

## **U.S. Presidential Cycle and Foreign Exchange Market**

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# U.S. Presidential Cycle and Foreign Exchange Market

SAMAR ASHOUR & SALIL SARKAR

## ABSTRACT

This paper examines the relation between the U.S. dollar foreign exchange rate and the U.S. political cycles. The results show that the foreign exchange rate is higher under Republican compared to the Democratic presidencies. In particular, the U.S. foreign exchange rate against British pound and euro is higher under Republican than Democratic presidencies by £0.0441 and €0.0739, respectively. This difference is statistically significant and robust in both the entire sample period and the subsamples. The U.S. foreign exchange rate against the Japanese yen is higher under Democrats in both the entire sample and the first subsample (which includes the fixed rate system period), but it is higher under Republicans in the second subsample period (which reflects the floating rate system period). In addition, the values of all the Real Trade Weighted Indexes (Broad Index, Major Index, and Other important Trading Partners Index), are higher under Republican presidencies. The presidential-partisan cycles have no statistical significant impact on the returns on the U.S. foreign exchange returns.

## 1. Introduction

The purpose of this study is to examine how political events affect foreign exchange market by focusing on the impact of the U.S. presidential cycles on the U.S. currency market, an issue that has been overlooked in previous studies. Unlike the existing literature that mostly examines the relation between U.S. presidential cycle and stock returns, my paper is the first to formally test the relation between presidential terms and U.S. foreign exchange market. Understanding the potential link between currency market and presidents is important to investigate because the presidential elections provide investors with information about the country's future economic policies. The two major political parties in the United States – Democratic and Republican – adopt different economic policies. Indeed, many previous studies find that Democratic presidencies are associated with higher inflation rates<sup>1</sup>. Hibbs (1986) shows that Democratic administration is more likely than Republican one to adopt expansionary

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<sup>1</sup> Alesina and Rosenthal (1995), Alesina, Roubini, and Cohen (1997) find that significant higher inflation rates associated with democratic political cycle. Fama (1981), Geske and Roll (1983), Kaul(1987), and Goto and Valkanov (2000) give strong evidence on the effect of monetary policy on the inflation.

economic policies that might yield to higher inflation and, consequently, might affect the relative value of the country's assets and the real value of the U.S. dollar. He documents that Republican administrations prefer to adopt tight monetary policies than their Democratic counterparts. On the other hand many previous studies (such as Santa Clara and Valkanov, 2003) report that Democratic administration is associated with higher stock returns, and this may attract investors to U.S. market and appreciates the U.S. dollar. All these findings give a strong motivation to investigate whether Democrats or Republican administrations are preferable for the appreciation of the U.S. Dollar Foreign exchange rate and for its monthly returns.

Using data from 1961 to 2012, I find that there is a significant relation between political cycles and the U.S. foreign exchange rate against the three major important currencies (Pound, Euro, and Japanese Yen). The average dollar price of euros and pounds is higher under republican presidents. The difference is statistically and economically significant. The U.S. foreign exchange rate against Japanese yen is higher under democrats. However, this paper documents that there is no impact of the political cycles on the returns of these three important foreign exchange rates.

In order to check whether the above results are spurious, I conduct two robustness tests - studying two subsamples, and using the three real Trade Weighted Indexes. In subsamples, the relation between political cycles and the exchange rate remains significant under both the fixed system in the first subsample and the floating and hybrid systems in the second subsample. For the first subsample, the average value of the dollar is higher under Republicans by £0.044 and €0.0133, and lower by ¥23.2212. For the second subsample, the average value of the U.S. foreign exchange rate against the three currencies is higher under Republican cycles. The difference for the second subsample which includes the floating system and the most recent

foreign exchange rate systems is £0.01, €0.05, and ¥34.679. The insignificant relation between presidential terms and the Foreign exchange(FX) returns remains stable across subsamples with only one exception for the average returns on U.S. dollar- Japanese yen exchange rate which is higher under Democrats under the fixed system.

The second robustness test is using a basket of currencies. I examine whether the difference in the value of dollar is due to selecting these three particular currencies or the U.S. dollar generally appreciates under the Republican presidency. To investigate the relation more thoroughly, I use the most recent three real Trade Weighted U.S. dollar Indexes of the Federal Reserve Board. These real indexes represent the weighted average of the price of various currencies relative to dollar. I find that the results remain robust and the republicans have been associated with higher real trade weighted index in all three cases (Broad index, Major index, and other important Trading Partner's Index). The average real Broad Weighted U.S. index under Republican is 99.4430 points compared to 91.1430 points with a difference of 8.3 points which represent 9% which is statistically and economically significant. The difference in the average value of dollars for the major and other trading partner's indexes under the two presidential terms is approximately 8% and 10%, respectively. After using these three indexes to test the difference in returns on the U.S. foreign exchange rate, the results remain robust and verify that there is no statistical significant relationship between presidential terms and the foreign exchange returns.

The rest of the paper is organized as follows: Section 2 discusses the literature review that examine the effect of the U.S. political cycles on the stock market and the previous studies that relate political variable to the foreign exchange rate. Section 3 introduces the data and variables used in the study. Section 4 discusses the methodology and the empirical methods used

for testing the main hypotheses. Section 5 presents the main findings and results of the effect of U.S. political cycle and U.S. currency market. Section 6 reports the results of the robustness tests. Section 7 presents the main conclusion of the study and provides directions for future research.

