
Residual		.065360755		8	.008170094	R-squared	=	0.9422

Total		1.13010578		10	.113010578	Adj R-squared	=	0.9277
						Root MSE	=	.09039

L3.logUSDNGN		Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
FEDRATE		.4239995	.0414721	10.22	0.000	.3283648 .5196343
NGNQCURRACC		-.0373267	.0095957	-3.89	0.005	-.0594544 -.0151991
_cons		5.104464	.0437989	116.54	0.000	5.003463 5.205464

. reg L6.logUSDNGN FEDRATE NGNQCURRACC

Source		SS	df	MS	Number of obs	=	10

Model		.833081314	2	.416540657	F(2, 7)	=	31.29
Residual		.093176657	7	.013310951	Prob > F	=	0.0003

Total		.926257971	9	.102917552	R-squared	=	0.8994
					Adj R-squared	=	0.8707
					Root MSE	=	.11537

L6.logUSDNGN		Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
FEDRATE		.4157802	.0532167	7.81	0.000	.2899428 .5416176
NGNQCURRACC		-.0187811	.0165749	-1.13	0.294	-.0579744 .0204122
_cons		5.011653	.0572669	87.51	0.000	4.876238 5.147067

. reg L9.logUSDNGN FEDRATE NGNQCURRACC

Source		SS	df	MS	Number of obs	=	9

Model		.500257289	2	.250128645	F(2, 6)	=	18.52
Residual		.081025861	6	.01350431	Prob > F	=	0.0027

Total		.58128315	8	.072660394	R-squared	=	0.8606
					Adj R-squared	=	0.8141
					Root MSE	=	.11621

L9.logUSDNGN		Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
FEDRATE		.3324123	.0547017	6.08	0.001	.1985619 .4662626
NGNQCURRACC		-.0135114	.0181742	-0.74	0.485	-.057982 .0309593
_cons		4.971567	.0578338	85.96	0.000	4.830053 5.113081

. reg L12.logUSDNGN FEDRATE NGNQCURRACC

Source		SS	df	MS	Number of obs	=	8

Model		.081676653	2	.040838326	F(2, 5)	=	19.21
Residual		.010627183	5	.002125437	Prob > F	=	0.0045

Total		.092303835	7	.013186262	R-squared	=	0.8849
					Adj R-squared	=	0.8388
					Root MSE	=	.0461

L12.logUSDNGN		Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
FEDRATE		.1377273	.0222182	6.20	0.002	.0806136 .1948411
NGNQCURRACC		-.0063769	.0075813	-0.84	0.439	-.0258652 .0131115
_cons		5.014414	.0233329	214.91	0.000	4.954434 5.074393

. reg logUSDZAR FEDRATE ZARQCURRACC

Source		SS	df	MS	Number of obs	=	44

Model		.325540644	2	.162770322	F(2, 41)	=	2.47
Residual		2.69849835	41	.065817033	Prob > F	=	0.0968

Total		3.02403899	43	.070326488	R-squared	=	0.1077
					Adj R-squared	=	0.0641
					Root MSE	=	.25655

logUSDZAR		Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
-----------	--	-------	-----------	---	------	----------------------

FEDRATE		.0928367	.0552098	1.68	0.100	-.0186616	.2043351
ZARQCURRACC		-.0343385	.0261934	-1.31	0.197	-.0872372	.0185601
_cons		2.123302	.1108356	19.16	0.000	1.899465	2.347139

. reg L3.logUSDZAR FEDRATE ZARQCURRACC

Source		SS	df	MS	Number of obs	=	41	

Model		1.05364967	2	.526824833	F(2, 38)	=	12.48	
Residual		1.60448058	38	.042223173	Prob > F	=	0.0001	

Total		2.65813025	40	.066453256	R-squared	=	0.3964	

						Adj R-squared	=	0.3646
						Root MSE	=	.20548

L3.logUSDZAR		Coef.	Std. Err.	t	P> t	[95% Conf. Interval]

FEDRATE		.286958	.0580514	4.94	0.000	.1694391 .4044769
ZARQCURRACC		-.0417898	.023306	-1.79	0.081	-.0889704 .0053907
_cons		2.00461	.1008329	19.88	0.000	1.800485 2.208736

. reg L6.logUSDZAR FEDRATE ZARQCURRACC

Source		SS	df	MS	Number of obs	=	38	

Model		1.39655672	2	.698278362	F(2, 35)	=	23.25	
Residual		1.05139626	35	.030039893	Prob > F	=	0.0000	

Total		2.44795298	37	.066160891	R-squared	=	0.5705	

						Adj R-squared	=	0.5460
						Root MSE	=	.17332

L6.logUSDZAR		Coef.	Std. Err.	t	P> t	[95% Conf. Interval]

