

# **VIETNAM'S EXCHANGE RATE POLICY AND IMPLICATIONS FOR ITS FOREIGN EXCHANGE MARKET, 1986-2009**

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## **ABSTRACT**

Vietnam's foreign exchange (forex) market has remained relatively poorly developed despite more than two decades of general reform throughout the economy. This paper adopts a microstructure approach to the analysis of the root-causes underlying the operational deficiencies of this market. The analysis suggests that the authorities have tended to follow a *de facto* adjustable peg exchange rate regime which, in turn, has acted as a retardant to the development of the country's forex market. Consequently, market signals have become increasingly non-transparent. There are indications that market forces have often moved beyond the framework of current regulations.

**Key words:** Foreign exchange market; market microstructure; Vietnam; VND/USD exchange rate.

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# 1 Introduction

In line with a general economic reform process dating back to at least the late 1980s, the Vietnamese authorities have endeavored to allow and encourage financial markets to develop. The formation of an organized foreign exchange (forex) market in the early 1990s was an example of such efforts. Yet, as is the case in a number of other developing economies, the forex market in Vietnam has remained relatively poorly developed, with low trading volumes, limited use of derivative products, and poor liquidity. What are the main reasons behind such weaknesses?

This paper will adopt a market microstructure approach to this question. Specifically, the paper will examine how the conduct of Vietnam's exchange rate policy has shaped the ways in which its forex market is organized and administered, and draw implications for the market's level of operational efficiency. In so doing, the paper seeks to make contributions in two main respects.

First, it will help to address the relative dearth of systematic analyses of the forex market in Vietnam. The existing literature in English on this particular topic is rather thin. While the literature in Vietnamese is more voluminous, apart from several reflective contributions, to date much of the relevant information has come piecemeal from disparate sources, such as short articles in trade journals, and undergraduate student dissertations or research papers (for examples of these, see Nguyen Tran Phuc 2009b). Reconciling and synthesizing such piecemeal and potentially conflicting information is a non-trivial task. Further, the paper will offer some new information obtained through a recent survey of market participants (the survey was conducted by the authors in February-May 2010). It is expected that a systematic analysis of the structural and operational characteristics of this forex market, with an emphasis on more recent years, will be of documentary interest to scholars and analysts whose research focus includes *Vietnamese affairs and socio-economic development*.

Second, through the application of the market microstructure approach, the paper seeks a better understanding of the root-causes of the poor functioning of this particular forex market. Accordingly, the paper may also be of interest to researchers and policy analysts who are concerned with the *workings of forex markets in general*.

The remainder of the paper is structured as follows. Section 2 provides some background information, including a brief overview of the evolution of the country's exchange rate policy and forex market, as well as the sources of the data being used.

Section 3 discusses the apparent preferences of Vietnamese authorities in conducting exchange rate policy and the mechanisms which have been developed to support these preferences. Section 4 draws the main implications of the conduct of exchange rate policy for the development and current state of the forex market. Finally, Section 5 provides a summary of the main points raised in the paper.

## **2 Background**

The economic reform process in Vietnam, often known as *Doi Moi* (renovation), has been extensively studied by many authors. For a very small sample of the literature of direct relevance to the present purposes, see Fforde and de Vylder (1996), Nguyen Duc-Tho and Bandara (1994), Nguyen Tri Hung (1999), Vo Tri Thanh et al. (2000), Pham Do Chi and Le Viet Duc (2003), Vo Dai Luoc (2004), and Pham Xuan Nam (2007). In brief, the pressures for change and reform which had been building up for a number of years came to a head in 1986. In response, the authorities initiated broad-based policy changes in order to shift the economy from a bureaucratic, central planning model to a more market-oriented, decentralized system. Nevertheless, in many ways it was not until around 1989 that the measures undertaken can really be regarded as comprehensive and decisive (Vo Dai Luoc 2004).

In line with the broader economic reform process, Vietnam's exchange rate regime has evolved from a system of multiple exchange rates to a single announced fixed rate, then to the current system of a narrow adjustable band around the official rate, which is itself set on a daily basis and is meant to reflect the interaction of market forces (Nguyen Tran Phuc and Nguyen Duc Tho 2009). The country's exchange rate policy is implemented and administered by its central bank, the State Bank of Vietnam (SBV). The focus of policy in this area has been the nominal, bilateral VND/USD exchange rate. At the time of writing, banks were allowed to quote offer and bid rates which were no lower than 3% below, nor higher than 3% above, the official VND/USD rate. Interestingly, they have been allowed far greater freedom in quoting other bilateral exchange rates, such as the VND/EUR rate.

In response to changes in the exchange rate regime, the forex market has also developed into an organized, modern-style market. Two forex trading floors were first established in 1991, one in Ho Chi Minh City (HCMC, the most important financial centre in the country) and the other in Hanoi (the capital). At the time, participants included not only banks but also businesses (such as export-import companies)

wishing to trade in foreign currency. The floors operated on a face-to-face basis, and participants met several days a week. By 1994, market requirements had evolved to the point where it became viable to set up an interbank forex market which involved only banks, utilized electronic trading systems, and operated on a five day per week basis.

Official data regarding the size and operations of the forex market in Vietnam come mainly from the International Monetary Fund (IMF) and the SBV, and are relatively limited. For present purposes, such data need to be supplemented by information gleaned from a variety of sources, including books, research reports, university dissertations, and short articles in trade journals or general-interest periodicals. The latter sources often deal with highly specific issues or features of the market but, in conjunction with other sources, may provide useful bits of information or illuminating anecdotes.

To further supplement the available information, the authors conducted a survey of forex dealers working for commercial banks. The targeted population consists of 61 commercial banks, but some of the smaller banks were established relatively recently and tended to be not very active in the forex market. Copies of the questionnaire instrument were distributed, through a network of associates, to 45 bank forex dealers in HCMC and Hanoi. The questionnaire contains 28 questions (the instrument is available from the authors upon request).

Responses from 39 dealers, each working for a different bank, were received. Of these, 32 responses were suitable for the analysis (the 7 unused responses came from banks with little or no forex business, or were incomplete). Follow-up interviews were conducted with 29 respondents to clarify and confirm the collected information. As a majority of the non-participating banks were relatively small and less active in the forex market, it is estimated that banks covered in the survey sample accounted for about 70% of total turnover in the forex market.

### **3 Vietnam's exchange rate regime: apparent official preferences and supporting mechanisms**

#### **3.1 Apparent preference for stability in VND/USD exchange rate**

In the literature, the preference by some monetary authorities for a fixed exchange rate (ER) regime is often provided a theoretical underpinning in terms of a stabilizing

“nominal anchor”, especially in the context of high inflation, rapid growth in monetary and credit aggregates, and large government budget deficits. Under such conditions, an ER peg relative to a major foreign currency could serve as a suitable anchor, especially in countries where the domestic government lacks a track record in policy making that would establish its credibility with market participants.

