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TALKING TO FOREIGN EXCHANGE MARKET; DOES IT MATTER FOR CENTRAL BANK?

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Abstract:
This study reviews the market intervention technique used by central banks for the management of exchange rate. In literature, enough evidence is available describing that many Central Banks used intervention as a tool to control the volatility of foreign exchange; however, recently the Central Banks in larger industrialized nations shifted from physical intervention policy to the oral intervention policy. The evidence suggests that the oral intervention remained more successful in controlling the volatility compared to physical intervention.

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Keywords: foreign exchange market, intervention, oral intervention, central bank

1. Introduction

The objective and intended contribution of the paper is to survey the studies focusing the effectiveness of oral interventions for exchange rates. We summarize the results of

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the previous studies conducted for different markets, and attempt to establish the effectiveness of oral intervention for exchange rate management.

Central bank intervention has been one of the critically examined topics of the exchange rate economics in recent years. A number of researchers have attempted to understand the impact of central bank intervention operations in the foreign exchange markets on currency values, on exchange rate volatility and on market conditions. One interesting and novel aspect of this intervention debate is to explore the link between communication/oral intervention and its effectiveness as a policy tool. The area became especially important after the exchange rate policies of major central banks like, Federal Reserve Bank and European Central Bank had undergone a fundamental change since the mid-1990. Previously these banks had used physical intervention as a major policy stance. However, now these authorities rely more on communication or verbal intervention to influence exchange rate. Similarly, this phenomenon also led to another fundamental change in both monetary and exchange rate policy management by these authorities, i.e. contrary to favoring the secrecy of intervention now there is a growing focus on transparency of communication and objectives.

2. Available Researches

With global access to market information, the communication tool has received importance in international financial industry. Historically, central banks relied heavily on actual (physical) intervention to show their intent and control markets, nowadays they communicate to the market more often to influence exchange rate. There is ample evidence from the literature [for example see, Kearney and MacDonald (1986) for the UK, (Humpage, 1999) and Sweeney (2000) for the US, Rhee (1999) for Korea, Ramaswamy and Samiei (2000) and Beine and Bernal (2007) for Japan, Domaç and Mendoza (2004) for Mexico and Turkey, Behera, Narasimhan, and Murty (2008) for India] that central banks have gradually shifted their strategy from actual intervention to communication in the second half of 1990s. Leading central banks like the Federal Reserve and European Central Bank have almost abandon physical intervention in favor of market communication since 1995[ii].

Literature suggest that there is a significant impact of central banks communications on exchange rates (Jansen & De Haan, 2005); Fratzscher (2008).Central banks communications are more effective in moving financial markets by enhanced predictability of monetary policy decisions (Blinder, 2009). Therefore, central banks during the last two decade have witnessed a change from "a very secretive, inbound policy regime" to "*a more transparent, market oriented and result based policy regime*".

[ii] Although there have been few instances even after 1995 when these authorities conducted physical intervention in markets, but generally speaking those instance, were very rare and few in numbers as compared to the what was the frequency before 1995. For instance FED intervene 10 times and ECB/Bundesbank only 8 times from 1995 to 2003. Whereas, these two central banks, only over the period 1990-1994, have intervened 74 and 79 times respectively. For details see, Fratzscher (2005).

Communication is as a powerful tool for monetary authorities, which influence financial markets and provide the participants with relevant private information (Berneanke, 2004). About the effectiveness of communication strategy it is argued that oral intervention had a short-term influence on bilateral exchange rate of major currencies (Fratzscher, 2008). Further, the success of communication channel is found orthogonal to the actual market intervention and the monetary policy stance. The communication channel is found more effective during high volatility periods and in pursuit of "*leaning against the wind*" strategy, and importantly it is found that these methods reduce volatility whereas actual intervention mostly increases it. It is safe to conclude that communication is an effective tool to implement monetary policy through exchange rate channel irrespective of monetary policy stance (Fratzscher (2005). Similarly, the study concluded that oral intervention affects exchange rates even independent of the occurrence of physical interventions. Therefore, the author suggested that the mechanism through which communication policies by world prominent authorities had affected exchange rates could not be termed as the signaling channel. This channel not only affect contemporaneous exchange rate but also influence forward exchange rates up to 6-months period in the desired direction.