FEDRATE		.3307125	.0491008	6.74	0.000	.2310326 .4303925
ZARQCURRACC		-.0062471	.0202472	-0.31	0.760	-.0473512 .034857
_cons		2.093416	.0857724	24.41	0.000	1.919289 2.267543

. reg L9.logUSDZAR FEDRATE ZARQCURRACC

Source		SS	df	MS	Number of obs	=	35	

Model		1.59936189	2	.799680947	F(2, 32)	=	52.57	
Residual		.486738517	32	.015210579	Prob > F	=	0.0000	

Total		2.08610041	34	.061355894	R-squared	=	0.7667	

						Adj R-squared	=	0.7521
						Root MSE	=	.12333

L9.logUSDZAR		Coef.	Std. Err.	t	P> t	[95% Conf. Interval]

FEDRATE		.3358067	.0356419	9.42	0.000	.2632066 .4084069
ZARQCURRACC		.0252388	.0148318	1.70	0.099	-.0049727 .0554502
_cons		2.170793	.0648611	33.47	0.000	2.038675 2.302911

. reg L12.logUSDZAR FEDRATE ZARQCURRACC

Source		SS	df	MS	Number of obs	=	32	

Model		1.28591077	2	.642955385	F(2, 29)	=	101.99	
Residual		.182812113	29	.006303866	Prob > F	=	0.0000	

Total		1.46872288	31	.047378158	R-squared	=	0.8755	

						Adj R-squared	=	0.8669
						Root MSE	=	.0794

L12.logUSDZAR		Coef.	Std. Err.	t	P> t	[95% Conf. Interval]

FEDRATE		.2816113	.0237762	11.84	0.000	.2329835 .3302391
ZARQCURRACC		.0400867	.0105918	3.78	0.001	.018424 .0617494
_cons		2.21016	.0484502	45.62	0.000	2.111068 2.309252

. *With no lags in Current account (2008-2019)

. reg logUSDTRY FEDRATE TRYQCURRACC

Source	SS	df	MS	Number of obs	=	44
Model	1.04273596	2	.521367982	F(2, 41)	=	3.61
Residual	5.92726783	41	.144567508	Prob > F	=	0.0361
Total	6.9700038	43	.162093112	R-squared	=	0.1496
				Adj R-squared	=	0.1081
				Root MSE	=	.38022

logUSDTRY	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
FEDRATE	.2080364	.0815612	2.55	0.015	.0433202 .3727527
TRYQCURRACC	.0267191	.0340342	0.79	0.437	-.0420145 .0954527
_cons	.8226677	.1911052	4.30	0.000	.436723 1.208612

. reg L3.logUSDTRY FEDRATE L3.TRYQCURRACC

Source	SS	df	MS	Number of obs	=	41
Model	2.85741581	2	1.4287079	F(2, 38)	=	32.76
Residual	1.65726157	38	.043612146	Prob > F	=	0.0000
Total	4.51467737	40	.112866934	R-squared	=	0.6329
				Adj R-squared	=	0.6136
				Root MSE	=	.20884

L3.logUSDTRY	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
FEDRATE	.4638381	.0582856	7.96	0.000	.3458451 .5818312
TRYQCURRACC					
L3.	.0037955	.019291	0.20	0.845	-.035257 .042848
_cons	.5564314	.1113887	5.00	0.000	.3309367 .7819261

. reg L6.logUSDTRY FEDRATE L6.TRYQCURRACC

Source	SS	df	MS	Number of obs	=	38
Model	2.40068928	2	1.20034464	F(2, 35)	=	43.28
Residual	.970708151	35	.027734519	Prob > F	=	0.0000
Total	3.37139743	37	.091118849	R-squared	=	0.7121
				Adj R-squared	=	0.6956
				Root MSE	=	.16654

L6.logUSDTRY	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
FEDRATE	.4482454	.0496559	9.03	0.000	.3474386 .5490522
TRYQCURRACC					
L6.	-.0197187	.0164244	-1.20	0.238	-.0530619 .0136245
_cons	.386639	.098569	3.92	0.000	.1865333 .5867447

. reg L9.logUSDTRY FEDRATE L9.TRYQCURRACC

Source	SS	df	MS	Number of obs	=	35
Model	1.68535442	2	.842677212	F(2, 32)	=	46.51
Residual	.579758368	32	.018117449	Prob > F	=	0.0000
Total	2.26511279	34	.066620964	R-squared	=	0.7440
				Adj R-squared	=	0.7281
				Root MSE	=	.1346

L9.logUSDTRY	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
FEDRATE	.3872867	.0405411	9.55	0.000	.304707 .4698663
TRYQCURRACC					
L9.	-.0299631	.0135051	-2.22	0.034	-.0574721 -.0024541
_cons	.2981427	.0828794	3.60	0.001	.1293228 .4669627

