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Dollarization in Viet Nam¹

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Abstract

The paper maps the dollarization process in Vietnam since the beginning 1990s. We analyze the pros and cons of complete currency substitution. We discuss different forms and degrees of dollarization, and why some countries dollarized and others not. Further, the paper analyzes the case of partial dollarization, its implied risks for financial sector stability and the underlying dynamics of dollarization. Finally, we describe ways to reverse dollarization. The main conclusions are that dollarization is not a viable exchange rate regime option for Vietnam; furthermore, the current status of a partly dollarized economy poses considerable risks for financial sector stability and makes the country prone to exogenous shocks. The recent dollarization of banks' loan portfolio has considerably increased systemic risk. The foreseeable opening of the Vietnamese economy will significantly increase the risks related to dollarization.

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Introduction

The paper discusses dollarization in Vietnam. It starts with a debate of the pros and cons of so-called corner solutions for exchange rate regimes, pure float or a fix, particularly currency substitution, by drawing from existing literature. By applying the criteria developed in the debate about dollarization it becomes very clear that Vietnam does not qualify as a candidate for currency substitution.

In the following section we discuss different forms and definitions of dollarization. We identify Vietnam as a partly dollarized economy, characterized by a dual monetary system that significantly complicates monetary policy. In the third section we analyze why economies are dollarized and others are not. The common obstacle for emerging economies is their inability to borrow internationally in domestic currency due to a perceived weakness of its currency and structure of the economy. Applying our definition, basically all emerging economies are dollarized; some indirectly, others directly. Vietnam is identified as a directly dollarized economy with a dual monetary standard. The U.S. dollar serves as parallel currency and quasi second legal tender. The fourth section demonstrates that dollarization does not cure the underlying problem identified in the previous section. Contrary, the use of dollar as a substitute for domestic currency produces major risks, original sin and currency mismatch. We find that directly, partly dollarized economies are potentially instable and extremely prone to financial crises. The final section discusses possible ways and a gradual approach for Vietnam to reduce and finally abolish dollarization of its economy.

1. The Pros and Cons of Dollarization

Since the Asian financial and banking crises in 1997 a significant shift in the debate about appropriate exchange rate regimes for emerging economies has taken place. In a world of huge and highly volatile international capital flows an *adjustable exchange rate* peg with an international key currency – in Asia the U.S. dollar – is no longer seen as a viable option. A peg with low exit cost is exposed to speculative attacks with the consequences of a dramatic reverse of capital flows, exchange rate deterioration and financial sector destabilization.⁴

⁴ Certainly the significant accumulation of foreign exchange reserves by regional central bank is another reaction to those experiences in 1997 and after.

For the proponents of the new exchange rate paradigm the only credible shelter against exchange rate speculation is a corner solution, either a *free float* of the exchange rate following supply and demand in the foreign exchange market, or a credible if not irrevocable fix of the exchange rate, the introduction of a *currency board* or complete *currency substitution* – dollarization.⁵ The advantage of a floating regime is that it removes one-way bets: any short selling of domestic currency bears the risk of a market turning in the opposite direction.

However, not many countries allow their exchange rates to purely float. Edwards (2002) stresses the fact that emerging countries tend to export commodities and light manufactures, making them vulnerable to exchange rate volatility. For a small open economy the exchange rate is not only crucial for determining the competitiveness of exports; the exchange rate is also an important asset price. The lack of credibility of domestic monetary authorities and repeated devaluation result in a high risk premium on the domestic currency. High exchange rate volatility causes significant pass-through effects on domestic prices and might destabilize the financial sector (Calvo and Reinhart, 2001).⁶ The nominal exchange rate peg serves as nominal anchor of the economy; only a few countries were able to substitute this external anchor through a domestic one by targeting inflation and allow their currency to float. In reality, a pure floating regime is rather an achievement than a choice.

On the other hand, the corner solutions of a currency board and dollarization imply the abolishment of the institution Central Bank; either through the replacement by a currency board, a currency exchange mechanism simulating the rules of the game of the classical gold standard, or by entirely subordinating domestic monetary policy under the reign of the central bank that provides the international key currency. The potential merits of this type of regimes are twofold; through the abolishment of the central bank its abuse by opportunistic politicians enforcing the use of the printing press is ruled out; in addition, the rule of the games of the gold standard, although gold is replaced by the dollar (and in some cases by the euro), enforces internal adjustment processes towards external equilibrium. In other words, the degree of freedom having

⁵ See for example Dornbusch, R. (2001), Eichengreen, B. (2001), Hausmann, R. (1999).

⁶ Throughout the paper risk premium is used for exchange rate risk while country risk stands for default risk.

a domestic monetary policy is given away. Finally, currency board and currency substitution bear huge exit costs; these huge costs increase the credibility and sustainability of the fix.⁷

Dornbusch (2001) describes the loss of domestic monetary policy as irrelevant, because by replacing domestic currency through dollars the (currency) risk premium will disappear. This allows a low level of interest rates that could never be achieved with the domestic currency and the risk premium that comes with it. The lower level of interest rates translates into a more dynamic economic performance to the benefit of all; under these circumstances financial sector development will most likely accelerate.⁸

However, the list of arguments against dollarization is long; first of all, with the exchange rate the economy loses an important adjustment mechanism, especially in cases of external shocks. Severe swings in output and employment due to asymmetric shocks can only be avoided through other domestic adjustment mechanisms, particularly wage flexibility and the fiscal policy.

Further, the dollarized economy loses the lender of last resort function; in cases of liquidity needs of banks or possible bank panics the authorities don't have furthermore the ability to inject theoretically unlimited amounts of money. In other words, the money supply function becomes inelastic, systemic risk in the financial sector increases.⁹

Powell and Sturzenegger (2000) challenge the benefit of lower interest rates stressed by Dornbusch as a byproduct of currency substitution. With the abolishment of the central bank the country loses two important sources of revenues, seignorage and inflation tax. This shortfall in revenues increases default risk. The risk premium might not disappear but rather change its form; the abolishment of currency risk is offset by an increased default (country) risk premium and interest rate levels stay significantly higher than in the US (the benchmark).

A main challenge for advocates of fixing regimes is the debate about optimal currency areas. Similar economic structures and a high degree of factor mobility (capital and labor) are

⁷ Argentina is not a good counter-example as the abolishment of the currency board was followed by a dramatic meltdown of wealth, in particular if measured in dollars.