It is not surprising that Vietnam has considered the USD a key nominal anchor. Some of its most important trading partners, such as China, Hong Kong, Singapore, Thailand and Malaysia, have generally preferred a stable ER relative to the USD. Vietnam’s own experience in reducing inflation during the first half of the 1990s also served to underscore the benefits that an effective peg to the USD could bring. There may also be a variety of non-economic (e.g, political or strategic) reasons for the authorities to prefer a stable VND/USD exchange rate.

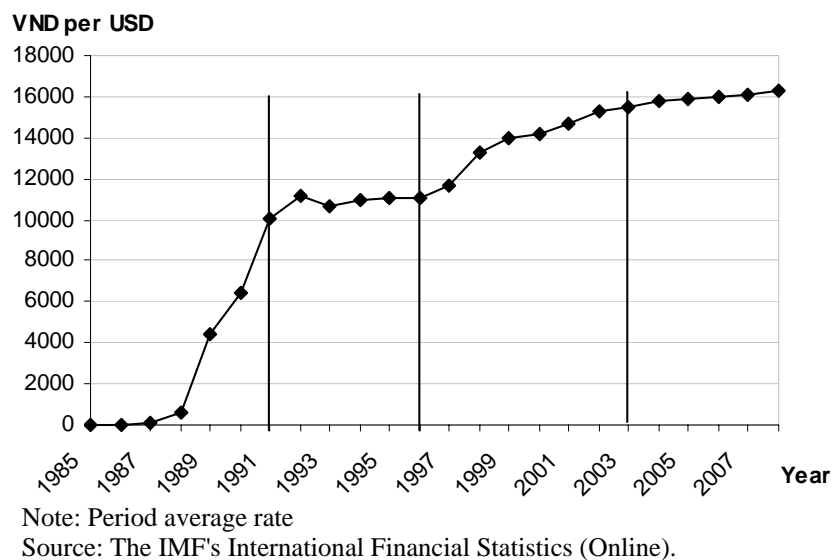
Indeed, notwithstanding the many changes in the ER setting arrangement, it appears that special emphasis has been placed on maintaining stability in this bilateral rate. This apparent preference can be confirmed through three ways: (i) analysis of trends in exchange rates; (2) examination of public statements by senior officials; and (3) estimation of the volatility of exchange rates.

### ***Trends in exchange rates***

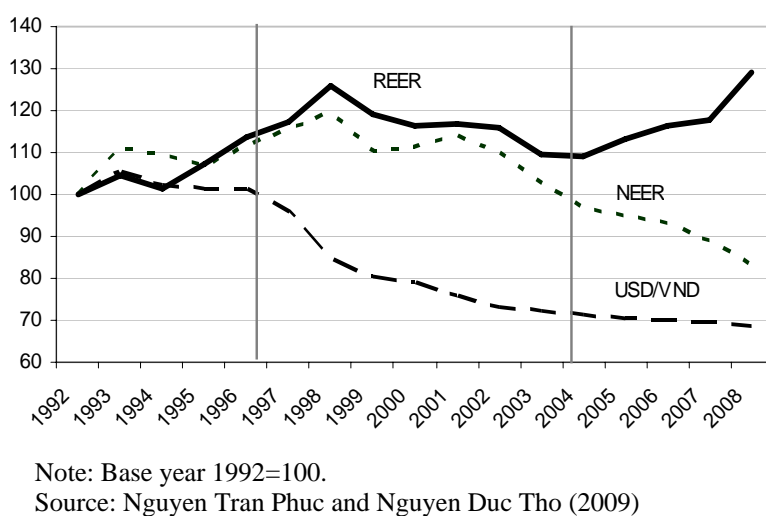
Figure 1 illustrates annual movements of the nominal VND/USD rate (of which a rise corresponds to a weakening of the VND) from 1985 to 2008. In Figure 2, this bilateral ER is re-expressed as an index, of which a rise corresponds to a strengthening of the VND. Also shown in the latter figure are annual values of the nominal and real effective exchange rates (NEER and REER) for Vietnam, of which a rise again corresponds to a strengthening of the VND.<sup>1</sup> As data for NEER and REER are available only for 1992 onwards, Figure 2 shows a slightly shorter period compared with Figure 1.

As can be seen from Figure 2, during the years 1992-1996, and again during 2004-2007, the USD/VND rate was very stable while the NEER and REER experienced substantial changes. By contrast, during the initial *Doi Moi* years (1985-1991, shown in Figure 1) as well as the Asian Financial Crisis and its aftermath (1997-2003) the VND/USD rate indicated major weakenings of the VND against the USD.

**Figure 1**  
Nominal VND/USD rate, 1985-2008



**Figure 2**  
USD/VND Index, NEER and REER, 1992-2008



A closer examination of the four sub-periods illustrated in Figure 1 indicates that, in an *ex post* sense, the authorities apparently preferred a stable nominal USD/VND exchange rate whenever that was feasible during the past two decades. There were two sub-periods (1992-1996, 2004-2007) when the VND was effectively pegged to the US dollar, so that the path of NEER was dictated by the strength of the US dollar relative to the currencies of other trading partners. Similarly, REER was determined residually, given the values of NEER and the inflation rate differential

between Vietnam and its trading partners. As it happened, in both of the above sub-periods, REER tended to increase, indicating a loss of competitiveness.

The other two periods (1985-1991, 1997-2003) were periods when, arguably, the authorities had little choice but to allow large movements in the nominal bilateral VND/USD rate. The former period covered the launch of the *Doi Moi* process while the latter involved the Asian Financial Crisis and the implementation of trade liberalization measures. It would appear that whenever such contingencies had passed, the authorities would return to a relatively stable VND/USD rate.

### ***Public statements***

Examination of public statements by senior officials tends to confirm this observation. For example, during the period 2004-2005, the Governor of the SBV was quoted as announcing that the VND would not be allowed to depreciate by more than 1 percent per annum (Camen, 2006). More recently, an official of the SBV also made it clear that volatility in the VND/USD rate was expected to be kept to no more than 2 percent per annum (Minh Duc 2008).

### ***Exchange rate volatility***

A preference for a stable nominal VND/USD rate can also be inferred from measurements of how variable or volatile this ER has been. A simple measure of *variability* in a data series is its coefficient of variation (CV), defined as ratio of the standard deviation to the mean. To highlight the volatility, or *unpredictability*, aspect of the data, an alternative measure may also be used, namely the root mean square percentage error (RMPSE):

$$RMSPE = 100 \times \sqrt{\frac{1}{T} \sum_{t=1}^T \left( \frac{E_t - \hat{E}_t}{E_t} \right)^2}$$

where  $E_t$  represents the actual exchange rate in period  $t$ , and  $\hat{E}_t$  the predicted exchange rate based on some suitable forecasting mechanism. A simple yet useful forecasting mechanism is the random walk model, where the actual  $E_{t-1}$  value observed in period  $t-1$  is used as the forecast value  $\hat{E}_t$  for period  $t$  (Dwyer, Nguyen, & Rajapakse, 1996).