. reg L12.logUSDTRY FEDRATE L12.TRYQCURRACC

Source	SS	df	MS	Number of obs	=	
Model	1.40578655	2	.702893275	F(2, 29)	=	78.39
Residual	.260018641	29	.00896616	Prob > F	=	0.0000
				R-squared	=	0.8439
				Adj R-squared	=	0.8331
Total	1.66580519	31	.053735651	Root MSE	=	.09469

L12.		Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
logUSDTRY							
FEDRATE		.3454261	.0276019	12.51	0.000	.2889738	.4018784
TRYQCURRACC							
L12.		-.0309345	.0094836	-3.26	0.003	-.0503306	-.0115384
_cons		.2586189	.0583903	4.43	0.000	.1391973	.3780405

. reg logUSD RUB FEDRATE RUBQCURRACC

Source	SS	df	MS	Number of obs	=	
Model	1.05514011	2	.527570053	F(2, 41)	=	4.81
Residual	4.50110926	41	.109783153	Prob > F	=	0.0133
				R-squared	=	0.1899
				Adj R-squared	=	0.1504
Total	5.55624937	43	.129215102	Root MSE	=	.33134

logUSD RUB		Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE		.1210106	.0714932	1.69	0.098	-.0233729	.2653941
RUBQCURRACC		-.0929351	.0335748	-2.77	0.008	-.1607408	-.0251293
_cons		3.981476	.1392559	28.59	0.000	3.700243	4.262709

. reg L3.logUSD RUB FEDRATE L3.RUBQCURRACC

Source	SS	df	MS	Number of obs	=	
Model	2.08135187	2	1.04067594	F(2, 38)	=	14.79
Residual	2.67339571	38	.070352519	Prob > F	=	0.0000
				R-squared	=	0.4377
				Adj R-squared	=	0.4081
Total	4.75474758	40	.11886869	Root MSE	=	.26524

L3.logUSD RUB		Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE		.3451608	.0810829	4.26	0.000	.1810171	.5093046
RUBQCURRACC							
L3.		-.036606	.0302819	-1.21	0.234	-.0979084	.0246965
_cons		3.648502	.1405834	25.95	0.000	3.363906	3.933098

. reg L6.logUSD RUB FEDRATE L6.RUBQCURRACC

Source	SS	df	MS	Number of obs	=	
Model	2.68829947	2	1.34414974	F(2, 35)	=	30.14
Residual	1.56101101	35	.044600315	Prob > F	=	0.0000
				R-squared	=	0.6326
				Adj R-squared	=	0.6117
Total	4.24931048	37	.114846229	Root MSE	=	.21119

L6.logUSD RUB		Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE		.4327461	.0616881	7.02	0.000	.3075126	.5579796
RUBQCURRACC							
L6.		-.023648	.0242409	-0.98	0.336	-.0728596	.0255636
_cons		3.52563	.1131388	31.16	0.000	3.295947	3.755314

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-----
. reg L9.logUSDRUB FEDRATE L9.RUBQCURRACC

Source |          SS          df          MS      Number of obs   =          35
-----+-----
Model | 2.98842481          2    1.4942124      F(2, 32)         =          79.99
Residual | .597761637         32    .018680051      Prob > F          =          0.0000
-----+-----
Total | 3.58618644         34    .105476072      R-squared         =          0.8333
                                           Adj R-squared     =          0.8229
                                           Root MSE         =          .13667

-----
L9.logUSDRUB |          Coef.      Std. Err.      t    P>|t|      [95% Conf. Interval]
-----+-----
FEDRATE | .4745197      .0388177     12.22  0.000      .3954507      .5535887
RUBQCURRACC |
L9. | -.0221573     .0161705     -1.37  0.180     -.0550954     .0107809
_cons | 3.453838     .0753149     45.86  0.000     3.300427     3.607249
-----

. reg L12.logUSDRUB FEDRATE L12.RUBQCURRACC

Source |          SS          df          MS      Number of obs   =          32
-----+-----
Model | 2.15047915          2    1.07523958      F(2, 29)         =          97.73
Residual | .319077583         29    .011002675      Prob > F          =          0.0000
-----+-----
Total | 2.46955673         31    .07966312      R-squared         =          0.8708
                                           Adj R-squared     =          0.8619
                                           Root MSE         =          .10489

-----
L12.
logUSDRUB |          Coef.      Std. Err.      t    P>|t|      [95% Conf. Interval]
-----+-----
FEDRATE | .4248723      .0318509     13.34  0.000     .3597299     .4900147
RUBQCURRACC |
L12. | .0110908      .01333       0.83  0.412     -.0161721     .0383537
_cons | 3.274015      .0651344     50.27  0.000     3.1408       3.407229
-----