⁸ Winkler, A. (2004) offers a very good compilation of the main pros and cons for dollarization, p. 7. See also Fratianni, M. and A. Hauskrecht (2002).

⁹ The Argentine experiences after December 2001 have sufficiently demonstrated that credit lines with international banks do not effectively substitute the ability to print money.

identified as crucial preconditions for a monetary unification. For many dollarized economies though these are not given. Rose (2000 and 2002) published astonishing econometric estimates on prospective trade gains for monetary unions. His empirical work shows dramatic increases of intra-trade after monetary unions were formed. The *endogeniety* argument questions the relevance of concerns about optimal currency area considerations for dollarized economies.

In his empirical work on officially dollarized economies Edwards (2001 and 2003) finds lower inflation than in countries with domestic currency but also a lower growth rate of GDP and higher output volatility.

Equally important is the intensity of trade of the dollarized economy with the US (Euroland). If a country uses country A's currency as substitute and has considerable trade with countries B and C, while exchange rates of countries A/B, A/C, and B/C float, this might produce hazardous *cross-rate effects* for country A's international competitiveness and balance of payments equilibrium.

To sum up the above arguments, dollarization might be a productive solution for rather small, open economies having close trade and financial ties with the country providing the anchor (substituting) currency. Otherwise, severe cross-rate effects might impede the supposed benefits of enthroning an international key currency as a substitute for domestic money. Winkler (2004, p. 6) states: "...recommending dollarization/eurozation irrespective of countries' ex ante degree of integration with the potential anchor country seems to bear considerable risk".

Table 1: Viet Nam's Major Trading Partners								
	2002 (est)		2002 (est)		2002 (est)		10m03	
Total year in mio. USD	16,705.8	19,733.0	36,438.8					
	Export	Import	Total Trade	in %	Export	Import	Total Trade	in %
1 Japan	2,438.1	2,509.6	4,947.7	0.19	2354.3	2495	4,849.3	0.18
2 PR China	1,495.5	2,158.8	3,654.3	0.14	1331.5	2,496.1	3,827.6	0.14
3 Singapore	960.7	2,534.3	3,495.0	0.13	860.1	2,335.2	3,195.3	0.12
4 Taiwan	812.1	2,536.9	3,349.0	0.13	607.6	2,317.5	2,925.1	0.11
5 USA	2,421.1	457.5	2,878.6	0.11	3401.5	1,030.0	4,431.5	0.17
6 S. Korea	466.0	2,285.5	2,751.5	0.10	397.9	2,128.0	2,525.9	0.09
7 Australia	1,329.0	286.3	1,615.3	0.06	1159.5	221.9	1,381.4	0.05
8 Germany	720.7	558.3	1,279.0	0.05	674.9	479.9	1,154.8	0.04
9 Thailand	227.8	955.5	1,183.3	0.04	285.2	1,030.7	1,315.9	0.05
10 Hongkong	337.3	809.6	1,146.9	0.04	306.9	817.6	1,124.5	0.04
SUM 10 Countries			26,300.6	1.00			26,731.3	1.00
Source: General Statistics Office								

Given this catalogue of prerequisites, Vietnam obviously does not qualify as a candidate for beneficial dollarization. Huge differences in wealth and economic structure, and low labor and capital market integration with the US conflict with major OCA criteria. In addition, while dollar is the preferred international key currency in Vietnamese balances, not euro and also not yen, Vietnam has a much diversified trade with the rest of the world. While trade with US is increasing rapidly, trade with other Asian countries, particularly Japan, and also Europe is important (see table 1). Also financial integration with the rest of Asia is significant. Hence, dollarization is not a viable exchange rate regime option for Vietnam.

2. Forms of Dollarization

McKinnon (1997, p. 367) differentiates between *direct and indirect dollarization*. Indirect dollarization “refers to investors switching between non-monetary financial assets, say “bonds”, denominated in different currencies in a way that indirectly influences the domestic demand for transaction balances”. Direct currency substitution refers to a foreign currency having money function within the domestic economy. Obviously the degree of dollarization, qualitatively and quantitatively, is varying from country to country. A number of countries has abandoned their domestic currencies and replaced them with foreign currency.

Officially dollarized Panama and more recently Ecuador and El Salvador are prominent examples of officially dollarized economies. Several other smaller economies have chosen to substitute domestic currency by using dollars or euros (see table 2).¹⁰ In all cases the dollarized country announced unilaterally the redemption of domestic currency and declared the U.S. dollar as sole legal tender. In most but not all cases the institution central bank is abolished.¹¹

As table 2 demonstrates, in terms of population most countries with complete currency substitution are rather small. Indeed, Ecuador is now, in terms of population, the biggest dollarized economy. U.S. dollar, euro, and ZAR are the dominant substituting currencies.

However, a more significant number of countries are unofficially dollarized (see table 3). In these cases dollars are used as unit of account, means of exchange, store of value, and medium of deferred payment, while the domestic currency still exists and circulates. The dollar functions as a quasi second legal tender of the economy, as a parallel currency. Amongst this group of countries the degree of dollarization might be almost complete (Bolivia, Uruguay, Lebanon) or only partly, as Vietnam with slightly above 20 percent of overall bank deposits.

¹⁰ Dollar and euro are the international key currencies, while no country ever introduced the yen or even pegged its currency directly to the yen. Most recently, El Salvador and East Timor have officially dollarized while Montenegro and Kosovo introduced the euro. See also Winkler, A. (2004), p. 4.

¹¹ Ecuador kept its central bank, although its tasks resemble more of a research institution than a central bank.