Table 1 presents the RMPSE of the nominal VND/USD rate and nominal effective exchange rate (NEER) for Vietnam, as well as comparable exchange rates for a number of other countries; the data relate to the end of the relevant months (the CV results are quite similar). It can be seen that, except for the years of the Asian

Financial Crisis (Jan. 1997 – Dec. 1998), the VND/USD rate was kept very stable compared with other bilateral exchange rates. While the RMSPE of the VND/USD rate was in the range of 0.2-0.7 percent for most of the sub-periods considered, the JPY/USD and USD/GBP rates recorded RMSPE of around 2 percent or higher, and the THB/USD around 1 percent or higher. It is interesting, however, to note that the RMSPE for the CNY/USD has been comparable to (and at times even lower than) that for the VND/USD. Thus, the volatility of the VND relative to the USD has been much lower than that of the currencies of the UK, Japan, or Thailand, but has not been very far out of line with that of China's currency.

**Table 1**  
**Average volatility (RMSPE) in month-end data (%)**

	Jan 92- Dec 94	Jan 95- Dec 96	Jan 97- Dec 98	Jan 99- Dec 01	Jan 02- Dec 03	Jan 04- Dec 07
VND/USD	0.7	0.2	2.0	0.4	0.2	0.2
CNY/USD	5.7	0.3	0.0	0.0	0.0	0.5
THB/USD	0.4	0.5	9.1	2.5	1.3	1.5
JPY/USD	2.6	3.7	5.0	2.9	2.2	2.3
USD/GBP	3.8	1.8	1.9	1.9	2.5	2.1
NEER for VN	n.a	1.3	3.3	1.2	1.3	0.9
NEER for the US	1.4	1.2	1.4	0.9	1.3	1.1
NEER for China	5.4	1.1	1.7	0.9	1.2	1.1

Source: The IMF's International Financial Statistics (Online); Authors' calculation.

The fact that the bilateral VND/USD rate has been relatively stable does not necessarily imply that the VND itself has been stable. On the contrary, the RMSPE figures reported in Table 1 indicate that Vietnam's NEER has been about as volatile as the NEER of the US or of China. This result is consistent with the fact that, at least for some of the time, both China and Vietnam have used the USD as a nominal anchor: as the overall value of the latter moved up and down, so would the value of China's and Vietnam's currencies.

### **3.2 Mechanisms to support stability in the VND/USD rate**

The current exchange rate regime incorporates an announced official ER and a band of allowable exchange rate quotations. These two devices have been used to slow down, if not eliminate, short-term changes in the ER, even when there was strong market pressure for either a depreciation or appreciation of the domestic currency. When the resultant commercial exchange rates failed to clear the market, as they very frequently did, the authorities tended to rely on official intervention to meet *part* of



the imbalance between demand and supply, supplemented by moral suasion and administrative measures.

### ***Official exchange rate***

Since 1999 the SBV has determined the average VND/USD exchange rate on the interbank market on each banking day and announced it as the official exchange rate on the following banking day. However, this determination process has not been transparent and still appears to reflect, to a noticeable extent, the will of the SBV. In general, it is reasonable to expect that the bid-ask spreads in the interbank market would be smaller than in the bank-client market. Thus, the average interbank rate should be somewhere between the bid rate and the ask rate quoted in the bank-client market. Yet in practice, the official exchange rate has frequently been set *below* the bid rate quoted in the client market on the previous day.

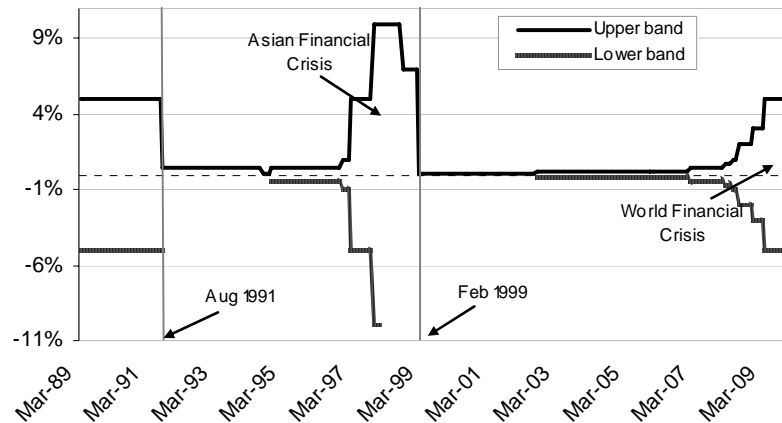
Additionally, the *announced* average interbank rate has often appeared rather sticky or even rigid, despite evidence of rapid developments in the actual market. For example, when there was upward pressure on the exchange rate (i.e., the VND was depreciating) and commercial banks consistently quoted their trading rates at the upper bound of the allowed band, in principle the average interbank rate should have increased daily by an amount equal to one-half of the width of the band. Historical data show, however, that it tended to increase slowly and sometimes did not increase at all.

### ***Allowable trading band***

The trading band, within which commercial quotations are allowed to fluctuate, has been quite narrow except for the periods around the 1997-1998 Asian Financial Crisis and the 2007-2008 Global Financial Crisis (see Figure 3). It would appear that increases in the width of the allowable trading band have been used mainly to respond to episodes of strong pressure for the VND to depreciate. In particular, the repeated broadenings of the band in 1997 and 2008-2009 allowed the VND/USD exchange rate to be adjusted upward in response to major external shocks. When the immediate urgency had passed, however, the band tended to be narrowed again.

**Figure 3**

**Allowable Variations around Official Exchange Rate,  
Mar 1989 - Dec 2009**



Note: There was no lower band for the periods Aug 91–Sept 94 and Jan 98–Jun 02

Source: Various decisions by the SBV from 1989 to 2009

### ***Official intervention, administrative rationing and moral suasion***

Given that pricing in this market was administered, through the setting of both the official exchange rate and the allowable trading band, frequent instances of non-clearance of the market were unavoidable. During much of the period under study, the VND was under pressure to depreciate, and there was a persistent excess demand for USD at the commercially quoted exchange rates, which were already pushed to their upper limit. Accordingly, the SBV had to sell quantities of USD to support the official exchange rate. Nevertheless, in order to conserve official forex reserves, the SBV tended to meet only *part* of the prevailing excess demand, and to use administrative arrangements to ration some of the available forex among potential buyers.

In particular, only those commercial banks with short positions exceeding a certain size could approach the SBV to buy foreign currency at the quoted rates. Moreover, the system allowed priority to be given to the importation of essential goods (such as petroleum, fertilizer and medicine), and to commercial banks that serve customers engaging in these priority activities (Tran Nga 2008). This means that other customers must turn to the parallel black market or other *ad hoc* channels (see below) to address their unmet demand for USD -- or just wait.

There were, of course, some periods when Vietnam also experienced pressure for the domestic currency to *appreciate*. For example, due to a surge in capital inflows in late-2007 and early-2008, the SBV faced the dilemma of whether or not to intervene in the forex market to prevent the VND/USD exchange rate from falling. The Bank's handling of this episode suggests that, in comparison with (for example) China, Vietnam's monetary authorities may have been less inclined to intervene fully in the forex market even when the domestic currency was subject to appreciating pressure.