. reg logUSDCNY FEDRATE CNYQCURRACC

Source |          SS          df          MS      Number of obs   =          44
-----+-----
Model | .033813198          2    .016906599      F(2, 41)         =          14.49
Residual | .047826188         41    .001166492      Prob > F          =          0.0000
-----+-----
Total | .081639386         43    .00189859      R-squared         =          0.4142
                                           Adj R-squared     =          0.3856
                                           Root MSE         =          .03415

-----
logUSDCNY |          Coef.      Std. Err.      t    P>|t|      [95% Conf. Interval]
-----+-----
FEDRATE | .0271318      .007434      3.65  0.001     .0121185     .0421451
CNYQCURRACC | .0076717      .0023416     3.28  0.002     .0029427     .0124007
_cons | 1.837581      .0091333     201.20  0.000     1.819136     1.856026
-----

. reg L3.logUSDCNY FEDRATE L3.CNYQCURRACC

Source |          SS          df          MS      Number of obs   =          41
-----+-----
Model | .041782417          2    .020891209      F(2, 38)         =          23.45
Residual | .033857581         38    .000890989      Prob > F          =          0.0000
-----+-----
Total | .075639998         40    .001891      R-squared         =          0.5524
                                           Adj R-squared     =          0.5288
                                           Root MSE         =          .02985

-----
L3.logUSDCNY |          Coef.      Std. Err.      t    P>|t|      [95% Conf. Interval]
-----+-----
FEDRATE | .0369824      .0088969     4.16  0.000     .0189716     .0549931
CNYQCURRACC |
L3. | .0150832      .0022799     6.62  0.000     .0104677     .0196987
-----

```

```

      _cons |    1.808548    .0105169    171.97    0.000    1.787258    1.829839
-----+-----

```

```

. reg L6.logUSDCNY FEDRATE L6.CNYQCURRACC

```

```

      Source |          SS          df           MS       Number of obs   =        38
-----+-----+-----+-----+-----+-----
      Model |    .04709893            2    .023549465       F(2, 35)         =       30.83
      Residual |    .026736913          35    .000763912       Prob > F          =       0.0000
-----+-----+-----+-----+-----
      Total |    .073835843          37    .001995563       R-squared          =       0.6379
                                           Adj R-squared      =       0.6172
                                           Root MSE          =       .02764

```

```

L6.logUSDCNY |          Coef.    Std. Err.      t    P>|t|     [95% Conf. Interval]
-----+-----+-----+-----+-----+-----
      FEDRATE |    .0415859    .0081281     5.12   0.000     .025085     .0580869
      CNYQCURRACC |
      L6. |    .0157137    .0021489     7.31   0.000     .0113511     .0200763
      _cons |    1.801511    .0101498    177.49   0.000     1.780906     1.822117
-----+-----+-----+-----+-----+-----

```

```

. reg L9.logUSDCNY FEDRATE L9.CNYQCURRACC

```

```

      Source |          SS          df           MS       Number of obs   =        35
-----+-----+-----+-----+-----+-----
      Model |    .039528361            2    .019764181       F(2, 32)         =       25.89
      Residual |    .024423959          32    .000763249       Prob > F          =       0.0000
-----+-----+-----+-----+-----
      Total |    .06395232          34    .001880951       R-squared          =       0.6181
                                           Adj R-squared      =       0.5942
                                           Root MSE          =       .02763

```

```

L9.logUSDCNY |          Coef.    Std. Err.      t    P>|t|     [95% Conf. Interval]
-----+-----+-----+-----+-----+-----
      FEDRATE |    .0090283    .0080583     1.12   0.271     -.007386     .0254425
      CNYQCURRACC |
      L9. |    .0155895    .0021814     7.15   0.000     .011146     .0200329
      _cons |    1.808884    .0105694    171.14   0.000     1.787355     1.830413
-----+-----+-----+-----+-----+-----

```

```

. reg L12.logUSDCNY FEDRATE L12.CNYQCURRACC

```

```

      Source |          SS          df           MS       Number of obs   =        32
-----+-----+-----+-----+-----+-----
      Model |    .044554233            2    .022277116       F(2, 29)         =       36.39
      Residual |    .017754348          29    .000612219       Prob > F          =       0.0000
-----+-----+-----+-----+-----
      Total |    .062308581          31    .002009954       R-squared          =       0.7151
                                           Adj R-squared      =       0.6954
                                           Root MSE          =       .02474

```

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L12.
logUSDCNY |          Coef.    Std. Err.      t    P>|t|     [95% Conf. Interval]
-----+-----+-----+-----+-----+-----
      FEDRATE |   -.0142406    .0074225    -1.92   0.065     -.0294213     .0009401
      CNYQCURRACC |
      L12. |    .0146341    .0020206     7.24   0.000     .0105015     .0187666
      _cons |    1.820217    .0102539    177.51   0.000     1.799245     1.841188
-----+-----+-----+-----+-----+-----

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. reg logUSDINR FEDRATE INRQCURRACC