Table 2: Countries with Official Currency Substitution					
Euroised countries (dependent territories)	Population	Dollarised countries (dependent territories)	Population	Other cases of official foreign currency adoption (dependent territories)	Population
Reunion	732,570	Puerto Rico	3,937,316	Jersey (GBP)	89,361
Guadeloupe	431,170	Guam	157,557	Isle of Man (GBP)	73,489
Martinique	418,454	Virgin Islands (U.S.)	122,211	Guernsey (GBP)	64,342
French Poly	253,506	Northern Mariana Is.	74,612	Greenland (DKK)	56,352
New Caledo	204,863	American Samoa	67,084	The Faroes (DKK)	45,661
French Guia	177,562	Bermuda	63,503	Gibraltar (GBP)	27,649
Mayotte	163,366	British Virgin Is.	20,812	Cook Islands (NZD)	20,611
Wallis and F	15,435	Turks and Caicos Is.	18,122	St. Helena (GBP)	7,266
St.Pierre and	6,928			Falkland Is. (GBP)	2,895
				Christmas Is. (AUD)	2,771
				Norfolk Is. (AUD)	1,879
				Tokelau (NZD)	1,445
				Cocos Is. (AUD)	633
				Pitcairn Is. (NZD)	47
<i>Total</i>	<i>2,403,854</i>	<i>Total</i>	<i>4,461,217</i>	<i>Total</i>	<i>394,401</i>

Independent countries (date of independence)	Population	Independent dollarised countries (date of independence)	Population	Independent countries that have adopted another foreign currency (date of independence, currency adopted)	Population
Andorra (12)	67,627	Panama (1903)	2,845,647	Lesotho (1996,ZAR)	2,177,062
Monaco (14)	31,842	Bahamas (1973)	297,852	Bhutan (1949, INR)	2,049,412
San Marino	27,336	Barbados (1966)	275,330	Namibia (1990,ZAR)	1,797,677
Vatican City	890	Belize (1981)	256,062	Swaziland (1968,ZAR)	1,104,343
		Micronesia, Fed.States (1978)	134,597	Kiribati (1979,AUD)	94,149
		Marshall Islands (1986)	70,882	Liechtenstein (1806,CHF)	32,528
		Palau (1994)	19,092	Nauru (1968, AUD)	12,088
		Ecuador (2000)	12,900,000	Tuvalu (1978,AUD)	10,991
		El Salvador	6,400,000	Niue (1974,NZD)	2,124
<i>Total</i>	<i>127,695</i>	<i>Total</i>	<i>23,199,462</i>	<i>Total</i>	<i>7,280,374</i>

Source: Winkler, A. (2004), Fratianni, M. (2004)

Table 3:		Unofficial dollarization/euroization in selected countries		
Degree of unofficial dollarization/euroization	Countries			
High(>70%)	Bolivia,	Uruguay,	Lebanon,	
Middle(>20%, <70%)	Cambodia,	Bulgaria,	Belarus,	
	Angola,	Costa Rica,	Russia,	
	Lao PRD	Philippines,	Vietnam,	
	Nicaragua,	Zambia,	Ecuador,	
	Croatia,	Georgia,	Tajikistan,	
	Peru,	Mozambique,	Egypt,	
	Argentina,	Lithuania,	Mongolia,	
		Sao Tome &		
	Turkey,	Principe,	Moldova,	
	Paraguay,	Azerbaijan,	Honduras,	
	Romania,	Latvia,	Ukraine,	
	Guinea-			
	Bissau,	Congo,DR	Yemen	
	Armenia			

Source: Winkler, A et al. (2004)

Please note that countries listed in table 3 are all directly dollarized/euroized; if we would add also indirect dollarization, basically all emerging economies had to be added to the list. This indicates a systemic development problem for those economies that will we addressed in the subsequent section.

Vietnam is a partly dollarized economy with a dual monetary system. The precise degree of dollarization, however, is hard to determine. Typically, the degree of dollarization is measured by the ratio of foreign deposits to total bank deposits. This measure has two pitfalls. First, it excludes foreign currency outside the banking system. Following McKinnon, foreign currency covers all money functions, unit of account, medium of exchange, and medium of deferred payment. For an emerging economy with undeveloped financial markets, dollar currency holdings may represent a very large share of foreign currency money holdings. Unfortunately, estimates of its size and evolution are usually of poor quality. Hence, for the perspective of a central bank dollarization complicates the business of liquidity management.¹²

¹² The argument does not only apply for the unknown variable foreign currency in circulation and its change, but also because domestic and foreign currency presumably will have different velocities. So the Fisher identity changes into $(MVND * VVND) + (M\$ * V\$) = y * P$, where part of M\$ is unknown. Not only the current value of V\$ is unknown but also its future rate of change, in fact even the sign of change. This significantly complicates liquidity management as important components of the money demand function are unknown.

Secondly, it excludes foreign-currency borrowings abroad. A more comprehensive measure of dollarization, however, must also include these borrowings.

3. Causes of Dollarization

The literature identifies two main causes for dollarization. First, loss of credibility of monetary policy due to longer periods of high and volatile inflation rates and a depreciating exchange rate cause the risk premium on nominal assets in this particular currency to increase. The public shifts nominal assets into another more stable currency or into real assets, in Vietnam historically gold and since the mid of the 1980s increasingly U.S. dollars. Secondly, low level of savings in domestic currency denominated assets and relatively low maturity of those assets (deposits/bonds) motivate borrowing abroad in foreign currency as substitute and cause a dollarization of liabilities. Eichengreen, Hausmann and Panizza (2003, p. 3) describe this as “the original sin”: “*the inability of a country to borrow abroad in its own currency*”.¹³ This addresses the observation of international capital flows being pro-cyclical in their nature; capital inflows tend to dry out when needed to smooth the shockwaves of an external shock on consumption and overflow when a sufficient supply of capital is given. The risk of the original sin is a rapid outflow of capital that causes a sharp depreciation of the real exchange rate and makes it more difficult to service foreign debt. Eichengreen et al. continue (2003, p. 4): “Knowing that shocks affecting the real exchange rate can disrupt the country’s ability to service its debt, foreigners may be rendered less willing to lend. And since the real exchange rate tends to strengthen in good times and weaken in bad times, foreign currency debt will be harder to service in bad times...”¹⁴