Discussions in the domestic Vietnamese literature acknowledged that the SBV was confronted at the time with a number of conflicting macroeconomic objectives (see, for example, Huynh The Du 2007; Vo Tri Thanh and Pham Chi Quang 2008). On the one hand, if the exchange rate were allowed to be more flexible, an appreciation of the VND would ensue and this was considered harmful to the country's external competitiveness. On the other hand, if the SBV were to maintain the prevailing exchange rate by buying foreign currency, this could add to the growth in money and credit, with potentially inflationary consequences.

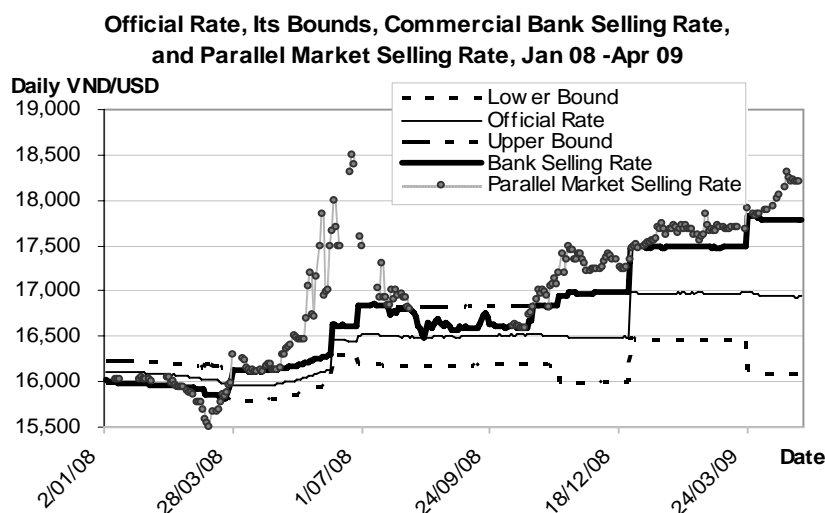
In the event, the SBV chose to adopt a compromise, halfway approach. The VND/USD exchange rate was allowed to fall, but not too sharply. At the same time, with commercial exchange rate quotes straining at the lower bound, the excess supply of foreign currency was considerable and many participants were unable to convert USD proceeds into VND (see Figure 4, especially for the period around March 2008). Despite this and some other episodes of excess supply, it remains true that excess demand for USD occurred far more frequently during the study period.

A prominent, but perhaps ultimately unhelpful, feature of official action in dealing with such excess demand for foreign currency has been the use of what might be described as 'moral suasion' or 'talking up the VND'. Senior officials would at times issue statements to reassure the public that the exchange rate regime was well managed, that the country had ample foreign reserves, and that the official exchange rate adequately reflected market supply and demand (Dinh Hai 2009; Quang Phuong 2008; SBV, 2009; Song Linh 2008).

The implication being drawn was that any excess demand that might arise for foreign currency would be due mainly to market participants being unduly influenced by temporary developments, false rumors or erroneous perceptions (Dinh Hai 2009; Hung Phong 2009; SBV, 2009). When it turned out, however, that the relevant excess

demand persisted and the exchange rate had to be allowed to move in the direction anticipated by market participants, public confidence in subsequent reassuring statements would naturally suffer.

**Figure 4**



Source: SBV, the Banking Association of Vietnam, Vietcombank, and VNExpress.

For example, during the period April-June 2008, there was persistent upward pressure on the VND/USD exchange rate and the parallel-market rate increased rapidly; see Figure 4. The authorities publicly interpreted these excess demand symptoms as the end-result of a “perceptions” issue – a “psychological” factor (Song Linh 2008; SBV 2009). Before too long, however, the official exchange rate had to be adjusted upward by 2 percent (on 11 June 2008) and the allowable trading band was doubled, from  $\pm 1$  to  $\pm 2$  percent (on 27 June 2008).

## **4 Implications for development of forex market**

The current exchange rate regime has been described by the authorities as a managed float. In principle, under a managed float, the ER is determined by market forces, and the government’s influence on this rate is effected only through its own purchases and sales in the forex market (Moosa 2004). In the case of Vietnam, the justification for the term ‘float’ being in the above description is that the SBV no longer sets the official ER, but simply ‘notifies’ the average interbank rate determined on the

preceding business day through the interaction between supply and demand in the market. The regime is ‘managed’ in that the exchange rate can move only within a stipulated band, the SBV remains a major participant in the market, and various forms of administrative exchange controls and rationing are maintained. As analysed in Section 3, however, in practice the system has tended to rely so heavily on the ‘managed’ part that perhaps the term ‘adjustable peg’ might be a more appropriate description – at least, in a *de facto* sense. In any case, it is clear that the nominal VND/USD rate has frequently been sticky if not completely stable. In turn, such stickiness has brought about a series of linked structural and operational deficiencies in the country’s forex market, as discussed below.

#### **4.1 Lack of interest in derivatives**

During much of the period being studied, the official VND/USD exchange rate followed a gradual upward trend with very little volatility except for the periods of the Asian Financial Crisis and the recent World Financial Crisis. The low volatility of the exchange rate, coupled with the one-way nature of most daily movements, meant that businesses generally perceived little foreign exchange risk. As a result, there was little incentive for market participants to develop greater sophistication in terms of ability to anticipate future paths of the exchange rate, or to manage exchange rate risks.

This largely explains why forward, swap and option transactions have remained only a very small part of the forex market in Vietnam. By comparison, BIS data indicate that at the global level, spot transactions tend to account for only around one-third of the total market, while swaps represent around one-half and outright forwards around 10 percent (BIS 2005, p. 5, 2007, p. 4). Similarly, as shown in Table 2, these types of derivative transactions typically account for more than 50 percent of total forex market turnover in Asian emerging economies -- except for the case of China where the forex market is still mainly a spot market.

**Table 2**  
**Shares of Forward and Swap Transactions in Total Foreign Exchange Turnover**  
**for Selected Asian Emerging Economies, Selected Years**

	1998	2001	2004	2007	2009
<b>China</b>					
Both cross-border and local transactions	n.a.	n.a.	n.a.	10%	n.a.
Local transactions only	2%	5%	n.a.	10%	n.a.
<b>India</b>					
Both cross-border and local transactions	53%	54%	49%	58%	n.a.
Local transactions only	62%	55%	49%	61%	n.a.
<b>Indonesia</b>					
Both cross-border and local transactions	53%	13%	57%	40%	n.a.
Local transactions only	53%	13%	44%	49%	n.a.
<b>Malaysia</b>					
Both cross-border and local transactions	70%	63%	50%	51%	n.a.
Local transactions only	74%	70%	59%	62%	n.a.
<b>Philippines</b>					
Both cross-border and local transactions	53%	57%	49%	53%	n.a.
Local transactions only	53%	61%	48%	55%	n.a.
<b>Thailand</b>					
Both cross-border and local transactions	71%	69%	60%	78%	n.a.
Local transactions only	70%	71%	66%	80%	n.a.
<b>Vietnam</b>					
Local transactions only	11%	6%	5%	15%	19%

Source: BIS (1996; BIS, 1999a, 2002, 2005, 2007); Data for China for years 1998 and 2001 are taken from Zhang and Liang (2006); Data for Vietnam are adapted from Nguyen Thi Kim Anh and Pham Thi Hoang Oanh (2007) for 1998, 2001 and 2004, and are estimated for 2007 and 2009 on the basis of the survey conducted by the authors; Authors' calculations.