```

```

      Source |          SS          df           MS       Number of obs   =        44
-----+-----+-----+-----+-----+-----
      Model |    .133483256            2    .066741628       F(2, 41)         =       2.63
      Residual |    1.04047439          41    .025377424       Prob > F          =       0.0842
-----+-----+-----+-----+-----
      Total |    1.17395765          43    .027301341       R-squared          =       0.1137
                                           Adj R-squared      =       0.0705
                                           Root MSE          =       .1593

```

```

logUSDINR |          Coef.    Std. Err.      t    P>|t|     [95% Conf. Interval]
-----+-----+-----+-----+-----+-----

```

FEDRATE		.0010092	.0357737	0.03	0.978	-.0712372	.0732556
INRQCURRACC		.0421634	.0193257	2.18	0.035	.0031344	.0811924
_cons		4.123356	.0583069	70.72	0.000	4.005603	4.24111

. reg L3.logUSDINR FEDRATE L3.INRQCURRACC

Source		SS	df	MS	Number of obs	=	41

Model		.315015037	2	.157507518	F(2, 38)	=	8.60
Residual		.695856139	38	.018312004	Prob > F	=	0.0008

Total		1.01087118	40	.025271779	R-squared	=	0.3116

					Adj R-squared	=	0.2754
					Root MSE	=	.13532

L3.logUSDINR		Coef.	Std. Err.	t	P> t	[95% Conf. Interval]

FEDRATE		.1319991	.0415404	3.18	0.003	.0479049 .2160933
INRQCURRACC						
L3.		.0173559	.0174891	0.99	0.327	-.0180489 .0527606
_cons		3.994984	.0545622	73.22	0.000	3.884528 4.105439

. reg L6.logUSDINR FEDRATE L6.INRQCURRACC

Source		SS	df	MS	Number of obs	=	38

Model		.387319133	2	.193659567	F(2, 35)	=	12.53
Residual		.540948272	35	.015455665	Prob > F	=	0.0001

Total		.928267405	37	.025088308	R-squared	=	0.4172

					Adj R-squared	=	0.3839
					Root MSE	=	.12432

L6.logUSDINR		Coef.	Std. Err.	t	P> t	[95% Conf. Interval]

FEDRATE		.183013	.0427232	4.28	0.000	.0962804 .2697456
INRQCURRACC						
L6.		-.0078336	.0180732	-0.43	0.667	-.0445241 .0288569
_cons		3.899229	.0591898	65.88	0.000	3.779067 4.01939

. reg L9.logUSDINR FEDRATE L9.INRQCURRACC

Source		SS	df	MS	Number of obs	=	35

Model		.476581677	2	.238290839	F(2, 32)	=	22.70
Residual		.335843218	32	.010495101	Prob > F	=	0.0000

Total		.812424896	34	.02389485	R-squared	=	0.5866

					Adj R-squared	=	0.5608
					Root MSE	=	.10245

L9.logUSDINR		Coef.	Std. Err.	t	P> t	[95% Conf. Interval]

FEDRATE		.2309284	.0362252	6.37	0.000	.1571401 .3047167
INRQCURRACC						
L9.		-.0343291	.0160385	-2.14	0.040	-.0669985 -.0016597
_cons		3.789441	.0545983	69.41	0.000	3.678228 3.900654

. reg L12.logUSDINR FEDRATE L12.INRQCURRACC

Source		SS	df	MS	Number of obs	=	32

Model		.49041066	2	.24520533	F(2, 29)	=	43.18
Residual		.164671217	29	.005678318	Prob > F	=	0.0000

Total		.655081877	31	.021131673	R-squared	=	0.7486

					Adj R-squared	=	0.7313
					Root MSE	=	.07535

L12.		Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
logUSDINR						

FEDRATE	.2308836	.0249996	9.24	0.000	.1797537	.2820135	
INRQCURRACC							
L12.	-.0462516	.0118671	-3.90	0.001	-.0705224	-.0219807	
_cons	3.725913	.0413251	90.16	0.000	3.641394	3.810433	