## **2. Literature Review**

A large body of literature relates U.S. political cycle to stock returns. Niederhoffer, Gibbs, and Bullock (1970) were the first to relate the stock market to the presidential parties. They find that there is no significant difference in stock returns between Democratic and Republican presidencies with an exception that Democratic presidencies associated with higher stock returns in the third year of the political cycle. However, Herbest and Slinkman (1984) use data from 1962 to 1977 and find that there is a significant relation between the presidential elections and the 48 month stock market cycle. Hensel and Ziemba (1995) and Johnson et al. (1999) report that there is a statistical significant difference between Democrats and Republicans for the small stocks. Santa-Clara and Valkanov (2003) is one of the most important studies that document the presidential political party effect on the stock market. They find that Democratic presidential administration is associated with higher stock market returns than their Republican counterparts, even after controlling for size effect and business cycle variables. Li and Born (2006) use the uncertainty associated with the 2000 U.S. presidential election to provide evidence that U.S. stock market responds to the political uncertainty. In addition, Cooper, Gulen, and Ovtchinnikov (2010) examine the relation between the amount of contributions coming from interest groups (i.e., firms that contribute money to elected U.S. politicians) and contributing firm returns. The results show a robust correlation between political contributions and stock returns. The most recent study that tries to resolve the presidential puzzle is Sy and Zaman

(2011). Using a conditional version of Fama and French (1993) model<sup>2</sup>, this paper resolves the presidential puzzle by explaining that systematic risk varies across political cycles and consequently, the market risk premium is higher under Democratic presidencies.

There is a gap in the literature that relates foreign exchange rate to the presidential terms. My work, however, is related to a strand of literature that relates exchange rate market to political economy variables. Bailey and Chung (1995) examine the impact of exchange rate fluctuations and political risk on stock prices and equity market risk premium of individual companies from Mexico, which is one of the most important developing countries. Using Mexican debt and currency market prices to proxy for changes in currency and political risks, they find that exchange rate and political risk are significant pricing factors in equity markets. Naranjo and Nimalendran (2000) investigate the effect of the government intervention on the foreign exchange markets. They provide a theoretical and empirical model and prove that there is a statistical and economical significant relation between the increase in DM/\$ bid-ask spreads and the variance of the unexpected governments intervention<sup>3</sup>. Huang et al. (2007) examine the impact of Taiwan presidential elections on the foreign exchange market and the stock market. Using jump diffusion models<sup>4</sup> (ARJI and GARCH- jump models), they find that the presidential election periods affect the jump intensity of stock and foreign exchange markets. They also document that the jump intensity and the volatility of the jump size are reasonable after the central bank intervention in the foreign exchange markets during the presidential election events. Liu and Pauwels (2012) examine the impact of external political pressures calling for faster Yuan (Renminbi) appreciation on the daily returns and conditional volatility of the central parity rate

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<sup>2</sup> This paper investigate whether risk can explain the difference in market performance between Republican and Democrats using conditional versions of the CAPM and TFPM in which systematic risk can vary across political cycles.

<sup>3</sup> This paper reports that government foreign exchange rate intervention can be decomposed into expected and unexpected intervention. They find that expected intervention has no significant effect on the bid-ask spreads.

<sup>4</sup> Jump-diffusion models in this paper include the ARJI model and the GARCH-jump model. They find that ARJI model provides superior fitness of asset returns and it is also more robust for the testing of presidential terms.

of the daily returns and conditional volatility of both the Yuan exchange rate and the 12-month RMB non deliverable forward rate. They use many political pressures indicators<sup>5</sup> to the Yuan exchange rate with focusing on the U.S. Political pressure. They find that international pressures do not have a significant impact on the Yuan's daily return, but political pressures (especially U.S. external pressure) do significantly affect the daily Yuan's volatility.

### 3. Data and Variables

This section presents all the variables used in the study. This paper uses two types of variables: Financial variables, and political dummy variables. The sample spans the period from January 1961 till September 2012, so that I can include 13 presidential elections - 7 Republican and 6 Democratic - including 621 observations. All series are at monthly frequency. As a check of robustness, I conduct the statistical analysis on the overall sample and two subsamples. The first subsample, 1961:01-1972:12, covers the Bretton Woods system and the Smithsonian Agreement and it includes 144 observations. The second subsample, 1973:01-2012:09, covers the most recent foreign exchange rate systems and includes 477 months under 6 Republican and four Democratic presidents. Table 1 shows elections, winners, losers, and the main candidates in each election.

#### 3.1 Political Variables:

The political dummy variables are  $RP_t$  which is equal to 1 if the president is Republican at time  $t$ , and 0 otherwise;  $DM_t$  is equal to 1 if the president is Democrat at time  $t$ , and 0 otherwise. One of the most cited papers that use the Political dummy variables is Santa Clara & Valkanov (2003).

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<sup>5</sup> This study states that the U.S. pressure indicator contains statements from the U.S. Treasury, presidency, Federal Reserve and the U.S. Congress. They collected all hearings, titles, summaries in congress bills that related to Chinese RMB exchange rate. For instance, bills require the U.S. government to intervene against china exchange rate currency.



**Table (1)**  
**Election Periods, Winning and Losing Candidates, and Parties**

Table (1) reports all the winners and losers during the elections periods from January 20, 1961 to September 20, 2012. Kennedy hold the presidency from January 20, 1961 until November 22, 1963 when he was assassinated, Having the vice president, Johnson to take over the presidential elections on November 20, 1963 and left it for the Republican president, Richard Nixon, who was the president from Jan20, 1969 until August 9, 1974 when he resigned the office of president leaving the vice president, Gerald Ford to complete the term.

Election (Presidential Term)	Winner	Loser
1961-1965	Kennedy/Johnson(Democratic)	Eisenhower (Republican)
1965-1969	Johnson (Democratic)	Goldwater (Republican)
1969-1973	Nixon (Republican)	Humphrey (Democratic)
1973-1977	Nixon/Ford (Republican)	McGovern (Democratic)
1977-1981	Carter (Democratic)	Ford (Republican)
1981-1985	Reagan (Republican)	Carter (Democratic)
1985-1989	Reagan (Republican)	Mondale (Democratic)
1989-1993	G.H. Bush (Republican)	Dukakis (Democratic)
1993-1997	Clinton (Democratic)	Bush (Republican)
1997-2001	Clinton (Democratic)	Dole (Republican)
2001-2005	G.W. Bush (Republican)	Gore (Democratic)
2005-2009	G.W. Bush (Republican)	Kerry (Democratic)
2009-2012	Obama (Democratic)	McCain (Republican)

3.2 Financial Variables: The financial variables can be categorized into two groups – US foreign exchange rates, and real Trade Weighted US dollar Indexes.