Available data suggest that, until quite recently, outright forward and swap contracts accounted for only about ten percent (or less) of total forex trading turnover (see Table 2). Data obtained from our own, recent survey of forex dealers suggest that this share has risen to around 15% in 2007 and 19% in 2009. As will be explained more fully below, part of this growth has been due to the use by some banks and their customers of these contracts as devices to circumvent official regulations regarding spot VND/USD quotations. Further, the forex market in Vietnam also became much more volatile in the wake of the Global Financial Crisis, and this undoubtedly would have played a role in the increased usage of derivatives. Nevertheless, it is clear that in Vietnam, derivatives have continued to account for a far smaller share (less than 20%) of the total forex market than in, for example, Indonesia or the Philippines.

In addition to low trading volumes, the forward segment of the market has been characterized by several other unfavourable features. First, the sale-purchase structure of forward trading by commercial banks has been clearly lopsided: the value

of forward sales made by commercial banks represented around 75-85 percent of total forward trading (Nguyen Tran Phuc 2009b). This provides an indication of the extent to which forward contracts may have been used as means for bank customers to acquire US dollars at rates exceeding the upper bound of the allowable trading band.

Second, in making quotations for the forward VND/USD rate, banks have had to work with highly prescriptive guidelines as to how such a forward rate quotation was to be calculated. The official emphasis on such guidelines suggests that the excess demand for USD which typified the spot market has generally spilled over to the forward market. Third, and not surprisingly, commercial banks have tended to be quite passive in taking the role of market-makers in the forward market. Indeed, banks may often be relatively slow and cautious in responding to requests for forward quotations. Of the 29 forex dealers who were interviewed for our survey, 27 indicated that regulations had become a barrier to forward trading, in that they tended to create a gap between the forward rate allowed and the forward rate that would equate supply and demand.

Currency options were first introduced by Eximbank into Vietnam's forex market in 2003.<sup>2</sup> However, trading in this form of derivative products has never really taken off and trading volume is in effect negligible (Nguyen Trong Tai 2006). Data from our recent survey suggest that currency options currently account for about 0.2% of total forex turnover.

## **4.2 Minor role for interbank transactions and low market turnover**

From the above discussion, it is clear that there has been little incentive for dealers from commercial banks to form views on the path of the ER, take position or manage risk in the interbank market. Instead, it would be more sensible for them to concentrate on providing intermediary services to their customers. This explains why the bulk of forex transactions have been spot transactions between banks and their clients, rather than interbank swaps and forwards which tend to dominate forex markets internationally.

In Figure 5, the size of the interbank market is shown as the gap between the middle curve (total forex market turnover) and the lower (broken) curve which represents the size of the client market. It is clear that the inter-bank market has been dominated by the client market. As shown in Table 3, until around 2006, the interbank market segment represented only 11% (or less) of the total forex market in Vietnam.

Based on data from our recent survey, the share of this market segment is estimated to have risen to about 35% of total market turnover in 2009.

**Figure 5**



Source: SBV (1999-2006); GSO (2006); Nguyen Van Tien (2006); Authors' estimation.

**Table 3**  
**Share of Interbank Transactions in Total Forex Market Turnover**

	1998	2001	2004	2007	2009
<b>India</b>					
Both cross-border and local transactions	82%	76%	70%	78%	n.a.
Local transactions only	71%	71%	66%	64%	n.a.
<b>Indonesia</b>					
Both cross-border and local transactions	79%	94%	83%	69%	n.a.
Local transactions only	65%	90%	64%	55%	n.a.
<b>Malaysia</b>					
Both cross-border and local transactions	92%	75%	71%	86%	n.a.
Local transactions only	79%	76%	60%	80%	n.a.
<b>Philippines</b>					
Both cross-border and local transactions	84%	77%	80%	94%	n.a.
Local transactions only	76%	69%	73%	93%	n.a.
<b>Thailand</b>					
Both cross-border and local transactions	81%	81%	70%	77%	n.a.
Local transactions only	76%	69%	73%	93%	n.a.
<b>Vietnam</b>					
Local transactions only	11%	11%	9%	14%*	35%

Note: (\*) 2006

Sources: BIS (1996; BIS, 1999a, 2002, 2005, 2007); SBV (1999-2007); Nguyen Van Tien (2006); Survey conducted by authors; Authors' calculations.

Despite this recent increase in its market share, the interbank market segment continues to play a limited role in Vietnam, in distinct contrast with the case in other countries. In the global forex market, the interbank market (including transactions



carried out by nonbank financial institutions) accounts for more than 80 percent of the total market trading volume (BIS 2007; Moosa 2004). Similarly, in some selected emerging markets in Asia, the trading volume in the interbank market was reported in a range from 55 percent to 95 percent (see Table 3).

Further, the limited role of the interbank market also implies a low turnover for the entire forex market. Daily total turnover on Vietnam's forex market increased seven-fold from around \$20 million in 1995 to around \$150 million in 2006 (Nguyen Tran Phuc 2009b). It then increased nearly threefold further, to about \$420 million in 2009. In spite of such seemingly remarkable growth, the market has remained very small compared with forex markets in other countries. This can be appreciated by comparing the size of each forex market to the relevant country's international trade volume.

As indicate in Table 4, in 2007 forex market turnover in the UK was almost 150 times the size of the country's international (two-way) trade volume. The corresponding ratios for other developed countries ranged from about 10 (for Korea) to about 30 and 70 (for the US and Australia, respectively). Among the emerging-market countries included in the table, the ratios ranged from 1.5 (for China) to more than 6 (for the Philippines). By contrast, Vietnam's ratio was less than one, suggesting that a noticeable proportion of international trade was conducted without going through the forex market.

In the past, businesses that generated revenues in foreign currency must surrender the foreign currency received, i.e., must sell it to commercial banks, but there were provisions allowing them to hold a certain proportion of it for their own business activities. Over time, the proportion to be surrendered was gradually reduced; it has been set at zero since 2003. Together with the fact that domestic businesses have been allowed to maintain bank deposits in foreign currency, the reduction of the required surrender portion to zero meant that businesses could more readily retain export earnings in foreign currency for use in subsequent import purchases, thus bypassing the forex market.

The knowledge that the market frequently experienced excess demand for US dollars would have added to the incentive for hoarding dollars. In a recent survey of export-import companies conducted by the authors, 85 out of 92 responding businesses (these all had export proceeds in 2009) indicated that they were not willing to sell foreign exchange to commercial banks upon receipt; instead they would keep

the proceeds to pay for imports in the future and/or would only sell when they needed VNDs.