The studies like Jansen and De Haan (2007) highlighted the role of communication channel as a policy tool. The study focused on the early period of Euro area Central Bankers (ECB). The main focus was on the linkage between oral intervention and the level and volatility of the euro–dollar exchange rates. The study concluded that, in general, the effects of verbal interventions were small and short-lived. Furthermore, the oral intervention events captured in the news report headlines were considered more effective. The intervention events overlapping with the release of some macroeconomic data were not equally effective in altering the exchange rate direction.

According to Beine, Janssen, & Lecourt, 2009, communications made by the officials as an alternative of actual interventions have a significant signaling effect on exchange rate level as well as exchange rate volatility in the developed financial markets. In a subsequent Bernal and Gnabo (2009) studied Japanese data for the period 1991 to 2004 using an ordered-probit model to evaluate the reaction functions of the central bank's foreign exchange interventions. They generalize the model to include oral interventions along with actual physical intervention. Their model estimated the occurrence of each type of interventions and evaluated the extent to which oral and actual interventions were substitutes or complements. The results obtained suggested that monetary authorities conducted oral intervention in coordination with actual intervention only in the cases of extreme desperation. The authors also used the event study approach to investigate the effectiveness of interventions. Overall, intervention operations were found to be moderately successful in correcting unwanted exchange-rate volatility.

Beine et al. (2009), analyzed the effectiveness of official statements made contemporary[iii] to the actual foreign exchange intervention events. The study used newswire service releases, to collect and classify the daily statements made by officials of the Bundesbank/ECB, BoJ and the Federal Reserve Bank. The sample periods selected were from 1989 to 2003 for the EUR/USD and 1991 to 2003 for YEN/USD exchange rates. The study tested whether the impact of reported central bank interventions (that were followed by a statement) differs from the impact of those with no subsequent statement by monetary authority. The results indicated that the intervention events accompanied by statements, had more impact on the exchange rate level. Moreover, issuing official statements, which accompany the central bank actual interventions, appear to reduce the traditional increase in exchange rate volatility.

Unrequited interventions (expected intervention operations but not materialized) were also discussed in the literature by studies like Dominguez and Panthaki (2007). They observed the effects of various types of intervention news on intra-day exchange rate movements. The study concluded with the comments that the unrequited interventions have a statistically significant influence on returns, volatility and order flow, suggesting that the expectation of intervention, even when authorities do not intervene, can affect currency values. The effects of exchange rate interventions using daily and intraday data were also examined for the Chilean foreign exchange market Tapia, et al (2004a). There were evidences of generally non-significant and small impact of individual actual intervention events but public announcements appeared to have a positive impact on the exchange rate level and trend.

The impact of Central Bank communication on exchange rate volatility was also examined by Goyal and Arora (2012). This study also involved other conventional monetary policy measures, including interest rates, intervention and other quantitative measures. The study used daily and monthly data sets. With regard to official communication, the authors concluded that the central bank communication had large potential impacts but the monetary authority did not effectively use it.

The question arises, why major developed countries have stopped conducting actual intervention and started using an oral intervention strategy. In the light of available literature, Fratzscher[iv] has attempted to answer this question. According to him, the uncertainty of the effectiveness and the time consistency problem of actual interventions are the probable causes of this regime shift. The study stated that, a number of researches in the past found very little evidence of effectiveness of actual intervention. Even the studies like, Baillie and Osterberg (1997) stated that actual market interventions were counterproductive and gave rise to uncertainty and volatility. Moreover, actual interventions prove to be more successful if these are

[iii] Their study focused on the key element of transparency viz. statements of officials given at the same day of intervention and aimed at infirming, confirming or commenting the operation.

[iv] For details see Marcel Fratzscher, 'Exchange rate policy strategies and foreign exchange interventions in the group of three economies' Page 262.

coordinated and publically announced. However, the time consistency problem states that announced actual interventions may cause speculative attacks in the market, which in turn can make the intervention counterproductive.