### 3.2.1 U.S. Foreign Exchange Rates:

Data is obtained from three selected important currencies: the British Pound, the Euro, and Japanese Yen, with the U.S. dollar as the foreign currency<sup>6</sup>. I use the U.S dollar price in terms of pounds, euros, and Japanese Yen. All of the foreign exchange rates data: British Pound/U.S. dollar ( $UKD_t$ ), the Euro to U.S. dollar ( $EUD_t$ ), and the Japanese Yen to US dollar ( $JYD_t$ ) obtained from data stream. Table (2) reports summary statistics of Trade Weighted U.S Index variables such as sample average (mean), standard deviation (Std. Dev.) and variance.

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<sup>6</sup> I use here the European terms (Foreign currency units/one U.S. dollar) which considers an indirect quote for U.S. By this way, we can examine empirical evidence as to whether the U.S. dollar appreciate or depreciate and which political party in office during periods of higher U.S. FX market.

I calculate the monthly return of the US Foreign exchange rates (( $RUKD_t$ ), ( $REUD_t$ ), ( $RJYD_t$ )), as follows:

$$R_t = \frac{FX_t - FX_{t-1}}{FX_{t-1}} \cdot 100$$

Where  $R_t$  is the monthly return on the foreign exchange;  $FX_t$  is the price of dollar on month t; and  $FX_{t-1}$  is the price of dollar on month t-1. In addition, I use the log monthly returns<sup>7</sup> of the US foreign exchange rate in terms of Pounds, Euros, and Japanese Yen ( $LRUKD_t$ ,  $LREUD_t$ ,  $LRJYD_t$ ) using the following equation<sup>8</sup>:

$$R_t = \ln \frac{FX_t}{FX_{t-1}} \cdot 100$$

**Table (2)**  
**Summary Statistics of the Foreign exchange rates Variables**

Table 2 reports the sample average (Mean), Minimum, Maximum, range, standard deviation (Std. Dev.), and the Variance (Var.) of the foreign exchange rates. The Foreign exchange values of U.S. dollar are expressed in pound, euro, and Japanese yen. The monthly returns of the U.S. dollar is computed in level and logarithmic form and presented in percentage points.

1961:01-2012:09(621 obs)						
Series	Mean	Minimum	Maximum	Range	Std.Dev	Var.
<i>UKD</i>	0.5407	0.3552	0.9208	0.5656	0.1175	0.0138
<i>EUD</i>	0.7755	0.5461	1.3845	0.8384	0.1654	0.0274
<i>JYD</i>	205.326	76.252	362.6701	286.4181	101.766	10,356.6
<i>RUKD</i>	0.1216	-11.0110	15.9712	26.9822	2.6010	6.7652
<i>REUD</i>	0.0654	-10.1120	9.9912	20.1032	2.6040	6.7808
<i>RJYD</i>	-0.203	-14.3912	11.3001	25.6913	2.901	8.4158
<i>LRUKD</i>	0.0883	-11.6670	14.8207	26.4877	2.571	6.6100
<i>LREUD</i>	0.0314	-10.6610	9.524	20.1850	2.602	6.7704
<i>LRJYD</i>	-0.246	-15.5420	10.7068	26.2488	2.927	8.5673

### 3.2.2 Real Trade Weighted U.S. dollar Indexes:

<sup>7</sup> The reason I am using log monthly returns for the foreign exchanges rates is to reduce the variance and reduce the effect of the outliers. To this end, I take the logarithmic values of the foreign trade weighted indexes since these number are very large and have high variance.

<sup>8</sup> Liu and Pauwels (2012) used the logarithmic form of the return on the Yuan exchange rate.

The real Trade Weighted U.S. dollar index<sup>9</sup> includes three different indices - the broad index, the major currencies index, and the other important trading partners index. Each index is computed as the geometric average of the bilateral exchange rates of selected currencies, given that the weight assigned to the value of each currency in the calculation is based on trade data criteria (Loretan, 2005)<sup>10</sup>. The broad currency index ( $TWEXB_t$ ) includes twenty six countries (the Euro Area, Canada, Japan, Mexico, China, United Kingdom, Taiwan, Korea, Singapore, Hong Kong, Malaysia, Brazil, Switzerland, Thailand, Philippines, Australia, Indonesia, India, Israel, Saudi Arabia, Russia, Sweden, Argentina, Venezuela, Chile and Colombia). Major currencies Index ( $TWEXMMTH_t$ ) include the most important seven currencies the circulated widely outside U.S. (the Euro Area, Canada, Japan, United Kingdom, Switzerland, Australia, and Sweden). The Other Important Trading Partners Index ( $TWEXOPA_t$ ) is a weighted average of the foreign exchange value of the U.S. dollar against a subset of the broad index currencies that do not circulate widely outside U.S. ( $TWEXOPA_t$ ) includes the other 19 countries.

As a robustness test, I examine the relation between the presidential variables and the foreign exchange rate using real trade weighted index, from January 20, 1973 to 20 to September 20, 2012, and this period includes 10 presidencies (6 Republicans and 4 Democrats) with 477 observations<sup>11</sup>. I use real Trade weighted Index for two main reasons. First, it is a weighted

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<sup>9</sup> The Trade Weighted Index, also defined as the effective exchange rate, is a multilateral exchange rate which is a weighted average of the price of various currencies relative to the dollar with the weight for each foreign country equal to its share in trade. The interpretation of the effective exchange rate is that if the index increases, the purchasing power of that currency is higher (the currency appreciates against those of the country's or area's trading partners (Loretan, 2005).