**Table 4**  
**Ratio of Forex Market Turnover to Foreign Trade Volume**  
**(based on daily averages), percent**

	1995	1998	2001	2004	2007	2009
United Kingdom	121.1	99.2	102.4	108.1	146.3	n.a.
Australia	53.5	59.4	46.2	29.5	72.3	n.a.
United States	19.5	32.8	18.5	24.4	31.4	n.a.
India	n.a.	7.0	11.2	11.9	23.6	n.a.
Singapore	40.7	37.4	37.0	26.1	22.2	n.a.
Japan	33.9	22.9	22.8	22.6	18.4	n.a.
Hongkong	22.4	0.5	16.4	11.9	14.0	n.a.
South Korea	n.a.	0.7	8.8	10.4	10.4	n.a.
Philippines	n.a.	2.7	4.6	2.2	6.3	n.a.
Thailand	n.a.	6.5	3.2	3.3	4.8	n.a.
Indonesia	n.a.	3.0	6.8	3.0	3.1	n.a.
Malaysia	n.a.	4.6	2.1	1.6	2.4	n.a.
China	n.a.	0.2	0.1	0.2	1.5	n.a.
Vietnam	0.6	0.6	0.8	0.8	0.6 <sup>*</sup>	0.8

Note: The notes for Table 1 are also applicable to data for forex market turnover used in calculating the figures shown in this table.

(\*) 2006

Sources: BIS (1996; BIS, 1999a, 2002, 2005, 2007); The IMF's International Financial Statistics (Online), SBV (1999-2007); GSO (2006); Nguyen Van Tien (2006); Survey conducted by authors; Authors' estimation.

### 4.3 Continuing need for the SBV to play a major role

Given the country's exchange rate setting mechanisms, the SBV has been required implicitly to stand ready to respond to instances of non-clearance of the market. In the three years 2000 to 2002, forex transactions involving the SBV were estimated to be 65%, 68% and 60%, respectively, of the total interbank market turnover (SBV 2000, 2001, 2002). The corresponding figure for 2004 was perhaps as high as 85 percent.<sup>3</sup> During 2009, the SBV's forex market interventions saw the country's forex reserves reduced from US\$23.9 billion to \$16.4 billion (IMF International Financial Statistics Online). In the longer term, if excess demand for US dollars persists, it will be difficult for the SBV to continue its role as a major supplier of dollars while its stock of foreign reserves continues to dwindle.

#### **4.4 Risks of illiquidity (in particular, excess demand for US dollars)**

In the literature, a market is usually described as ‘liquid’ if it features ‘a high level of trading activities’ (Harvey & Morgenson, 2002) such that ‘a large volume of trades can be immediately executed with minimum effect on price’ (Muranaga & Shimizu, 1999). Thus, the term “illiquidity” here is meant to describe the situation where many market participants find it difficult, if not impossible, to complete transactions (either sales or purchases) at the market-quoted price. In that sense, the forex market in Vietnam has experienced frequent bouts of extreme illiquidity.

Because of the VND’s long-term depreciating trend relative to the USD, it has not been possible for the SBV to fully meet the excess demand for USDs on a sustainable basis. Partial or zero intervention, however, implied prolonged excess demand and market illiquidity: when the commercially quoted exchange rate was already at its highest allowable level, supply simply dried up, as banks and other market participants had little incentive to sell.

In comparing daily data for the period from Jan 2002 to June 2009, we found that commercial bank quotations of the exchange rate were at or near the upper bound of the allowable trading zone for more than 76 percent of the time. More specifically, Vietcombank’s ask rate was within 0.01 percent of the upper bound on 76.3 percent of the days observed.

Figure 4 (above) illustrates a number of these episodes.<sup>4</sup> For example, during the period from April to July 2008, or the period from November 2008 to April 2009, the commercial quote was always at or near the upper bound, indicating excess demand. In spite of a number of techniques which were developed to circumvent the upper bound regulations (as outlined below), there were inevitably businesses and individuals who were simply unable to obtain USDs for normal, legitimate purposes -- for example, see Lan Huong (2003) and Nguyen Tan (2008). For these market participants, the usual risk of exchange rate changes has been transformed into a risk of illiquidity, in that it may be impossible for them to buy USDs at the quoted rates.

Of course, there were also a number of times, such as the period from January to March 2008 (see Figure 4 above), when commercial banks gave quotes which were at or near the lower bound – in the above example, due to a short-term surge in capital inflows and excess supply of USDs. In these circumstances, it was frequently reported

in the media that exporters could not sell their forex proceeds at quoted rates -- for example, see Hai Ly (2007).

For perspective, however, it is important to note that during the period from January 2002 to June 2009, Vietcombank's bid rate was within 0.01 percent of the lower bound for only 9.8 percent of the daily observations. Thus, excess demand for USDs occurred far more frequently than did excess supply, or market clearance. In the remainder of the paper, for brevity we shall focus mainly on cases of excess demand for foreign currency.

Data from our recent survey of forex dealers provide further indications of the low levels of market liquidity during recent years. Respondents indicated that, on average, their bank was unwilling to provide a VND/USD quotation within the allowed band for *interbank* transactions about 50% of the time in 2007. By comparison, respondent banks were unwilling to do so about 93% of the time in 2009. Similarly, when asked whether their bank was unwilling to sell USDs at the quoted rate to customers in the *bank-client* market, respondents indicated that their bank was unwilling to do so about 79% of the time in 2009.

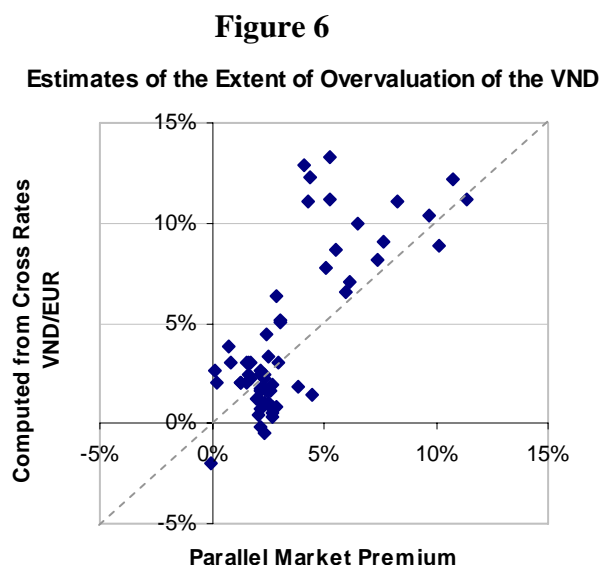
## **4.5 Circumventing activities**

It is clear from the above that during prolonged periods of excess demand, the exchange rate ostensibly quoted by banks would typically be inoperative, due to a lack of genuine, willing sellers. Many customers would thus be forced to turn to the parallel market to meet their foreign currency requirements (see Section 4.6 below). To serve their clients, commercial banks have also developed a range of techniques to circumvent the regulations governing the maximum exchange rate that they can apply; for a detailed list and description of these techniques, see Nguyen Tran Phuc (2009b).