Some of the other studies which focused economic news impact on exchange rate movements, includes Evans and Lyons (2005), who reviewed whether macro news arrivals affect currency markets over time and concluded that these effects remain significant for days. Similarly, Andersen et al (2002), focused on macroeconomic news and found that announcement surprises (news) produce conditional mean jumps and the market reacts to news in an asymmetric fashion, whereas, bad news has greater impact than good news.

Among some other empirical work on the effectiveness of the communication strategy of central banks, there are studies of Guthrie and Wright (2000) for New Zealand and (Kohn and Sack (2003)) for the United States. Although these two studies have conducted the analysis of communications about interest rate, in essence, they conclude that communication can indeed be a rather effective monetary policy instrument in these economies.

Although there is sufficient and growing research evidence available on oral intervention policy of advanced economies but this communication and its effectiveness in emerging markets is relatively neglected area. We may wonder whether central banks in emerging markets are mature enough to follow the advance economies in using communication as an exchange rate policy instrument. Furthermore their communication is proving effective in achieving the objectives; still some studies like Karacadag and Guimarães (2004); and Tapia, Tokman, Landerretche, and Rigobón (2004b), on Turkey and chili respectively indicate that communication plays a role. This should be a motivation to carefully analyses this tool and assess possible policy implications.

Table 1: Key studies on oral Intervention in Foreign Exchange Market

Study	Objectives	Findings
Announcements, financial operations or both? (Bernal & Gnabo, 2009)	To generalized the reaction functions of central bank's foreign exchange interventions to include oral interventions along with actual intervention.	The oral intervention was conducted in coordination with actual intervention only in the cases of extreme desperation. Interventions operations were moderately successful in correcting unwanted exchange-rate volatility.
Do Market Participants Listen to Verbal Intervention? (Girardin, Lyons, & Sager, 2008)	The study assessed the benefits of verbal intervention with reference to the yen-dollar exchange rate during the period January 2003 to April 2004. The authors have used daily data for the market.	The study concluded that the information content of verbal intervention is sensitive to the frequency with which this policy strategy is used. Moreover, in the period of market disequilibrium excessive use of policy may not influence market participants.

Oral Interventions versus Actual Interventions in FX Markets (Fratzscher, 2008)	Investigation of the effectiveness of oral intervention for exchange rate and its relationship to and interaction with the actual FX interventions	Strong evidence for the medium- to long-term effectiveness of both oral interventions and actual interventions with high persistence over time. Exchange rate communication is effective in influencing exchange rates mostly independent of monetary policy
Were verbal efforts to support the euro effective? (Jansen & Haan, 2007)	Study of the effects of verbal interventions by euro area central bankers during the first years of the European Economic & Monetary Union and tests to what extent these verbal interventions had an effect on the level and volatility of the euro–dollar exchange rate.	The effects of verbal interventions were small and short-lived. Verbal interventions that coincide with releases of macroeconomic data had mixed effects: they were less effective in changing the direction of the exchange rate, but do temporarily lead to lower exchange rate volatility.
On the Long Term Effectiveness of Exchange Rate Communication and Interventions. (Fratzscher, 2006)	To examine that the effects of oral and actual interventions. Empirical analysis and assessment of the long-run effectiveness of communication and actual interventions for G3 economies.	The communication of all three monetary authorities has a significant but short-lived impact on exchange rates. The communication affects forward rates over a longer horizon than actual interventions.
Look Who's Talking ECB Communication during the First Years of EMU. (Jansen & De Haan, 2006)	Empirical analysis of communication by the European central bankers during the first year of the European Economic and Monetary Union.	A contradiction of comments by central bankers on interest rates, inflation and economic growth in the euro zone. Interest rate statements were more in line with each other. National central banks continue to dominate communication on monetary policy.
Strategies of Exchange Rate Policy in G3 Economies. (Fratzscher, 2005)	Document & analyze the regime change in foreign exchange intervention policy of G3 countries. To characterize the intervention strategies of the policy-makers.	Both types of interventions were supportive to the monetary policy with greater frequency in high volatility periods and follow leaning against the-wind pattern.
Communication and Exchange Rate Policy. (Fratzscher, 2004)	Analysis of the short-term influence of oral intervention on exchange rate along with systematic comparison of oral and actual intervention policies.	Oral interventions may constitute a largely autonomous policy tool. It influences financial markets not only by signalling future monetary policy decisions or actual interventions, but also by conveying relevant private information. It tends to reduce exchange rate volatility, whereas actual interventions mostly increase volatility.