<sup>10</sup> Loretan (2005) reports that the real index value takes into account the countries whose currencies experience differing inflation rates from that of the U.S. This is compensated by adjusting the exchange rates in the formula using the consumer price index of the respective countries. The real index value is computed by the following formula:

$$I_t = I_{t-1} \times \prod_{j=1}^{N(t)} \left( \frac{e_{j,t} \times \frac{P_t}{P_{j,t}}}{e_{j,t-1} \times \frac{P_{t-1}}{P_{j,t-1}}} \right)^{w_{j,t}}$$

Where  $I_t$  is the value of the index at time  $t$ ;  $e_{j,t}$  is the price of U.S. dollar in terms of foreign currency  $j$  at times  $t$ ;  $w_{j,t}$  is the weight of currency  $j$  in the index at time  $t$ ;  $N(t)$  is the number of foreign currencies in the index at time  $t$ ,  $P_t$  is the value of the U.S. consumer price index at times  $t$ ;  $P_j$  is the value of the country  $J$  consumer price index at times  $t$  (loretan, 2005).

<sup>11</sup> The data available for the trade weighted index from 1/1/1973 so that I exclude 3 presidencies.

average of inflation-adjusted foreign exchange rate of the U.S. dollar against the currencies of a broad group of major U.S. trading partners, so that I can control the difference of the inflationary policy between Republicans and Democrats. Second, running the regression using indices rather than using individual currencies is much more informative, since each index is a combination of different currencies. Table (3) reports summary statistics of Trade Weighted U.S Index variables such as sample average (mean), standard deviation (Std. Dev.) and variance.

**Table (3)**

**Summary Statistics of the real Trade Weighted Index Variables**

Table 3 reports the sample average (Mean), Minimum, Maximum, Range, Standard Deviation (Std.Dev.) and the variance (Var.) of the Trade Weighted U.S. dollar variables. The Trade Weighted indices are expressed in the level and logarithmic form. The Monthly returns of the US dollar is computed in level and logarithmic form and presented in percentage points.

1973:01-2012:09(477obs)						
Series	Mean	Minimum	Maximum	Range	Std.Dev	Var.
<i>TWEXB</i>	96.3432	80.5700	128.4371	47.8671	9.3721	87.8362
<i>TWEXMMTH</i>	93.6255	77.7042	131.5512	53.8470	10.8913	87.8362
<i>TWEXOPA</i>	105.8233	86.6490	131.1870	44.5380	11.5920	134.3938
<i>LTWEXB</i>	4.5634	4.3982	4.9234	0.5252	0.093	0.0087
<i>LTWEXMMTH</i>	4.5300	4.3529	4.8793	0.5264	0.1116	0.1246
<i>LTWEXOPA</i>	4.6557	4.4618	4.8766	0.4148	0.1100	0.1210
<i>RTWEXB</i>	-0.0441	-1.3457	1.1234	2.4691	1.2900	0.0168
<i>RTWEXMMTH</i>	-0.01367	-1.1234	1.3112	2.4346	0.3816	0.1450
<i>RTWIOPA</i>	-0.00611	-0.9543	1.2709	2.2252	0.2517	0.0634
<i>LRTWEXB</i>	-0.0530	-4.567	5.8445	10.4115	1.2900	0.0168
<i>LRTWEXMMTH</i>	-0.0136	-5.3758	5.8275	11.2033	0.3816	0.1456
<i>LRTWEXOPA</i>	-0.0653	-4.1089	5.8737	9.9826	1.7330	3.003

**4. Empirical Methodology and Hypotheses Development**

In order to investigate the relation between political cycles and the U.S. foreign exchange market, I examine the following two hypotheses:

Hypothesis (1): “*The political cycles have significant impact on the value of U.S. foreign exchange rate*”. In order to test this hypothesis, I run the following regression<sup>12</sup>:

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<sup>12</sup> This equation is exactly the same as the following equation:  $FX_{t+1} = \alpha_1 DM_t + \alpha_2 RP_t + u_{t-1}$ . In order to examine the null hypothesis, I examine whether  $\beta = 0$  which is exactly equal to  $\alpha_1 - \alpha_2 = 0$ .

$$FX_{t+1} = \alpha + \beta\rho_t + u_{t+1}$$

Where US foreign exchange values are denoted by  $FX_{t+1}$ , political cycles are represented by  $\rho$ ,  $\alpha$  refers to the average value of the U.S. dollar under Democratic presidencies, and  $\beta$  is the difference in the U.S exchange rate between Republicans and Democrats.

Hypothesis (2): “*There is a significant effect of the political cycle on the U.S. exchange rate returns*”. In order to investigate the impact of the US presidential election on the U.S. exchange rate return, I will use the following monthly return-generating process:

$$R_{t+1} = \alpha + \beta\rho_t + u_{t+1}$$

Where  $R_{t+1}$  is the monthly returns on the foreign exchange, and  $\rho_t$  refers to the presidential term. The returns on the US dollar under Democrats represented by  $\alpha$  and  $\beta$  refers to the difference in returns between the two presidential-partisan cycles.

## 5. Main Findings

In this section, I provide the empirical result of estimating the relation between the political cycle and the U.S. foreign exchange rate. Table (4) reports the results of regressing the U.S. foreign exchange rates versus the British Pound, Euro, and Japanese yen on dummy variables for Republicans and Democrats. The coefficients represents the average values of US foreign exchange rates with the three currencies under the Republican (*RP*) and Democratic (*DM*) presidencies, (*Diff*) represents the difference ( $\beta$ ) in the foreign exchange rates under the two presidencies, and the *P*-values show the probabilities of accepting the null hypothesis. During the entire sample period (1961 - 2012), the average value of the U.S. dollar is £0.5600 under Republican presidencies, while it is only £0.5159 under the Democratic white house, with a difference of £0.0441, which is economically and statistically significant at 1% level. The difference in the average price of dollar in terms of euro under the two presidential regimes

in table (4) is €0.0739 and the  $p$ -value of this difference is statistically and economically significant at 1% level.