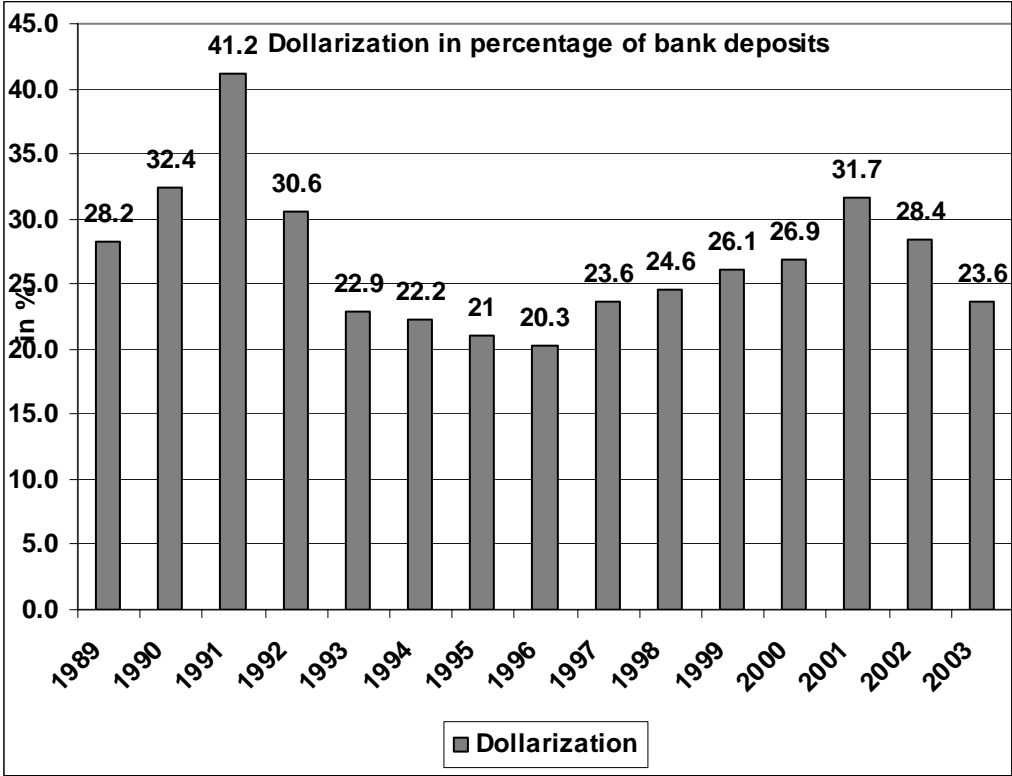
As we shall see later, original sin and currency mismatch are similar but not identical phenomena. Borrowing in foreign currency does not necessarily cause a currency mismatch. For instance, the central bank might increase its net foreign reserves and thereby indirectly hedge

¹³ This finding is closely linked to our first argument for dollarization, the weak store of value function of the domestic currency. However, many other factors as financial infrastructure, legal and political environment might play a role.

¹⁴ In this context, the current effort to prepare the first float of Vietnamese sovereign dollar bonds is questionable as it will further contribute to the dollarization of the Vietnamese economy, and increase foreign exchange exposure. In other words, while the State Bank of Vietnam has been trying for some years to reduce the degree of dollarization in the banking system, the prospective issue of a dollar-denominated sovereign bond will pull the country in the opposite direction and contribute to dollarization. This is also surprising as Vietnam, with a positive balance of payments, is not in need for an additional inflow of U.S. dollars.

currency risk. In this case, though, foreign currency borrowing for the country as a whole becomes useless.

Graph 1:

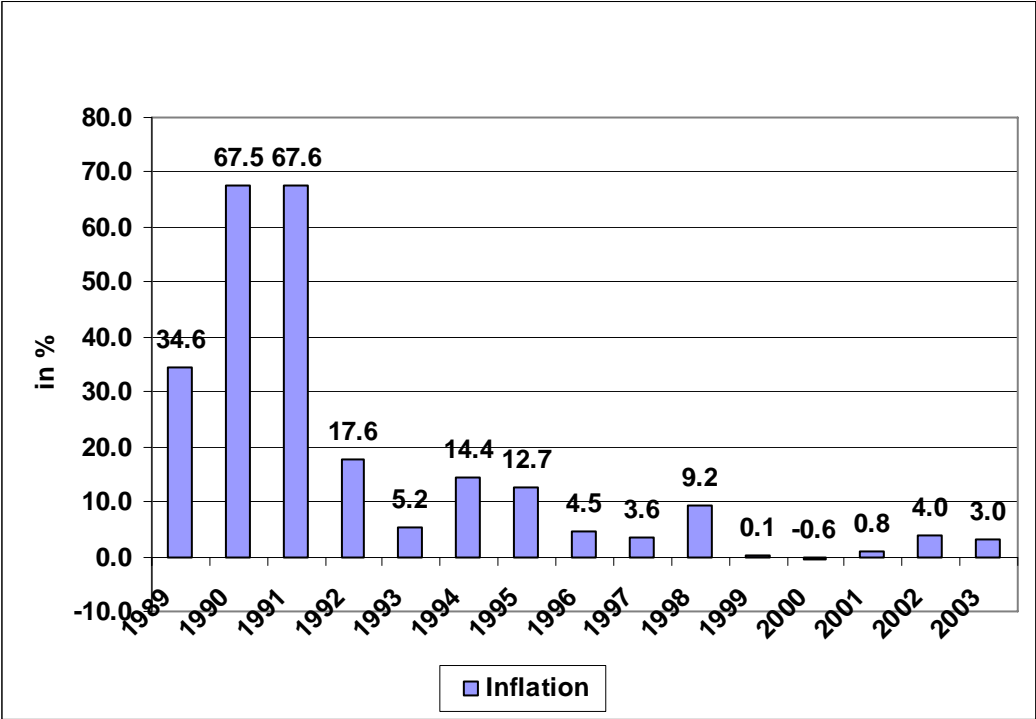


Source: Monetary Survey, SBV

Graph 1 plots the development of dollarization of the Vietnamese banking system from 1988 to 2003. Two factors contributed mainly to the dollarization process; first, the failed monetary reform in fall 1985 with the consequences of dramatic increases in inflation and depreciation of the Vietnamese Dong (VND) against the dollar until end of 1991 (Graphs 2 and 3). The low quality of VND as store of value forced savers into alternative assets, gold and with the opening of the economy also U.S. dollars. The low quality of VND but also the perceived instability of the bank system is reflected in the short duration of deposits of less than one year in average. The stabilization of the Vietnamese price level and the nominal exchange rate of the U.S. dollar caused a reversion of the currency substitution process. Inflation rates are single digit and very modest since 1996. Strict capital controls helped to stabilize the nominal exchange rate against the U.S. dollar. The peg against the U.S. dollar around a very small margin of around 2.5