By and large, the circumventing activities have become possible mainly through the existence of a number of inconsistencies and anomalies in regulations and the inherent complexity of modern forex transactions. For example, banks could arrange for VND-USD transactions to be completed through a *third currency*, such as the euro (EUR) (Lan Huong 2003; Hai Ly 2008; Nguyen Tan 2008). This was possible because while the bilateral VND/USD exchange rate was closely administered, banks have generally been allowed freedom in quoting exchange rates involving the VND and a third currency, or exchange rates that do not involve the VND.

It is possible to obtain an indication of the extent to which market participants regarded the VND as being overvalued (and the USD as undervalued) from the discrepancies between Vietnamese banks' quotations of the VND/EUR cross rate and the corresponding rate implied by the USD/EUR rate quoted on international market and the commercial quote in Vietnam of the VND/USD rate. An alternative measure is the parallel-market premium over the approved commercial exchange rate, but data for this direct measure are not always available in the public domain.

Not surprisingly, there has been a high degree of correlation between these two measures of the VND's overvaluation. For example, during the period January 2008 to June 2009, where estimates for both measures were available and where both exceeded 5 percent, there were remarkable similarities between them, in terms of both level and movements (see Figure 6); the relevant simple correlation coefficient was 0.80.<sup>5</sup> Anecdotal evidence provided by forex dealers to the authors suggests that commercial banks frequently used the parallel-market premium as a guide in calculating their own quotes of the VND/EUR cross rate.



Source: The websites of OANDA corporation <[www.oanda.com](http://www.oanda.com)> and Vietcombank <[www.vcb.com.vn](http://www.vcb.com.vn)>, viewed from 10 March 2008 to 12 June 2009 ; Authors' calculations.

Another example of circumventing activities is the use of short-term *forward contracts* to allow customers to buy USDs at a rate higher than the maximum permitted in the spot market (Hai Ly 2007);<sup>6</sup> in some instances, the contracts could

even be backdated to allow immediate delivery.<sup>7</sup> The inconsistency that has given rise to this circumventing activity is that while spot trading of the USD has been tightly supervised, forward trading has been less closely administered. Although the authorities issued a number of guidelines to limit usage of this financial product as a circumventing device, it is difficult to prevent such usage altogether without being overly prescriptive about how forward contracts may be used by banks for legitimate commercial purposes.

As pointed out previously, an indication of the extent to which this device has been used to get around regulations is that forward contracts have been used primarily by commercial banks to *sell* rather than buy USDs. In our recent survey of forex dealers, more than 50% of the respondents reported that forward transactions at their bank had been used at one time or another to manage market illiquidity; indeed, around 33% reported that was the *main* use of these transactions at their bank.

Similarly, since the introduction of *currency options* in 2003, American-style options could be used to allow bank customers to obtain USDs by paying the premium and immediately exercising the option (Luu Minh Ngoc 2008; Nguyen Tran Phuc 2009b). Again, it has not been feasible for the authorities to anticipate and regulate all aspects of trading, and as a result, there have been opportunities for market participants to use currency options to trade USD quantities at effectively higher spot rates than ostensibly allowed.

Conducting VND/USD transactions through a third currency became highly popular, until the SBV explicitly banned it in June 2008 (Hai Ly 2008). In response, commercial banks tended to shift emphasis to forward transactions and other derivative products as a means to trade the USD at rates above the ceiling. At the beginning of 2009, this technique was also banned. This gave rise to the popularity of forex surcharges under various guises, such as additional transaction fees, commissions, fees for cash management, and interest on loans. The authorities again attempted to ban these circumventing devices.

Circumventing activities have proved to be resistant against administrative bans, however. Often the resistance occurred through the innovation and adaptation of techniques which were explicitly banned. For example, in the interbank market segment, the use of a third currency with the involvement of three (rather than two) parties has become very popular and is largely immune to detection. In our recent survey, 23 out of 29 dealers confirmed that their bank had adopted this technique

(some also added that their main purpose in using this technique was to serve their customers). In the client market segment, collecting fees and compensating through interest rates have become popular circumventing techniques; both techniques were confirmed by 13 out of 29 dealers. The use of derivative products (forward contracts) also seemed popular, being confirmed by 10 out of 29 dealers.

Other techniques that were mentioned by several banks include: setting up a service package for regular customers, maintaining an open account to record debt, cash payment to compensate for differences in exchange rates, and compensation through ostensible purchases and sales of gold. One “solution” that may have implications for the development of the forex market in the longer term is that a commercial bank may introduce potential sellers to its customers, but would then let buyer and seller negotiate with each other. This solution was mentioned by 11 out of 29 responding dealers.

#### **4.6 Incentives for using the parallel market and dollarization**

The parallel (black) forex market has always been a part of contemporary business life in Vietnam: its existence predated the economic reform process. While, in a strict sense, transactions in this market have always been illegal, the long-running excess demand for USDs ensured its continued existence. There have been cases where corporate customers had to resort to transactions with much higher prices in the informal parallel market because doors in the official market were all closed. Anecdotal evidence provided to the authors suggests that some bank customers have begun to search for and deal with each other directly, often with the assistance of commercial banks (see above).

Further, as long as simple spot transactions could not be easily conducted and derivative transactions were not common, the hoarding of US dollars was a natural response. Thus, many businesses that generated revenues in foreign currencies preferred to retain such proceeds for their own future use, or as a hedge against future depreciations of the domestic currency, rather than selling them (Lan-Huong 2003). Accordingly, at times commercial banks found themselves in a curious situation, in that they had an abundance of US dollars to lend but a serious shortage of US dollars to sell.

## **4.7 Inefficiencies associated with administered pricing**

In international forex markets, spot transactions are usually conducted quickly and easily. By contrast, due to administered pricing of forex, in Vietnam these simple transactions have frequently been transformed into more complicated transactions designed to circumvent binding regulations. These activities involved resources which could have been utilized in activities which are, from society's point of view, potentially more productive. Thus market participants, including corporate customers, had to bear deadweight losses in terms of the time and extra costs involved.

## **4.8 Non-transparency and inaccurate price signals**

Through circumventing activities, forex transactions have often been conducted at rates that were substantially different from the quoted commercial rates. Yet these actual rates would not be officially reported, due to their illegality. As a result, price signals became rather opaque to market participants and policy makers. For example, it is evident that exchange rate data that are available from official sources (including the SBV and IMF) did not fully reflect market realities. Accordingly, using such data for economic analysis might lead to biased results.

Another example of the opaque nature of price signals in this market is its extremely narrow bid-ask spreads. Table 5 shows the average spread (as a percentage of the mid rate) between Vietcombank's ask and bid rates on the retail market during the period 2002-2008. From 2002 to 2005, the bid-ask spread was effectively zero. Since late-2006, as the allowable trading band was progressively enlarged, the spread also began to widen. Nevertheless, as of 2008 and the time of writing, the typical spread was still less than 0.10 of 1 percent. It can be expected that the corresponding spreads in the interbank market would have been similarly small, or even smaller.