**Table (4)**  
**Average values of the U.S. Foreign exchange rates**  
**under Republicans and Democrats.**

Table (4) shows the results of testing the null hypothesis that there is no effect of the political variables on the U.S. foreign exchange rate. The table shows the coefficients of regressing the exchange rates of US dollar against three major currencies (British Pound (*UKD*), Euro (*EUD*), and Japanese yen (*JYD*)) on dummy variables for Republicans and Democrats. The *Diff* column shows the difference in coefficients under Republicans and Democrats. The  $t$ -statistics and  $p$ -values are presented in parentheses.

1961:01-2012:09 (621 observations)			
	<i>RD</i>	<i>DM</i>	<i>Diff (Presidential Effect)</i>
<i>UKD</i>	0.5600 (89.99) (0.000)	0.5159 (73.88) (0.000)	0.0441 (4.72) (0.000)***
<i>EUD</i>	0.8082 (92.99) (0.00)	0.7343 (75.19) (0.000)	0.0739 (5.56) (0.000)***
<i>JYD</i>	196.8629 (36.05) (0.000)	216.9119 (35.46) (0.000)	-20.0490 (-2.45) (0.020)**

\*\*\*1% Significance Level.

\*\* 5% Significance Level.

\*1% Significance Level.

On one hand, the above results are consistent with the findings of Chappel and Keech (1986) who document that Democratic presidencies have been associated with higher inflation rates than Republicans by 2.5% on average. Also, Alesina and Rosenthal (1995), and Alesina et al. (1997) find that higher inflation rates are associated with Democratic political cycle. These higher rates of inflation may be the reason for the dollar depreciation under Democrats. On the other hand, these results contradict the findings of all studies that document that Democrats associated with higher rates of stock returns such as (Santa Clara & Valkanov, 2003). It is logical that higher returns in the U.S. stock market attract foreign investors to invest more money in the

American market, and consequently, the dollar is believed to appreciate under Democratic presidencies. Although the dollar appreciates under Republican presidents compared to their Democratic counterparts in terms of pounds and euro, the dollar depreciates against Japanese yen. The foreign exchange rate between the Japanese yen and the U.S. dollar is higher under democrats ¥216.9119 compared to ¥196.8629 under Republicans. The findings show that the relation between the political cycle and the returns on the foreign exchange rates is insignificant.

Table (5) reports the mean level and logarithmic returns of the exchange rate of US dollar against Pound, Euro, and Japanese yen under Republican (*RP*) and Democratic (*DM*) Presidential terms. The difference in the average return of the three U.S. dollar exchange rates between Republicans and Democrats is not statistically significant. The *p*-values in table (5) show that there is no relation between political cycles and the U.S. foreign exchange rate. Although these results may be surprising, it could be argued that the difference in the effect of the political variables on the foreign exchange returns is simply due to the interest rate parity (IRP). Shi et al. (2012) investigate whether real interest rate parity holds in six developed countries (Canada, France, Japan, Italy, Singapore, U.K against the U.S.). They find that the interest rate parity holds in all these countries except for Italy. This result justifies my findings because this means that when the interest rate parity holds, there is no opportunity for arbitrage, and consequently it is very difficult to earn abnormal returns on the U.S. foreign exchange rate.

## **6. Robustness Tests**

### **6.1 Subsamples**

The results in section five provide an evidence of a statistically significant relation between the presidential terms and the U.S. exchange rates. However, the results may be spurious since there is a possibility that this relation is only evident under the floating exchange

rate system, and such relation would not be present under the fixed exchange rate system. In order to test such argument, I divide the entire sample period into two subsamples - (1961-1973) and (1973-2012). The first subsample includes the period of the fixed exchange rate system under the Bretton Woods agreement<sup>13</sup>, while the second subsample period reflects the more recent floating exchange rate system<sup>14</sup>.

Table (5)  
**Average values of the U.S. Foreign exchange returns under Republicans and Democrats.**

Table (5) reports the mean level and logarithmic returns of the U.S. dollar foreign exchange against Pound, euro, and Japanese yen (*RUKD*), (*REUD*), (*LRJYD*) (*LRUKD*, *LREUD*, *LRJYD*) under Republican (*RP*) and Democratic (*DM*) Presidential terms. The first row below the coefficients represents *t* statistic and the second row represents *p*-values. The *p*-values below the *Diff* column under the null hypothesis that there is no effect of the political variables on the U.S. foreign exchange rate returns.

1961:01-2012:09 (621 observations)			
	<i>RD</i>	<i>DM</i>	<i>Diff</i>
<i>RUKD</i>	0.2371 (1.56) (0.19)	-0.0229 (-0.14) (0.88)	0.2600 (1.23) (0.215)
<i>REUD</i>	-0.0295 (-0.21) (0.8336)	0.1841 (1.174) (0.241)	-0.2136 (1.0155) (0.310)
<i>RJYD</i>	-0.2388 (-1.52) (0.126)	-0.1587 (-0.908) (0.364)	-0.0801 (-0.342) (0.732)
<i>LRUKD</i>	0.1935 (1.397) (0.163)	-0.0545 (-0.35) (0.724)	0.2480 (1.19) (0.233)
<i>LREUD</i>	0.0827 (0.513) (0.607)	-0.1568 (0.9986) (0.318)	0.2395 (-1.137) (0.255)
<i>LRJYD</i>	-0.3255 (1.784) (0.074)	-0.1485 (0.841) (0.401)	-0.1770 (-0.742) (0.458)

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<sup>13</sup> The Bretton Woods agreement was implemented in 1946. Under this agreement, each government should maintain a fixed pegged exchange rate for its currency vis-à-vis the dollar or gold (one ounce of gold was set to equal \$35). The fixed rate system collapsed on August 15, 1971, when the US president Nixon ordered the U.S. authorities to terminate convertibility even for central banks, since he realized that the “run” on the dollar was reaching alarming proportions. At the same time, he devaluated the dollar to deal with U.S. emerging trade deficit. In December 1971, the dollar was devalued to 1/38 of an ounce of gold under the Smithsonian agreement.