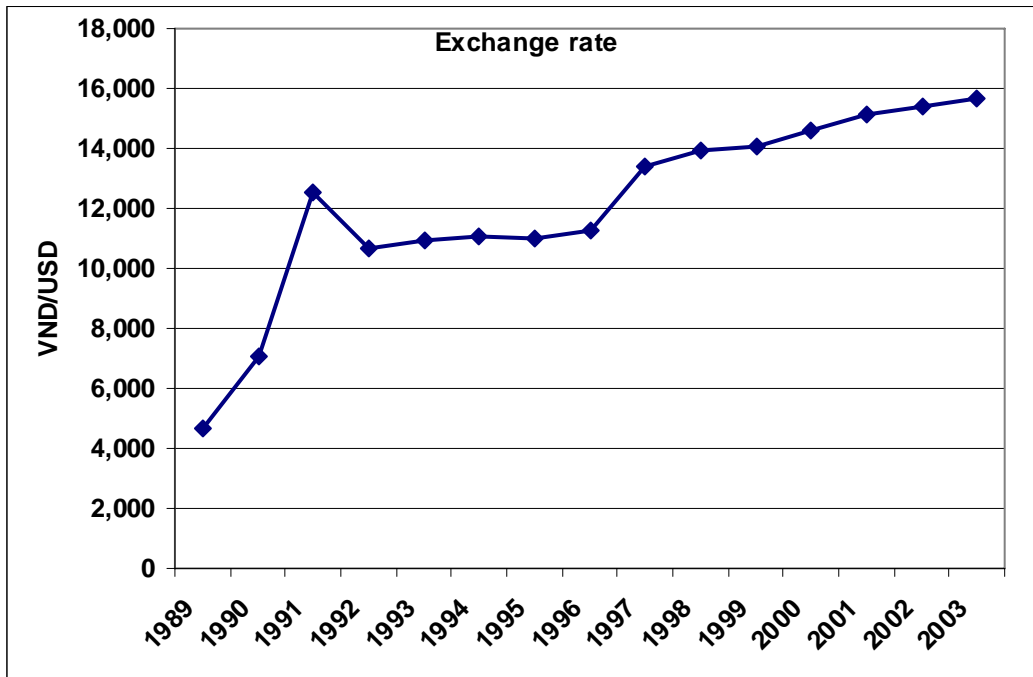
percent a year made the exchange rate development predictable. The shockwaves of the Asian financial crisis and the subsequent depreciation of the VND fuelled again dollarization. However, since 2001 dollarization in Vietnam is again on a downward trend with currently slightly above 20 percent of bank deposits. The

Graph 2: Vietnamese Yearly Inflation



Source: GSO

Graph 3: Exchange Rate VND/U.S. dollar, end of period



Source: GSO

The flight into the better quality money, driven by its superiority as store of value, was spurred by the decision in 1988 to allow banks accepting deposits in foreign currency and paying interest rates on them. This argument applies strictly for a country like Vietnam with tight capital controls where investment abroad is no option. The arbitrage condition for holding VND or U.S. dollars changes into:

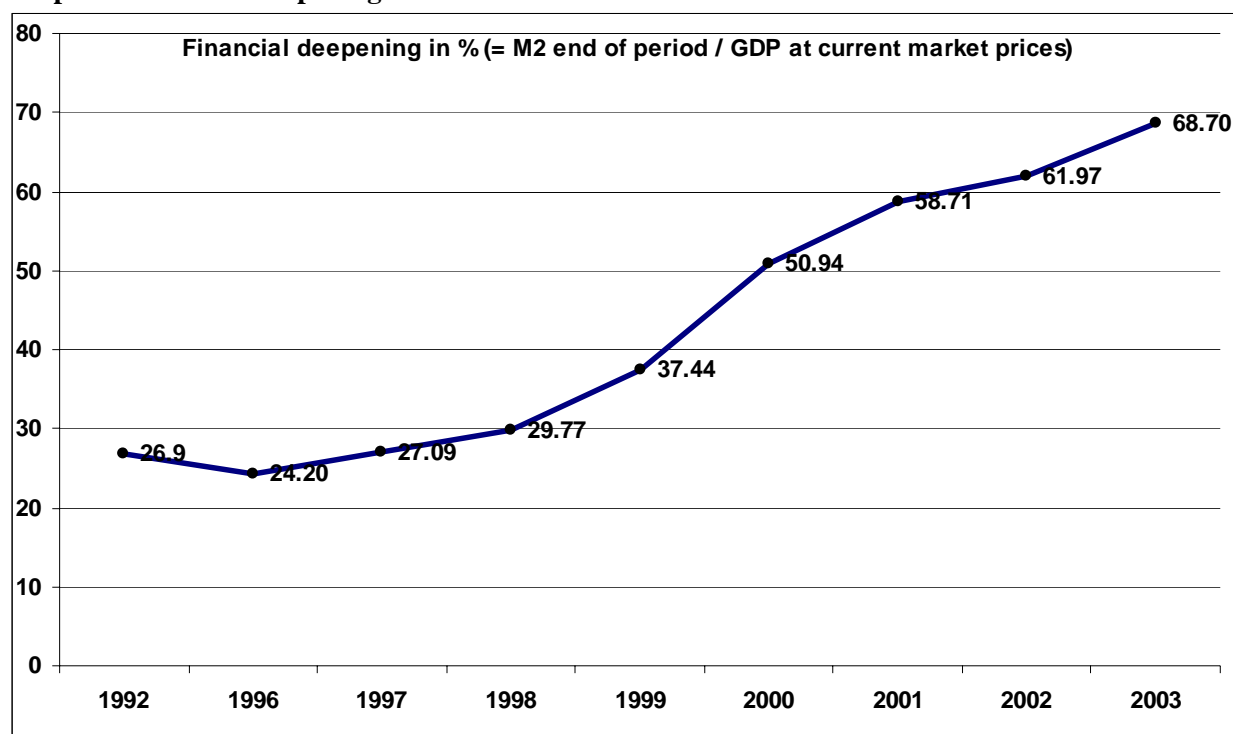
$$\frac{VND(1 + i_{VND})}{P} = \frac{USD(1 + i_{USD})}{P} * e^e,$$

where P is the Vietnamese price level in Vietnam and e^e is the expected change of the VND/USD rate.¹⁵ The payment of interest rates on U.S. dollar deposits in the Vietnamese banking systems increases the attractiveness of U.S. dollar holdings. The reason behind the decision of the monetary authorities to allow U.S. dollar deposits was the low level and the low growth rate of deposits in VND. In addition, foreign exchange, when hoarded by the public is not available for financial intermediation for an economy with desperate need for foreign currency.

¹⁵ Note that a change in P itself does not cause portfolio decisions. A higher inflation rate relative to the US produces a fear of future depreciation of VND and increases e^e .

Applying our definitions, the limited ability to borrow domestically and abroad in domestic currency was causal for the dollarization of the Vietnamese economy.