. reg logUSDBRL FEDRATE BRLQCURRACC

Source	SS	df	MS	Number of obs	=	
Model	.363194489	2	.181597245	F(2, 41)	=	2.09
Residual	3.55809977	41	.086782921	Prob > F	=	0.1364
Total	3.92129426	43	.09119289	R-squared	=	0.0926
				Adj R-squared	=	0.0484
				Root MSE	=	.29459

logUSDBRL	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
FEDRATE	.0884647	.0918708	0.96	0.341	-.0970722 .2740015
BRLQCURRACC	.0291816	.0538275	0.54	0.591	-.0795253 .1378884
_cons	.9004668	.1699829	5.30	0.000	.5571794 1.243754

. reg L3.logUSDBRL FEDRATE L3.BRLQCURRACC

Source	SS	df	MS	Number of obs	=	
Model	1.67464174	2	.837320869	F(2, 38)	=	21.53
Residual	1.47771254	38	.038887172	Prob > F	=	0.0000
Total	3.15235428	40	.078808857	R-squared	=	0.5312
				Adj R-squared	=	0.5066
				Root MSE	=	.1972

L3.logUSDBRL	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
FEDRATE	.4570261	.0709568	6.44	0.000	.3133816 .6006707
BRLQCURRACC					
L3.	-.1095004	.0344373	-3.18	0.003	-.1792151 -.0397858
_cons	.3860149	.1097234	3.52	0.001	.1638915 .6081382

. reg L6.logUSDBRL FEDRATE L6.BRLQCURRACC

Source	SS	df	MS	Number of obs	=	
Model	1.97047068	2	.985235342	F(2, 35)	=	42.30
Residual	.815241764	35	.023292622	Prob > F	=	0.0000
Total	2.78571245	37	.075289526	R-squared	=	0.7073
				Adj R-squared	=	0.6906
				Root MSE	=	.15262

L6.logUSDBRL	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
FEDRATE	.4261973	.0463573	9.19	0.000	.332087 .5203076
BRLQCURRACC					
L6.	-.1006479	.0253025	-3.98	0.000	-.1520147 -.0492812
_cons	.3703935	.0798103	4.64	0.000	.2083699 .5324171

. reg L9.logUSDBRL FEDRATE L9.BRLQCURRACC

Source	SS	df	MS	Number of obs	=	
Model	1.89511122	2	.947555609	F(2, 32)	=	62.59
Residual	.484429596	32	.015138425	Prob > F	=	0.0000
Total	2.37954081	34	.069986495	R-squared	=	0.7964
				Adj R-squared	=	0.7837
				Root MSE	=	.12304

L9.logUSDBRL	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE	.3737686	.0345502	10.82	0.000	.3033922	.444145
BRLQCURRACC						
L9.	-.0558988	.0207287	-2.70	0.011	-.0981217	-.0136758
_cons	.461491	.0618449	7.46	0.000	.335517	.5874649

. reg L12.logUSDBRL FEDRATE L12.BRLQCURRACC

Source	SS	df	MS	Number of obs	=	32
Model	1.50041377	2	.750206884	F(2, 29)	=	74.86
Residual	.290631971	29	.010021792	Prob > F	=	0.0000
Total	1.79104574	31	.057775669	R-squared	=	0.8377
				Adj R-squared	=	0.8265
				Root MSE	=	.10011

L12.logUSDBRL	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE	.3540775	.033128	10.69	0.000	.2863231	.421832
BRLQCURRACC						
L12.	.008035	.0206934	0.39	0.701	-.0342878	.0503578
_cons	.5957639	.054412	10.95	0.000	.4844789	.7070489

. reg logUSDMXN FEDRATE MXNQCURRACC

Source	SS	df	MS	Number of obs	=	44
Model	.613064003	2	.306532002	F(2, 41)	=	13.24
Residual	.94931436	41	.023154009	Prob > F	=	0.0000
Total	1.56237836	43	.036334381	R-squared	=	0.3924
				Adj R-squared	=	0.3628
				Root MSE	=	.15216

logUSDMXN	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE	.0830143	.0329256	2.52	0.016	.0165197	.149509
MXNQCURRACC	-.1624663	.0339809	-4.78	0.000	-.2310922	-.0938404
_cons	2.362365	.0652936	36.18	0.000	2.230502	2.494228

. reg L3.logUSDMXN FEDRATE L3.MXNQCURRACC

Source	SS	df	MS	Number of obs	=	41
Model	.99783862	2	.49891931	F(2, 38)	=	65.19
Residual	.290819939	38	.007653156	Prob > F	=	0.0000
Total	1.28865856	40	.032216464	R-squared	=	0.7743
				Adj R-squared	=	0.7624
				Root MSE	=	.08748

L3.logUSDMXN	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE	.2100898	.0249582	8.42	0.000	.1595646	.260615
MXNQCURRACC						
L3.	-.1057151	.0200544	-5.27	0.000	-.1463131	-.0651171
_cons	2.390888	.0348089	68.69	0.000	2.320422	2.461355