Table 2: Oral Intervention Events taken from key studies

Study	Currency Pair	Origin of Communication	Period	Oral Intervention Events
Fratzscher M. (2004)	DEM/USD	US	1990-2003	155
	DEM/USD	German	1990-2003	114
	YEN/USD	Japan	1990-2003	137
Beine et al. (2009)	DEM/USD	US & German	1989-2003	75
	YEN/USD	US & BOJ	1991–2003	81[a]
Égert and Kočenda (2014)	CZK/EUR	Czech Republic	2004-2009	65 [b]
	HUF/EUR	Hungary	2004-2009	112
	PLN/EUR	Poland	2004-2009	55
Jansen and Haan (2007)	EUR/USD	Euro Region	1999-2002	146[c]
Bauwens, Omrane, and Giot (2005)	EUR/USD	Mainly Euro and US Region	May to Nov. 2001	1040[d]
Jansen and Haan (2006)	EUR/USD	Euro Region	1999-2002	511[e]
(Bajwa I.A. (2013))	USD/PKR	Pakistan	1999-2008	456[f]

[a] Cover all statements concerned with intervention including denial statements by both central banks

[b] Consists of all types of currency strengthening, weakening and stability statement by these monetary authorities

[c] Statements both from ECB and national central banks

[d] This includes nine categories of scheduled and unscheduled news announcements on the euro/ dollar return volatility

e It covers all statements and news related to Value of euro, Intervention and Euro as target. It excludes all other types of macroeconomic announcements.

[f] includes all types of statements which may affect PKR

Table 3: Examples of Oral Intervention (communication) statements taken from key sources

Communication	Type of Communication	Country /Currency
The Vice-Governor of Czech central bank Mr. Mojmir Hampl stated; "*We are happy that the high volatility on the Czech crown has stabilised a bit*".	Stabilizing/intend to strengthen the currency	CZK/EUR
The Deputy Governor of Hungary's Central bank Mr. Ferenc Karvalits told the Reuters; "*We are ready to defend the currency if its weakness puts the central bank's inflation goal or financial stability goals at risk,*"	Currency Strengthening statement	HUF/EUR
Polish Finance Minister Mr. Wasilewska-Trenkner stated; "*We should still conduct anti-inflationary policy. But we have to move in a way that won't speed up the weakening of the zloty,"*	Currency Strengthening statement	PLN/EUR
The president of Deutsche Bundesbank Mr. Welteke says; "*In the mid-term I see the euro strengthening against the dollar*".	Currency Strengthening statement	EUR/USD
ECB Vice President Noyer commented: "*I am very confident over time the euro will show its strength …"*	Currency Strengthening statement	EUR/USD
Sources from BoJ: "*If excessive yen rises hurt the economy, the BOJ won't hesitate to ease"*	Currency weakening statement	USD/YEN
The governor of state bank Dr. Shamshad Akhter told; "*Any intervention in exchange market is aimed to moderating the rate of exchange and preventing abrupt fluctuations in exchange rate rather than establishing a level for it."*	Stabilizing the currency	USD/PKR
The governor of state bank of Pakistan Dr. Ishrat Hussain stated; "*The value of Rupee in future is expected to improve owing to arrival of dollars through the launch of Islamic bonds, world bank and ADB funds inflows and no large external payment"*	Currency Strengthening statement	USD/PKR

Sources: Bloomberg, Factivia and Reuters

3. Concluding Remarks

Central bank role in managing the foreign exchange market can hardly be overemphasized. This paper surveys the literature on the effectiveness of central bank's oral intervention in foreign exchange market. In literature enough evidence is available describing that most of the countries used intervention as a tool to control the volatility of foreign exchange; however, recently the larger industrialized nations shifted from physical intervention policy to the oral intervention policy. There is a general consensus in literature on effectiveness of oral intervention on exchange rate. Even in the cases where oral intervention is not supported by actual interventions it showed significant results. All These evidences have important policy implications implying that oral interventions may be a useful and effective policy tool not only for advance economies but for those emerging markets which still follows the physical intervention policy.

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