One might be tempted to infer from such narrow bid-ask spreads that forex transaction costs were low in Vietnam, indicating a market with good *liquidity*, in the sense that foreign currency 'can be swiftly and with insignificant costs transformed into' local currency and vice versa (BIS 1999b). As Sarr and Lybeck (2002) have pointed out, however, the *quoted* bid-ask spread by itself is often unreliable as a measure of a particular forex market's true liquidity, because it may also reflect the flexibility/stickiness of the exchange rate.



**Table 5**  
**Average Retail Forex Bid-Ask Spread at Vietcombank,**  
**2002-2009 (Percentage of Mid Rate)**

	2002	2003	2004	2005	2006	2007	2008	2009*
Mean	0.001	0.000	0.000	0.001	0.022	0.032	0.098	0.065
Median	0.000	0.000	0.000	0.000	0.000	0.025	0.012	0.000
Maximum	0.032	0.026	0.013	0.019	0.118	0.279	0.748	0.726
Minimum	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Std. Dev.	0.005	0.003	0.001	0.003	0.032	0.033	0.145	0.147
Skewness	4.76	9.02	16.06	3.80	1.25	2.94	1.56	2.90
Kurtosis	24.96	82.34	259.00	17.59	3.34	17.99	4.96	11.77
Observations	253	253	261	252	252	259	249	76

\* Data for 2009 cover the period up to 29 April 2009 only

Note: Calculations are based on daily data.

Sources: The website of Vietcombank, viewed from 10 March 2008 to 30 August 2008

<[www.vcb.com.vn](http://www.vcb.com.vn)>; Authors' calculations.

For the case of Vietnam, it is clear that, despite their small size, these spreads did not translate into low transaction costs. Instead, they were essentially a by-product of a peg ER regime. Faced with a persistent excess demand for USDs, commercial banks generally tried to attract supplies by increasing the bid rate, up to the level of the upper bound itself. At the same time, the ask rate was not allowed to exceed the upper bound. As a result, the gap between ask and bid rates often became squeezed to zero or near-zero. By contrast, when the exchange rate was not under strong upward pressure, such as during several days at the end of March 2008 and the period August-October 2008, the bid-ask spreads may become as large as 0.5-0.7% percent; see Nguyen Tran Phuc (2009b).

## 4.9 Administrative measures playing catch up

Recently, the SBV issued a ban on the trading of the US dollar through a third currency and other circumventing activities. Such an *ad hoc* policy response may have been undertaken because of a concern that, without it, the current exchange rate policy could be undermined, in that market outcomes could be different from the intended outcomes. For example, businesses that were supposed to benefit from access to relatively cheap foreign currency might end up paying effectively much higher prices.

The ban might impede circumventing activities temporarily, but it is unlikely to prove effective in the longer term. From the perspective of developing the forex

market, the ban is a move toward deeper official involvement in normal, everyday market operations, which is inconsistent with longer-term efforts to allow market forces to play a greater role in the economy.

## 5 Summary

In this paper, a microstructure approach has been adopted in trying to identify the root-causes of the poor functioning of Vietnam's forex market. Essentially, this approach examines how the ways in which a market is organized and administered can affect trading behaviour, volume, prices, quotes and transaction costs. This paper argues that Vietnam's forex market development has been shaped to a significant extent by the conduct of country's exchange rate policy. Therefore, the key to understanding this forex market, especially its operational deficiencies, is the recognition that the country's *de facto* exchange rate regime has effectively been an adjustable peg.

Three different ways of examining the available information suggest that the authorities have apparently preferred a stable VND/USD rate throughout much of the period under study. It is not clear whether this has been due to a desire to control inflation or some other (economic or non-economic) reasons. In any case, to support this preference, the SBV has relied on a number of administrative measures, including the daily setting of the official exchange rate and the use of an allowable trading band. These two devices have been extensively used to slow down, if not to eliminate, short-term changes in the VND/USD rate. As a result, on about 86 percent of the trading days, the commercial quotes have been within 0.01 percent of either the upper or the lower bound of the trading band – arguably, an indication of an adjustable pegged regime.

As a result of the adjustable peg and a thin buffer of official reserves, the bilateral VND/USD rate has been sticky and there has been a persistent but variable gap between the official exchange rate and the true equilibrium rate. These have, in turn, brought about a range of operational deficiencies in the forex market: lack of interest in derivatives, low turnover, minor role for interbank transaction, continuing need for the SBV to play a major role in the market, and illiquidity risk.

Prolonged periods of excess demand for US dollars have prompted market participants to develop a variety of circumventing activities to conduct forex

transactions at rates above the upper bound of the allowable band. Other consequences have included increases in transaction costs, as well as greater reliance on the parallel market and dollarization.

The poor liquidity and the growth of circumventing activities imply that the current regulatory framework has not allowed market forces to operate freely. There are indications that market forces could and did move beyond that framework. With the market becoming increasingly non-transparent, the published data on exchange rate no longer provide accurate indication of true market realities. Any analysis of price-quantity causality that is conducted on the basis of these data may produce inadequate findings. Furthermore, whatever the authorities' economic objectives may be in pursuing a stable VND/USD exchange rate, such objectives are being slowly undermined.

Observing changes in the exchange rate regime, one can perceive that the Vietnamese authorities have been reluctant to move more rapidly to a flexible exchange rate regime. They have often cautioned that such a move should be accompanied (or preceded) by measures to enhance the functioning of the forex market. Yet, from the above analysis, it is clear that as long as the exchange rate regime remains geared to an artificially sticky rate, major improvements in the functioning of the country's forex market will be difficult to achieve.

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## NOTES

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<sup>1</sup> The data for NEER and REER have been compiled by the authors on the basis of exchange rate and foreign trade data provided by the IMF and GSO. For details, see Nguyen Tran Phuc and Nguyen Duc-Tho (2009) and Nguyen Tran Phuc (2009a).

<sup>2</sup> In 2003, the SBV allowed this bank to act as a pilot bank in designing and offering option contracts to customers as a response to the strong appreciations of the euro against the US dollar at the time, which were generating exchange rate risk for businesses with euro-denominated payables.

<sup>3</sup> Nguyen Dac Hung (2005, p. 34) reported that the SBV bought and sold \$3.54 billion of foreign currency in this year. The figure presented in the text is an estimate based on this volume of SBV trading.

<sup>4</sup> For simplicity, the bid rate is not shown, as the bid-ask spread was negligible during most of this period (this issue will be discussed further below).

<sup>5</sup> For simplicity and clarity, in this figure we have excluded observations where either variable was less than 2 percent – these would simply show up as a lot of bunched-together observations. However, the correlation coefficient reported is based on all observations.

<sup>6</sup> In these cases, the forward contract would be used mainly as a hedge against the risk of illiquidity rather than the risk of unfavourable changes in the exchange rate.

<sup>7</sup> Forex swaps could also be used for similar purposes.