Graph 4: Financial Deepening in Viet Nam



Source: Monetary Survey, SBV, own calculations

Graph 4 shows the development of financial deepening ($M2_{\text{VND+USD}}/\text{GDP}$) since 1992.¹⁶ While this ratio has values above one for developed economies Vietnam's financial deepening started in the early 1990s from levels below 30 percent. Over the last decade financial deepening has increased to almost 70 percent.

In this section we showed that the main cause of the dollarization of the Vietnamese economy was the low quality of the domestic currency as medium to store value. With the ongoing stabilization of the VND dollarization came to a stop and could be even partly reversed.

¹⁶ Monetary data before 1992 are not very reliable.

4. The Use of U.S. dollars in a Dollarized Economy and its Dynamics

While dollarization of bank deposits indisputably helps to increase financial deepening it comes with a considerable increase of risk for the financial system.¹⁷ The open question is: what to do with all these dollars?

For Viet Nam it is important to note that although dollarization of bank deposits might have a positive effect on financial deepening, both U.S. dollar and VND deposits have short maturities of one year or less. Hence, the problem of short term maturity of bank deposits and other sources of funds remains unsolved.

The main argument against a dual currency regime is that it raises currency and default risk through currency mismatches. Vietnamese banks have basically three options for the use of dollars in their balance sheets: investing abroad, selling to the central bank, or giving domestic loans in U.S. dollars.

First, they can deposit U.S. dollars abroad; this is the safest way since it does not give rise to currency mismatches. U.S. dollar dominated liabilities correspond with assets denominated in the same currency. Yet, banks might face an interest rate risk exists if a positive duration in dollar assets and liabilities exists. However, by keeping the U.S. dollars abroad they don't serve within the Vietnamese financial intermediation and ridicule the financial deepening argument. The conclusion is: only if imported foreign currency is exported and held in form of deposits or bonds, risk can be avoided. Vietnamese bank deposits abroad peaked early 2002 with almost \$ 5 billion deposits abroad.

From a welfare viewpoint the immediate export of foreign currency inflows should be suboptimal as borrowing rates should exceed lending rates. However, this does not apply for Vietnam; strict capital controls allowed banks to offer lower than world market interest rates for domestic U.S. dollar deposits and constitute a positive margin against their holdings abroad, mainly in Singapore and Hong Kong. The macroeconomic effect of this is a redistribution of wealth from domestic dollar depositors to banks; it is a *capital control tax* to the benefit of domestic banks, particularly State Owned Banks (SOCBs).

¹⁷ See for example Nicolo, G.D., Honohan, P. and A. Ize (2003)

The sharp decrease in U.S. dollar interest rate since 2002, though, reduced the spread for banks and made such an investment less attractive. Consequently, banks called outstanding deposits back home and deposit volume abroad halved until end of 2003.

The second option is for banks to sell dollars to the central bank, the State Bank Viet Nam. Indeed, purchase of foreign currency by the Vietnamese central bank has been the single most important source of money supply since several years. The sale of dollars produces a currency mismatch in banks' balance sheets. In case of dollar deposit withdrawals banks must have the guarantee of getting access to the central bank's international reserve. In case of a devaluation of VND against the dollar either the banks take the hit, or the central bank compensates them by selling dollar to banks to the previous exchange rate. Note that foreign exchange reserves by central banks are another form of capital export. By doing so and promising banks the possibility of repurchase of foreign exchange to historic values the central bank implicitly hedges the banks' currency mismatch.

It is no coincident that central banks in Asia have accumulated significant net foreign exchange reserves.¹⁸ With foreign net reserves of roughly 20 percent of GDP also the Vietnamese central bank is no exception.

Finally, banks might lend in dollars to local firms and individuals. In 2003 foreign currency lending ballooned by 41 percent in Vietnam. In spring 2004, domestic loan volume in USD dollars already exceeds 28 percent. While banks formally avoid a currency mismatch of their assets / liabilities the default risk of banks' loan portfolio dramatically increases as the exchange rate risk is outsourced to the final borrower. As these domestic borrowers overwhelmingly receive revenues in VND while the loans are denominated in U.S. dollars, they are exposed to changes of the dong/dollar exchange rate without having instruments to hedge this risk. More precisely, the relationship between net foreign currency liabilities and the net present value of a domestic currency denominated cash flow will change when the exchange rate changes. Only under the extreme assumption that the firm's realized output prices change one to one with the depreciation of the domestic currency an increased default risk of the firm can be

¹⁸ China has U.S. dollar 439 Bio. foreign reserves, Hon Kong 122.1 Bio., India 113 Bio., Indonesia 36 Bio., Malaysia 53.4 Bio., Philippines 13.4 Bio., South Korea 163.6 Bio., Taiwan 227.7 Bio., and Thailand 41.9 Bio. The Economist, June 2004.

avoided.¹⁹ Vietnamese banks are simply exchanging currency risk for default risk without properly pricing this risk.

For Vietnam as a country, consolidating foreign currency assets and liabilities of its residents allows us to derive the aggregate currency mismatch.²⁰ The consequences for Vietnam as a whole are not different to a single firm (Eichengreen et al. 2003, p.14): “real exchange rate depreciation that raises the value of a country’s external debt in terms of the value of its national output will create adverse balance-sheet effects”.

As a consequence, Vietnam has to keep the exchange rate against the U.S. dollar stable. A sharp depreciation of the VND would cause an implosion of the domestic banking system plus important segments of the corporate sector.

To make things worse, while domestic dollar based lending increases financial sector systemic risk it also fuels the process of dollarization by charging interest rates for those loans. Interest rate payments in foreign currency constitute an additional foreign currency demand and undermine the long-term stability of the domestic currency.²¹

Hence, an exogenous economic shock could have devastating effects for the Vietnamese financial system based on two currencies. A devaluation of the Chinese yuan, for example, would immediately put pressure on the VND to devalue as well. A significant devaluation would ultimately risk a collapse of the banking system. In other words, the current situation does not allow any considerable change of the VND/\$ parity (devaluation) without jeopardizing the financial sector stability. The loss of the exchange rate as a monetary policy instrument might be even more harmful with the current tendency of a rising price level; an overvaluation of the VND without the possibility to correct it would cause significant welfare losses. Furthermore, this implicit *conflict of interest* exposes Vietnam to speculative attacks as soon as capital flows are liberalized. Hence, the Vietnamese economy is increasingly prone to speculative attacks.