. reg L6.logUSDMXN FEDRATE L6.MXNQCURRACC

Source	SS	df	MS	Number of obs	=	38
Model	.838884604	2	.419442302	F(2, 35)	=	71.88
Residual	.204222853	35	.005834939	Prob > F	=	0.0000
Total	1.04310746	37	.028192093	R-squared	=	0.8042
				Adj R-squared	=	0.7930
				Root MSE	=	.07639

L6.logUSDMXN	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE	.2030728	.0249692	8.13	0.000	.1523826	.253763
MXNQCURRACC						
L6.	-.0635179	.0199375	-3.19	0.003	-.1039932	-.0230426
_cons	2.438099	.0311726	78.21	0.000	2.374815	2.501383

. reg L9.logUSDMXN FEDRATE L9.MXNQCURRACC

Source	SS	df	MS	Number of obs	=	35
Model	.532650953	2	.266325476	F(2, 32)	=	50.89
Residual	.16747663	32	.005233645	Prob > F	=	0.0000
Total	.700127582	34	.020591988	R-squared	=	0.7608
				Adj R-squared	=	0.7458
				Root MSE	=	.07234

L9.logUSDMXN	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE	.1751918	.0270395	6.48	0.000	.1201142	.2302694
MXNQCURRACC						
L9.	-.0336252	.0219421	-1.53	0.135	-.0783198	.0110694
_cons	2.469396	.0309315	79.83	0.000	2.40639	2.532401

. reg L12.logUSDMXN FEDRATE L12.MXNQCURRACC

Source	SS	df	MS	Number of obs	=	32
Model	.226919161	2	.113459581	F(2, 29)	=	19.45
Residual	.169176997	29	.00583369	Prob > F	=	0.0000
Total	.396096159	31	.012777295	R-squared	=	0.5729
				Adj R-squared	=	0.5434
				Root MSE	=	.07638

L12.logUSDMXN	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE	.1217602	.030304	4.02	0.000	.0597816	.1837388
MXNQCURRACC						
L12.	-.0162587	.0269043	-0.60	0.550	-.0712842	.0387668
_cons	2.492388	.0345932	72.05	0.000	2.421637	2.563139

. reg logUSDNGN FEDRATE NGNQCURRACC

Source	SS	df	MS	Number of obs	=	11
Model	1.10550416	2	.552752079	F(2, 8)	=	17.20
Residual	.257158697	8	.032144837	Prob > F	=	0.0013
Total	1.36266286	10	.136266286	R-squared	=	0.8113
				Adj R-squared	=	0.7641
				Root MSE	=	.17929

logUSDNGN	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE	.4317192	.0822617	5.25	0.001	.2420233	.621415
NGNQCURRACC						
L12.	-.0381905	.0190334	-2.01	0.080	-.0820816	.0057007
_cons	5.19071	.0868772	59.75	0.000	4.990371	5.391049

. reg L3.logUSDNGN FEDRATE L3.NGNQCURRACC

Source	SS	df	MS	Number of obs	=	10
Model	.92845917	2	.464229585	F(2, 7)	=	95.92
Residual	.033878904	7	.004839843	Prob > F	=	0.0000
Total	1.36266286	9	.151418101	R-squared	=	0.9648
				Adj R-squared	=	0.9547

Total | .962338073 9 .106926453 Root MSE = .06957

L3.logUSDNGN	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE	.4709711	.0380249	12.39	0.000	.3810564	.5608858
NGNQCURRACC						
L3.	-.0265102	.0075112	-3.53	0.010	-.0442715	-.008749
_cons	5.100622	.0364291	140.02	0.000	5.014481	5.186763

. reg L6.logUSDNGN FEDRATE L6.NGNQCURRACC

Source	SS	df	MS	Number of obs	=	
Model	.449960954	2	.224980477	F(2, 6)	=	36.25
Residual	.03723518	6	.006205863	Prob > F	=	0.0004
Total	.487196134	8	.060899517	R-squared	=	0.9236
				Adj R-squared	=	0.8981
				Root MSE	=	.07878

L6.logUSDNGN	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE	.3724586	.0571868	6.51	0.001	.2325276	.5123896
NGNQCURRACC						
L6.	-.0068384	.0102391	-0.67	0.529	-.0318927	.0182158
_cons	5.014568	.0543546	92.26	0.000	4.881567	5.147569

. reg L9.logUSDNGN FEDRATE L9.NGNQCURRACC

Source	SS	df	MS	Number of obs	=	
Model	.089245615	2	.044622807	F(2, 5)	=	72.96
Residual	.00305822	5	.000611644	Prob > F	=	0.0002
Total	.092303835	7	.013186262	R-squared	=	0.9669
				Adj R-squared	=	0.9536
				Root MSE	=	.02473