<sup>14</sup> The world officially turned to floating exchange rates in 1973.



Table (6) displays the results of estimating the relation between the U.S. foreign exchange rate *levels* and the political dummy variables for the entire sample period and the two subsamples. The difference in the mean value of the U.S. foreign exchange rate of US dollar against British pounds remains significant across the two subsamples. Moreover, the difference in the coefficients between Democratic and Republicans is higher under the fixed system (£0.04485) compared to the floating system (£0.01). In addition, the difference is more significant under the fixed rate system (1% significance) compared to that under the floating rate system (10% significance). However, the significance of the difference in the average value of the U.S. foreign exchange rate against euro drops from 1% to 10% under the fixed system.

**Table (6)**  
**Average values of the U.S. Foreign exchange rates under Republicans and Democrats during the Fixed and Floating systems under Republican and Democratic Presidencies**

Table (6) reports the average value of the U.S dollar foreign exchange rates against Pound (*UKD*), euro (*EUD*), and Japanese yen (*JYD*) and the average price of the dollar for the overall period and the two subsamples periods under Republican (*RP*) and Democratic (*DM*) Presidential terms. The first row below the coefficients represents *t* statistic and the second row represents *p*-values. The *p*-values below the *Diff* column under the null hypothesis that there is no effect of the political variables on the U.S. foreign exchange rate.

	1961:1-2012:09 (621 obs.) Overall Period			1961:01-to1973:12 (144 obs.) Fixed system			1973:01-2012:09(477 obs.) Floating system		
	<i>RP</i>	<i>DM</i>	<i>Diff</i>	<i>RP</i>	<i>DM</i>	<i>Diff</i>	<i>RP</i>	<i>DM</i>	<i>Diff</i>
<i>UDK</i>	0.5600 (89.99) (0.000)	0.5159 (73.88) (0.000)	0.0441 (4.72) P=0.00***	0.4453 (151.810) (0.000)	0.36668 (190.316) (0.000)	0.04485 (13.485) (0.000)***	0.596 (89.31) (0.000)	0.586 (114.5) (0.000)	0.01 (1.650) (0.10)*
<i>EUD</i>	0.8082 (92.99) P=0.00	0.7343 (75.19) P=0.00	0.0739 (5.56) (0.000)***	0.6470 (339.72) 0.000	0.6337 (475.63) (0.000)	0.0133 (1.650) (0.10)*	0.8396 (86.52) (0.000)	0.7894 (62.38) (0.000)	0.050 (2.9) (0.000)***
<i>JYD</i>	196.8629 (36.05) (0.000)	216.911 (35.46) (0.000)	-20.0490 (-2.45) (0.02)**	338.1426 (151.59) (0.000)	361.3638 (227.93) (0.000)	-23.2212 (-8.49) (0.000)***	173.785 (45.66) (0.000)	139.106 (27.89) (0.000)	34.6790 (5.52) (0.000)***

\*\*\*1% Significance Level.

\*\* 5% Significance Level.

\*1% Significance Level.

Table (7) shows the results of estimating the relation between the U.S. foreign exchange rate *returns* and the political dummy variables for the entire sample period and the two

subsamples. The results show that the relation between FX returns and political cycles remains insignificant across the subsamples. This reveals of no statistical impact of the presidential cycle on the foreign exchange return with only one exception which is the returns on the foreign exchange rate between U.S. dollar and the Japanese yen.

**Table (7)**

**Average values of the U.S. Foreign exchange returns during the Fixed and Floating systems under Republican and Democratic Presidencies**

Table (7) reports the mean level and logarithmic returns of the U.S. dollar foreign exchange against pound, euro and Japanese yen (*RUKD*), (*REUD*), (*LRJYD*) (*LRUKD*, *LREUD*, *LRJYD*) for the entire period and for the subsamples periods under Republican (*RP*) and Democratic (*DM*) Presidential terms. The first row below the coefficients represents *t* statistic and the second row represents *p*-values. The *p*-values below the *Diff* column under the null hypothesis that there is no effect of the political variables on the US foreign exchange rate returns.

	1961:2012 (621obs) Overall Period			1961to 1973 (144 obs) Fixed Rate System Period			1973:1985 (477 obs) Floating Rate System Period		
	<i>RP</i>	<i>DM</i>	<i>Diff</i>	<i>RP</i>	<i>DM</i>	<i>Diff</i>	<i>RP</i>	<i>DM</i>	<i>Diff</i>
<i>RUDK</i>	0.2371 (1.695) (0.09)	-0.0229 (-0.14) (0.88)	0.2600 (1.23) (0.215)	0.1780 (1.24) (0.213)	0.0336 (0.166) (0.983)	0.1444 (0.582) (0.56)	0.2700 (1.62) (0.103)	-0.1315 (-0.61) (0.539)	0.4015 (1.48) (1.39)
<i>REUD</i>	-0.0295 (-0.210) (0.833)	0.1841 (1.174) (0.241)	-0.2136 (1.016) (0.310)	-0.075 (-0.928) (0.354)	0.00115 (0.020) (0.983)	-0.0762 (-0.77) (0.442)	-0.022 (-0.13) (0.89)	0.2830 (1.28) (0.2)	-0.3050 (-1.09) (0.27)
<i>RJYD</i>	-0.2388 (-1.52) (0.126)	-0.1587 (-0.908) (0.364)	-0.0801 (-0.342) (0.732)	-0.348 (-3.15) (0.002)	-0.0003 (-0.005) (0.99)	-0.3477 (-2.85) (0.01)***	-0.2210 (-0.08) (0.939)	-0.2440 (-0.99) (0.320)	0.0230 (0.07) (0.939)
<i>LRUKD</i>	0.1935 (1.397) (0.163)	-0.0545 (-0.35) (0.724)	0.2480 (1.19) (0.233)	-0.04452 (-0.2305) (0.818)	0.1670 (1.126) (-0.225)	-0.2115 (-0.8927) (0.3734)	0.2200 (1.334) (0.183)	-0.1569 (-0.738) (0.460)	0.3769 (1.40) (0.161)
<i>LREUD</i>	0.0827 (0.513) (0.607)	-0.1568 (0.999) (0.318)	0.2395 (-1.137) (0.255)	-0.1778 (-1.828) (0.069)	-0.0003 (-0.005) (0.999)	-0.1775 (1.487) (1.39)	-0.0707 (0.412) (0.67)	0.2481 (1.12) (0.260)	-0.3188 (1.14) (0.254)
<i>LRJYD</i>	-0.3255 (1.784) (0.074)	-0.1485 (0.841) (0.401)	-0.1770 (-0.742) (0.458)	-0.3579 (-3.333) (0.000)	-0.0008 (-0.006) (0.995)	-0.3571 (-2.58) (0.01)**	-0.269 (1.399) (0.162)	-0.310 (1.25) (0.211)	0.0410 (0.13) (0.896)