¹⁹ See also Eichengreen et al. (2003), p. 13.

²⁰ This is precisely the link to McKinnon’s definition of direct and indirect dollarization, as borrowing in foreign currency abroad might, but not always has to produce a currency mismatch.

²¹ Banks lend dollar denominated loans k and charge interest i_s . The bank earns from the margin $k(i_L - i_D)$ with i_L being the lending rate and i_D the deposit interest rate. The additional net demand of the economy for foreign currency is $k(i_L)$.

The current exchange rate might as well come under pressure when US interest rates pick up. Only if the VND interest rates are lifted even more an increase of domestic dollar demand might be avoidable. Also, as most domestic U.S. dollar denominated loans are constructed as floaters (SIBOR plus spread), the higher interest rates will raise borrowing costs and increase default risk.

The master plan for the opening of the Vietnamese economy is outlined in the Bilateral Trade Agreement (BTA) with the US and serves as basis for the current WTO negotiations. Unavoidably, the capital account restrictions will have to be removed within the coming five years. Consequently, exchange rate management will be much more difficult in the future while domestic dollar lending is long-term. In addition, speculation against the exchange rate parity will be simplified.

As stated above, dollarization of banks balance sheets weakens the lender of last resort function of the central bank. While a run on domestic currency can always be responded by increasing liquidity, the elasticity of money supply in foreign currency is limited. Given the net foreign reserves, the State Bank of Vietnam could at present probably not stem a run on dollar denominated bank deposits.

The banking system is more prone to bank panics and unforeseen withdrawals of foreign deposits; the opening up of the economy will force banks to price in accordingly this higher risk. The advantage of cheap dollar lending will disappear. To put it in other words, domestic dollar lending increases systemic bank risk and the exposure will increase in parallel with the opening of the Vietnamese economy.

The sobering result of this analysis is that incomplete dollarization, including any borrowing in foreign currency that produces a currency mismatch, is futile; it does not support financial intermediation. The price to be paid for the questionable benefits of having foreign currency available is to put financial sector stability at risk.

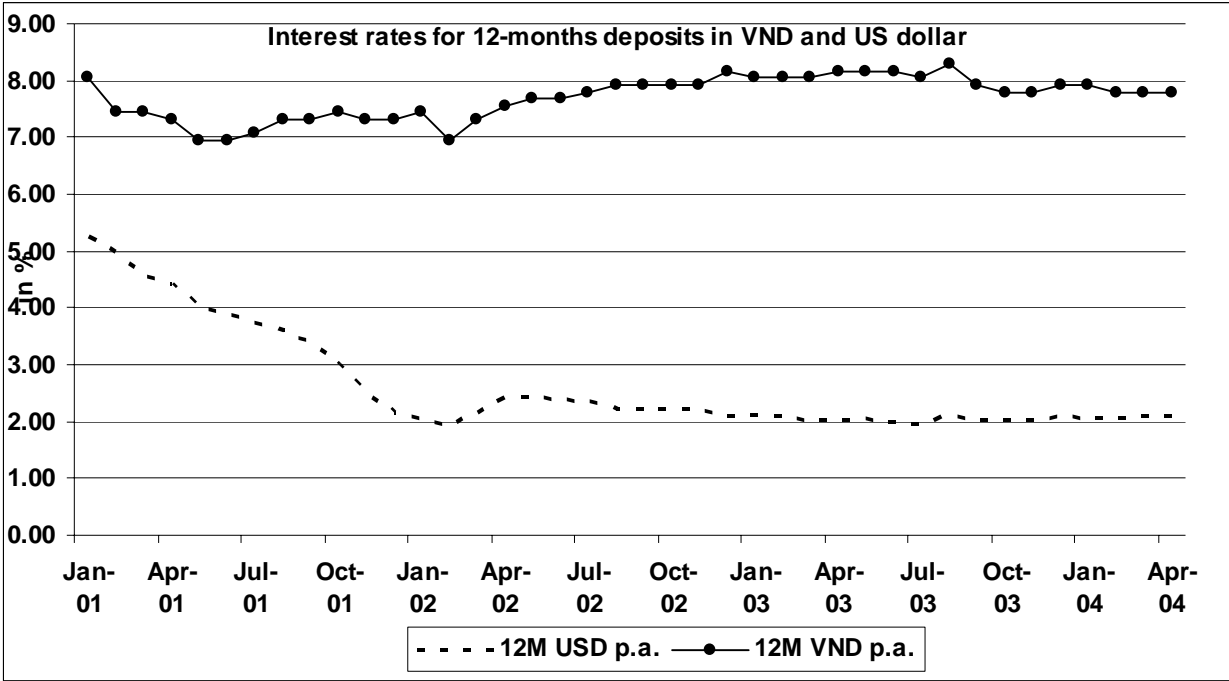
5. Scheme of Actions to Fight Dollarization

Dollarization occurs when a country's currency proves to be weak in its store of value function. However, not every weak currency country is directly dollarized. As stated before, the introduction of dollar deposits and also the quasi legalized domestic use of dollars certainly

fueled the dollarization process in Vietnam. In its current situation of incomplete dollarization, Viet Nam is in the worst of all possible worlds. To regain the exchange rate as an adjustment mechanism and to pursue a more independent monetary policy a de-dollarization of the Vietnamese economy , particularly of the banking system as a sine qua non.

Once a country is dollarized, hysteresis effects make it difficult to reverse the process. As a common pattern, currency related portfolio decisions are very difficult to be overturned. In principle, monetary authorities have to strengthen the quality of the domestic currency and build a robust financial and legal infrastructure as a precondition to reverse dollarization. The final objective having the VND as the only legal tender of the economy implies dollar deposits in the banking system to be prohibited. However, as banks lend in dollars a sudden prohibit of dollar deposits is not feasible. Instead, a gradual approach is needed; business in dollars has to be made unattractive for banks.