L9.logUSDNGN	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE	.0726823	.0333252	2.18	0.081	-.0129829	.1583475
NGNQCURRACC						
L9.	-.0231726	.0048313	-4.80	0.005	-.0355919	-.0107532
_cons	5.126916	.0282834	181.27	0.000	5.054211	5.199621

. reg L12.logUSDNGN FEDRATE L12.NGNQCURRACC

Source	SS	df	MS	Number of obs	=	
Model	.089931002	2	.044965501	F(2, 5)	=	94.75
Residual	.002372833	5	.000474567	Prob > F	=	0.0001
Total	.092303835	7	.013186262	R-squared	=	0.9743
				Adj R-squared	=	0.9640
				Root MSE	=	.02178

L12.logUSDNGN	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE	.0560245	.0203558	2.75	0.040	.0036983	.1083507
NGNQCURRACC						
L12.	-.0209848	.0046278	-4.53	0.006	-.0328808	-.0090887
_cons	5.116409	.0263268	194.34	0.000	5.048734	5.184084

. reg logUSDZAR FEDRATE ZARQCURRACC

Source	SS	df	MS	Number of obs	=	44
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Model	.325540644	2	.162770322	F(2, 41)	=	2.47
Residual	2.69849835	41	.065817033	Prob > F	=	0.0968
				R-squared	=	0.1077
				Adj R-squared	=	0.0641
Total	3.02403899	43	.070326488	Root MSE	=	.25655

logUSDZAR	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE	.0928367	.0552098	1.68	0.100	-.0186616	.2043351
ZARQCURRACC	-.0343385	.0261934	-1.31	0.197	-.0872372	.0185601
_cons	2.123302	.1108356	19.16	0.000	1.899465	2.347139

. reg L3.logUSDZAR FEDRATE L3.ZARQCURRACC

Source	SS	df	MS	Number of obs	=	41
Model	1.47929003	2	.739645015	F(2, 38)	=	23.84
Residual	1.17884022	38	.031022111	Prob > F	=	0.0000
				R-squared	=	0.5565
				Adj R-squared	=	0.5332
Total	2.65813025	40	.066453256	Root MSE	=	.17613

L3.logUSDZAR	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE	.3317723	.0510817	6.49	0.000	.2283628	.4351819
ZARQCURRACC						
L3.	-.0804378	.0189087	-4.25	0.000	-.1187164	-.0421592
_cons	1.826423	.0878845	20.78	0.000	1.64851	2.004336

. reg L6.logUSDZAR FEDRATE L6.ZARQCURRACC

Source	SS	df	MS	Number of obs	=	38
Model	1.95302646	2	.97651323	F(2, 35)	=	69.06
Residual	.49492652	35	.014140758	Prob > F	=	0.0000
				R-squared	=	0.7978
				Adj R-squared	=	0.7863
Total	2.44795298	37	.066160891	Root MSE	=	.11891

L6.logUSDZAR	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE	.363349	.0334905	10.85	0.000	.2953596	.4313383
ZARQCURRACC						
L6.	-.0797008	.0126726	-6.29	0.000	-.1054275	-.0539741
_cons	1.781428	.0586757	30.36	0.000	1.66231	1.900546

. reg L9.logUSDZAR FEDRATE L9.ZARQCURRACC

Source	SS	df	MS	Number of obs	=	35
Model	1.84661837	2	.923309186	F(2, 32)	=	123.37
Residual	.23948204	32	.007483814	Prob > F	=	0.0000
				R-squared	=	0.8852
				Adj R-squared	=	0.8780
Total	2.08610041	34	.061355894	Root MSE	=	.08651

L9.logUSDZAR	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FEDRATE	.3245995	.0246331	13.18	0.000	.2744236	.3747755
ZARQCURRACC						
L9.	-.0600778	.0096295	-6.24	0.000	-.0796925	-.0404631
_cons	1.832832	.0422988	43.33	0.000	1.746672	1.918992

. reg L12.logUSDZAR FEDRATE L12.ZARQCURRACC

Source	SS	df	MS	Number of obs	=	32
Model	1.35258922	2	.676294609	F(2, 29)	=	168.88
Residual	.116133666	29	.004004609	Prob > F	=	0.0000
				R-squared	=	0.9209
				Adj R-squared	=	0.9155
Total	1.46872288	31	.047378158	Root MSE	=	.06328

```
L12.
logUSDZAR |
          Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-----+-----
    FEDRATE |   .272183   .0189649    14.35   0.000   .2333954   .3109706
ZARQCURRACC |
L12. |   -.0460207   .0073505    -6.26   0.000   -.0610543   -.0309872
   _cons |   1.86821   .0309217    60.42   0.000   1.804968   1.931452
```

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