\*\*\*1% Significance Level.

\*\* 5% Significance Level.

\*1% Significance Level.

## 6.2 Basket of Currencies:

The problem with the findings in section five is that the statistical inference was based on three currencies only. That is why there is a question whether the results would be found in other different currencies. Therefore, I reexamine the relation between the presidential variables and

the foreign exchange rates using Real Trade Weighted U.S. dollar Indexes from January 20, 1973 to 20 to September 20, 2012<sup>15</sup> including 10 presidencies (6 Republicans and 4 Democrats), resulting in 477 observations.

Figure (1) displays the average real Trade Weighted U.S. Broad index during each presidential term for the 1973-2012 periods. Republican presidencies are denoted with the darker color. The mean of the Trade weighted U.S. dollar index is represented by the horizontal solid line. Most Republican presidencies have been associated with higher than average trade weighted index, with only 2 out of 6 Republicans (G. H. Bush, 1989-1993, and George W. Bush 2005-2009) the only exception. On the other hand, Democratic presidencies realized lower than average trade weighted index with the exception of Clinton who has known significantly higher than average Trade Weighted U.S. dollar Index.

**Figure1: Average Real Trade Weighted Index (Broad Index) under presidential terms - 1973 to 2012**

The figure 1 displays the average real Trade Weighted U.S. Index (Broad index) during each presidential term for the 1973 to 2012 period. Republican presidencies are denoted with the darker color. The average Trade weighted U.S. dollar index is represented by the solid line. Most Republican presidencies have been associated with higher than average trade weighted index, with Bush (father and son) the only exception. On the other hand, democratic presidencies realized lower than average trade weighted index with the exception of Clinton.

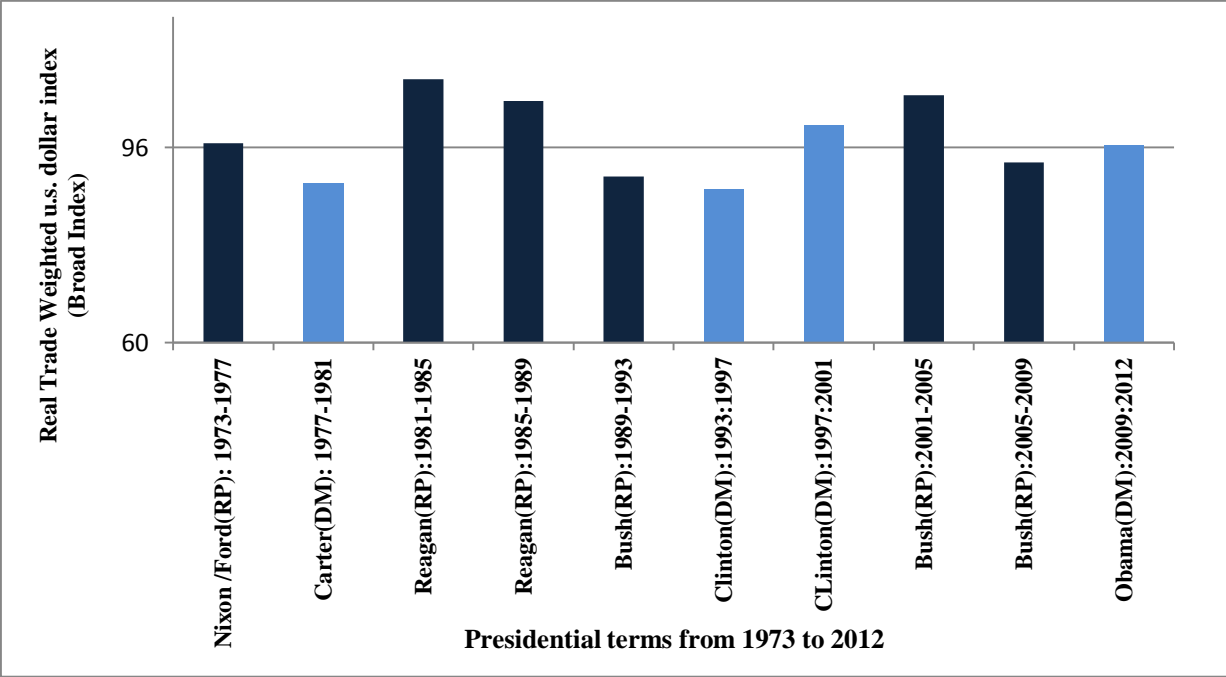


Table (8) shows the average value of the broad index ( $TWEXB_t$ ), which is 99.4433 points under Republican presidents compared to only 91.1430 points under their Democratic counterparts, with a difference of 8.3 points, represents about 9% which is statistically and economically significant at 1% significance level. The average value of the Major Index ( $TWEXMMTH_t$ ) was higher under Republicans by 7.05 points represents about 9%. Finally, for the Other Important Trading Partners Index ( $TWEXOPA_t$ ), the average value of the index was lower under Democratic by 9.77 points. Moreover, it is clear from the results that the impact of the political cycle on the U.S. trade weighted indexes remains significant at 1% level even after taking the logarithm of the real trade weighted indexes.

