The composition and management of capital flows in the Philippines

Amando M Tetangco, Jr[1]

Introduction

The surge in capital flows to emerging market economies in the early to mid-1990s was a reflection of the rapid expansion and integration of international capital markets that had been driven by economic policy and structural changes. Technological advances and the emergence of increasingly sophisticated financial products have likewise increased the speed and complexity of capital account transactions. The global and domestic factors which influence capital flows to emerging markets can be categorised into two broad groups.[2] The first group is composed of country-specific or pull factors which determine the destination of flows. The pull factors include the adoption of economic liberalisation policies, improved macroeconomic performance, more investment opportunities and institutional reforms implemented in some developing countries. The second group covers push factors or those that are outside the control of a borrowing country. These include structural and cyclical conditions in lending countries which determine the timing and magnitude of flows. This paper will review and examine the experience of the Philippines regarding capital flows since the 1990s. It will focus mainly on the policy issues the country faced during the period.

Continued rise in financial integration in Asia

Some countries in Asia have been experiencing greater financial integration in the past two decades. This is based in part on the fact that the magnitude of capital flows in these economies has risen significantly.[3] Table 1 presents gross private capital flows in selected Asian economies and shows that as a percentage of GDP, financial flows indeed increased between the 1980s and the early 1990s.[4] The capital flows peaked around the 1996-98 period, and subsequently declined to more modest levels.

Another indicator of greater financial openness of these countries is the stronger linkage of their equity markets with major equity markets elsewhere in the world. Table 2 presents the simple correlation of stock markets in selected Asian countries with each other and with the equity markets in the United States and Japan.[5] It may be observed that the correlation between the equity markets generally increased during the period 1996-2003 compared to 1990-95.

---

[1] Deputy Governor, Bangko Sentral ng Pilipinas (the central bank).

[2] See, for example, Yap (2001).

[3] For comments on the advantages and disadvantages of gross capital flows as a measure of financial integration see, for example, Montiel (1994).

[4] Gross capital flows are computed as the sum of inflows and outflows of items under the capital and financial accounts of the balance of payments as reported in the IMF's *International Financial Statistics*. Trade credits were not included in the computation.

[5] Computed as monthly returns using end-month data on stock indices.

Table 1

Gross capital flows[1] as a percentage of GDP: selected Asian countries

	Hong Kong SAR	Indonesia	Korea	Malaysia	Philippines	Singapore	Thailand
1980-84	...	4.8	4.8	13.2	7.1	35.4	1.9
1985-89	...	3.5	4.6	7.9	1.9	40.2	4.9
1990-94	...	4.4	5.5	13.9	8.0	40.7	11.0
1995	...	5.6	11.0	9.6	12.1	53.6	17.2
1996	...	5.3	13.1	9.9	18.3	65.3	11.9
1997	...	4.7	8.1	11.9	8.2	128.0	19.0
1998	203.2	10.1	8.3	11.1	8.8	43.0	26.0
1999	166.0	4.2	6.7	18.0	19.4	86.0	19.4
2000	152.7	5.2	7.7	15.4	8.1	59.2	13.4
2001	109.0	5.2	9.7	6.0	4.8	57.3	9.7

[1] Does not include trade credits.

Sources: IMF, *International Financial Statistics*; Bangko Sentral ng Pilipinas.

Table 2

Average correlation of stock market returns[1]

	Hang Seng	Jakarta SE	KOSPI	KLSE	PHISIX	Strait Times	SET	Nikkei 225	Dow Jones
1990-2003	0.52	0.41	0.37	0.48	0.51	0.58	0.51	0.32	0.42
1990-95	0.52	0.33	0.19	0.54	0.48	0.58	0.49	0.25	0.35
1996-2003	0.52	0.47	0.45	0.46	0.53	0.58	0.53	0.40	0.46

[1] Computed as the simple correlation of a stock market with all the other stock markets included in the table.

Source: Bangko Sentral ng Pilipinas.

Trends and impact of capital flows in the Philippines

Trends and composition

Total net capital flows (excluding trade credits) to the Philippines grew steadily from 1992 as the country undertook foreign exchange liberalisation measures. Capital inflows declined in 1995 as access to international financial markets was affected by the Tequila (Mexican peso) financial crisis. The annual increase in capital flows reached a peak of about 220% in 1996 (Table 3b). However, as total capital flows to emerging market economies fell in 1997 in the aftermath of the Asian financial crisis, net capital flows to the country declined in 1997 and 1998. Capital inflows recovered sharply in 1999, supported by a surge in portfolio investments, but have since steadily declined. For the first seven months of 2003, capital and financial account posted a total net outflow of more than $300 million (Table 3a). The deterioration resulted from the weak performance of the direct, portfolio and other investment accounts, reflecting the still cautious stance of investors and net repayment of maturing loans.