Graph 5:

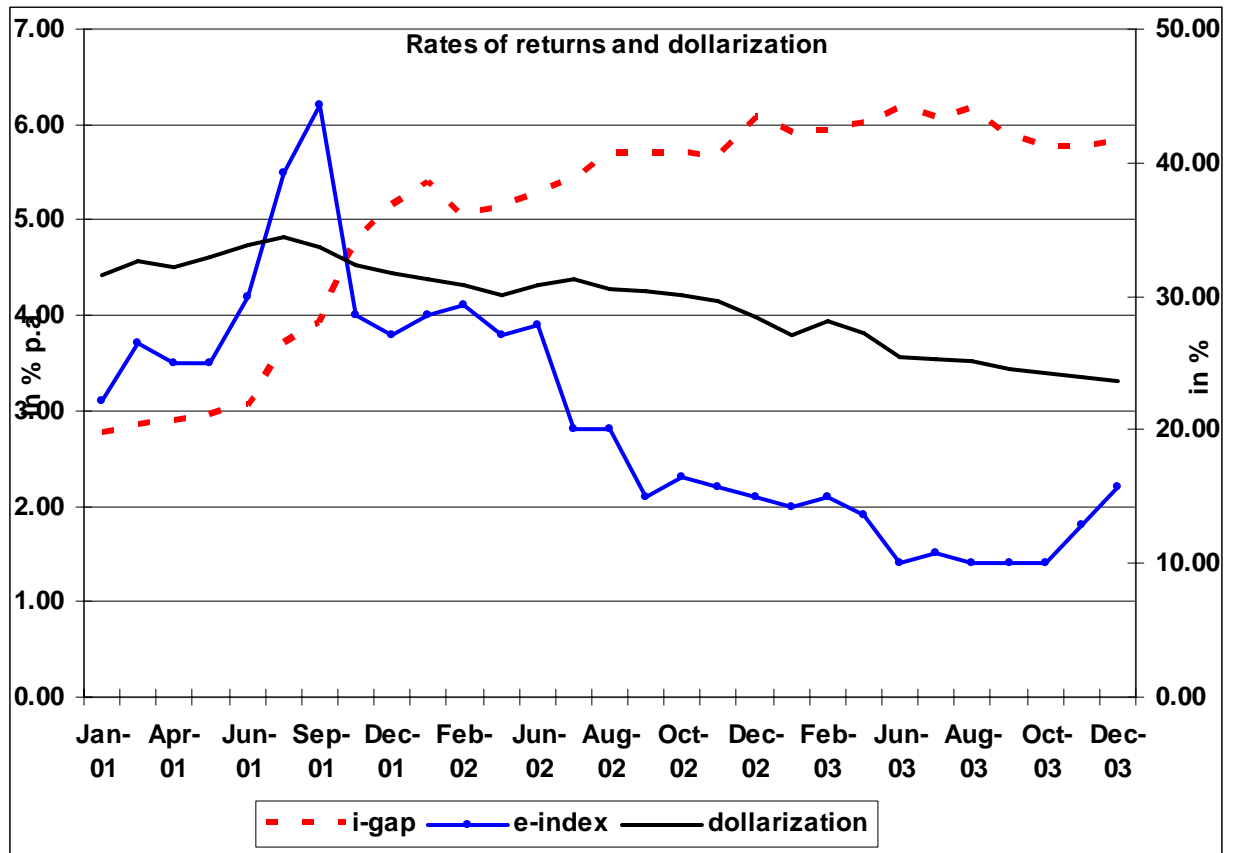


Source: Monetary Survey, SBV

As graphs 5 and 6 indicate, the degree of dollarization is sensitive to the rate of return on deposits denominated in domestic currency and the substituting currency. Graph 5 plots the widening interest rate gap between VND and dollar denominated deposits in Vietnam. Graph 6

ads the ex post devaluation of VND against dollars to calculate the definite ex post rate of return on deposits in both currencies.²² As a result of higher returns on dong deposits investors gradually shifted out of dollar into VND denominated deposits. Dollarization is reversible. The degree of dollarization declined from above 31 percent to close to 23 percent end of 2003.

Graph 6:



where i-gap measures differences in nominal interest rates for both currencies, and the e-index the change of the exchange rate.

Source: Monetary Survey, SBV, own calculations

Additional measures have to be taken to accelerate this process. As a first step, dollar lending by banks should be limited to borrowers with dollar revenues to limit a currency mismatch. This is a second best solution taking into consideration that the dollarization of bank deposits can not be terminated straight away as banks have long-term dollar denominated loans

²² As mentioned above the current exchange rate regime with strict capital controls and a defined maximal yearly depreciation of VND against dollar is rather predictable.

in their portfolio. Still, the selection of potential dollar borrowers with revenues in the same currency aims to reduce the currency mismatch of borrowers.

Second, interest ceilings for dollar deposits should be introduced in order to discourage dollar holdings; the envisaged effect is to motivate a further shift out of U.S. dollar denominated into VND deposits and a repatriation of U.S. dollars outside banks in circulation. For the latter, the use of foreign currency as means of payment and unit of account (pricing) should be strictly prohibited. As indirectly dollarized economies demonstrate the domestic use of dollars as quasi parallel currency can be effectively prevented.

Finally, reserve requirements for dollar deposits should be raised to reduce the profit margin for banks doing dollar denominated business. It is crucial to reduce banks' incentive to attract further U.S. dollar deposits. This measure, taken by the State Bank since 2001, has been proven to be very effective.

With tight capital account restrictions in place it should be possible to reverse dollarization as the public has no legal way to earn legally interest on dollar savings outside the domestic banking system. The successful de-dollarization is a necessary precondition for a more flexible exchange rate regime. With the opening of the financial sector in the coming years and the liberalization of capital account transaction it will be much harder to achieve this objective.

6. Conclusions

The Vietnamese economy is not a promising candidate for a unilateral monetary unification with the U.S.; in other words, dollarization is not beneficial as basically all requirements derived from Optimal Currency Area literature are not in place.

The reason why the Vietnamese economy is dollarized can be tracked back to the financial turmoil of the 1980s and the VND being a weak medium to store value and the decision by monetary authorities in 1988 to accept dollar denominated deposits in the domestic banking system.

The current situation for Vietnam having two currencies that are used parallel in the economy is the worst of all worlds. Unavoidably, considerable currency mismatches occur within and outside the banking system. A significant devaluation of VND against dollar would jeopardize the entire financial system. The only way to avoid such a currency mismatch is to

keep dollars invested abroad. This, however, demonstrates the uselessness of dollarization for economic development.

To reverse the process of dollarization the financial and legal infrastructure has to be improved; further, VND denominated assets should promise a higher rate of return than dollar denominated one. Finally, the use of dollar should increasingly be made unattractive for banks and customers. A successful de-dollarization is necessary given the foreseeable opening of the Vietnamese economy in the context of WTO.

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