**Table (8)**

**Average values of the Real Trade Weighted U.S. Index  
under Republicans and Democrats.**

Table (8) reports the average value of the three real Trade Weighted U.S. dollar Indexes: Broad index ( $TWEXB_t$ )-Major currencies ( $TWEXMMTH_t$ ) and other important trading partners ( $TWEXOPA_t$ ) under republican ( $RP$ ) and Democratic ( $DM$ ) Presidential terms. The Logarithmic differences are expressed in percentage points. The first row below the coefficients represents  $t$  statistic and the second row represents  $p$ -values. The  $p$ -values below the  $Diff$  column under the null hypothesis that there is no effect of the political variables on the real trade weighted U.S. indexes.

1973:01-2012:09(477 observations)			
	<i>RD</i>	<i>DM</i>	<i>Diff</i>
<i>TWEXB</i>	99.4430 (202.7614) (0.000)	91.1430 (143.98) (0.000)	8.3000 (10.39) (0.000)***
<i>TWEMMTH</i>	96.2714 (160.536) (0.000)	89.2206 (115.308) (0.000)	7.0508 (7.202) (0.000)***
<i>TWEXOPA</i>	109.4922 (178.462) (0.000)	99.715 (125.9632) (0.000)	9.7772 (9.761) (0.000)***
<i>LTWEXB</i>	4.5950 (942.308) (0.000)	4.5100 (716.74) (0.000)	0.085 (10.724) (0.000)***
<i>LTWEXMMTH</i>	4.5591 (741.8779) (0.000)	4.4870 (565.876) (0.000)	0.0721 (7.193) (0.000)***
<i>LTWEXOPA</i>	4.6899 (802.904) (0.000)	4.5987 (610.1681) (0.000)	0.0912 (9.569) (0.000)***

\*\*\*1% Significance Level.  
\*\* 5% Significance Level.  
\*1% Significance Level.

Table (9) shows the results of the average returns on the three real Trade Weighted Indices under the two political cycles. It find no evidence to support that there is no relation between the presidential terms and the returns on the foreign exchange rate even after including many currencies to test this relation. All the p-values are insignificant, which means that my findings that show that there is no impact of the political cycle on the foreign exchange rate returns are robust.

**Table (9)**

**Average returns of the Real Trade Weighted U.S. Index under Republicans and Democrats**

Table (3) reports the average returns on the three real Trade Weighted U.S. dollar: Broad index ( $RTWEXB_t$ )- Major currencies index ( $RTWEXMMTH_t$ ) and other important trading partners index ( $RTWEXOPA_t$ ) under Republican ( $RP$ ) and Democratic ( $DM$ ) Presidential terms. The level and logarithmic differences are expressed in percentage points. The first row below the coefficients represents  $t$  statistic and the second row represents  $p$ -values. The  $p$ -values below the  $Diff$  column under the null hypothesis that there is no effect of the political variables on the return on the real trade weighted U.S. indexes

1973:01-2012:09			
	<i>RD</i>	<i>DM</i>	<i>Diff</i>
<i>RTWEB</i>	-0.1024 (-1.36) (0.165)	0.0676 (0.7013) (0.4834)	-0.1700 (-1.39) (0.1654)
<i>RTWEMMTH</i>	-0.0358 t=-1.62 P=0.105	0.023 t=0.8113 P=0.417	-0.0588 (-1.633) (0.1029)
<i>RTWEXOPA</i>	-0.0082 t=-0.56 P=0.5736	-0.0026 t=-0.138 P=0.89	-0.0056 (-0.2355) (0.8138)
<i>LRTWEB</i>	-0.0610 t=-0.634 P=0.526	-0.1113 t=-1.488 P=0.137	0.1723 (1.413) (0.158)
<i>LRTWEMMTH</i>	-0.1665 (-1.442) P=(0.17)	0.1031 (0.798) (0.425)	-0.2696 (-1.448) (0.12)
<i>LRTWOPA</i>	-0.0387 (-0.574) (0.566)	-0.01165 (-0.134) (0.893)	-0.02707 (-0.027) (0.805)

## 7. Conclusion

This paper examines the relation between the U.S. foreign exchange rate and the presidential cycles. The major conclusion from this study can be summarized in the following points:

- 1- The U.S foreign exchange rate of US dollar against the British pound is on average 10% higher under Republican compared to Democratic administration. The average dollar price in terms of euro is €0.08082 under Republican and €0.7343 under Democrats with a difference equal 8%, which is statistically and economically significant. However, the difference in the average foreign exchange rate between U.S. dollar and Japanese yen is higher under Democratic for the entire sample period and under the fixed rate system period.
- 2- The most surprising result is that even under the fixed system, the difference in the average value of dollar between Republican and Democratic presidencies remain significant. The Republicans presidential periods have been associated with higher average value of dollar against Pound, euro, and Japanese yen under the floating system by £0.01, €0.05, and ¥36.679 respectively.
- 3- Generally, there is no evidence of significant impact of the political cycle on the returns of the U.S. foreign exchange rate for both the entire sample and the subsamples periods.
- 4- All the real Trade weighted U.S. indices (which are inflation-adjusted) are higher under Republicans. This means that the difference in the average dollar value remains higher under Republicans even after controlling the effect of the inflation,
- 5- The returns on the trade weighted indices do not correlate with the political cycles. This result verifies the main findings that state that the presidential partisan cycles do not have any impact on the FX returns. This issue can be explained by the hypothesis of the Interest rate parity. The relation between the return on the foreign exchange rate under Republican and Democrats and the interest rate parity is left for future research.

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