Table 3a

Net capital flows in the Philippines[1]

In millions of US dollars

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003[2]
Total capital flows, net	**1,529**	**1,864**	**1,859**	**2,850**	**4,438**	**3,468**	**11,078**	**6,594**	**196**	**4,090**	**3,022**	**1,713**	**818**	**–332**
Capital account	1	0	1	0	0	0	3	1	16	–8	38	–12	–19	–13
Financial account	1,528	1,864	1,858	2,850	4,438	3,468	11,075	6,593	180	4,098	2,984	1,725	837	–319
• Direct investment	528	527	675	864	1,462	2,014	474	1,086	2,108	1,754	1,453	1,142	1,026	10
• Portfolio investment	–128	361	–954	324	1,156	1,227	3,560	1,241	–749	6,874	207	1,050	1,912	1,005
Of which: bonds	*–80*	*236*	*–1,016*	*376*	*887*	*979*	*1,381*	*1,592*	*–829*	*5,519*	*432*	*671*	*1,523*	*853*
• Other investment	1,128	976	2,137	1,662	1,820	227	7,041	4,266	–1,179	–4,530	1,324	–467	–2,101	–1,334
Of which: loans	*511*	*634*	*2,210*	*1,551*	*2,261*	*274*	*4,007*	*1,971*	*2,235*	*318*	*1,661*	*–652*	*–571*	*–763*

[1] Excludes trade credits. [2] January-July.

Source: Bangko Sentral ng Pilipinas.

Table 3b

Net capital flows in the Philippines[1]

Growth rates, in per cent

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003[2]
Total capital flows, net	**21.9**	**–0.3**	**53.3**	**55.7**	**–21.9**	**219.4**	**–40.5**	**–97.0**	**1,986.7**	**–26.1**	**–43.3**	**–52.2**	**–127.1**
Capital account	–100.0	.	–100.0	.	.	.	–66.7	1,500.0	–150.0	575.0	–131.6	–58.3	–44.4
Financial account	22.0	–0.3	53.4	55.7	–21.9	219.3	–40.5	–97.3	2,176.7	–27.2	–42.2	–51.5	–125.9
• Direct investment	–0.2	28.1	28.0	69.2	37.8	–76.5	129.1	94.1	–16.8	–17.2	–21.4	–10.2	–98.9
• Portfolio investment	382.0	–364.3	134.0	256.8	6.1	190.1	–65.1	–160.4	1,017.8	–97.0	407.2	82.1	–21.5
Of which: bonds	*395.0*	*–530.5*	*137.0*	*135.9*	*10.4*	*41.1*	*15.3*	*–152.1*	*765.7*	*–92.2*	*55.3*	*127.0*	*–7.8*
• Other investment	–13.5	119.0	–22.2	9.5	–87.5	3,001.8	–39.4	–127.6	–284.2	129.2	–135.3	–349.9	–45.2
Of which: loans	*24.1*	*248.6*	*–29.8*	45.8	*–87.9*	*1,362.4*	*–50.8*	*13.4*	*–85.8*	*422.3*	*–139.3*	*12.4*	*–633.6*

[1] Excludes trade credits. [2] Growth for the period January-July 2003 was computed relative to the comparable level for 2002.

Source: Bangko Sentral ng Pilipinas.

Table 3c

Composition of capital flows in the Philippines[1]

In per cent

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003[2]
Capital account	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	8.2	–0.2	1.3	–0.7	–2.3	–3.9
Financial account	99.9	100.0	99.9	100.0	100.0	100.0	100.0	100.0	91.8	100.2	98.7	100.7	102.3	–96.1
• Direct investment	34.5	28.3	36.3	30.3	32.9	58.1	4.3	16.5	1,075.5	42.9	48.1	66.7	125.4	3.0
• Portfolio investment	–8.4	19.4	–51.3	11.4	26.0	35.4	32.1	18.8	–382.1	168.1	6.8	61.3	233.7	302.7
Of which: bonds	*–5.2*	*12.7*	*–54.7*	*13.2*	*20.0*	*28.2*	*12.5*	*24.1*	*–423.0*	*134.9*	*14.3*	*39.2*	*186.2*	*256.9*
• Other investment	73.8	52.4	115.0	58.3	41.0	6.5	63.6	64.7	–601.5	–110.8	43.8	–27.3	–256.8	–401.8
Of which: loans	*33.4*	*34.0*	*118.9*	*54.4*	*50.9*	*7.9*	*36.2*	*29.9*	*1,140.3*	*7.8*	*55.0*	*–38.1*	*–69.8*	*–229.8*

[1] Excludes trade credits. [2] January-July.

Source: Bangko Sentral ng Pilipinas.

In terms of composition, direct investments and loan availments comprised a significant share of foreign flows as they accounted for an average of about 37% and 50%, respectively, during the period 1990-95 (Table 3c). The share of these two components declined significantly in 1996-97 but recovered in 1998. From 1999 portfolio investments, particularly investments in bonds, and direct investments have generally been the most important sources of capital inflows.

Impact

The surge in capital flows in the 1990s affected the performance of the Philippine economy. Several areas were influenced by the trends in capital flows including the growth of domestic liquidity, volatility of financial markets, the movement of the real exchange rate and even asset booms.

1. Domestic liquidity, credit and dollarisation

Domestic liquidity and credit. From 1990 to 1997, domestic liquidity (M3) grew by an average of 19.8% annually (Table 4). The growth in money supply, which peaked at 26.5% in 1994, was supported by the rapid expansion in both the net foreign assets (NFA) and net domestic assets (NDA) of residents. NFA reverted to positive levels starting 1992 and grew as the liberalisation of foreign exchange regulations beginning that year resulted in higher foreign exchange inflows, including those from remittances of overseas Filipino workers (OFWs). This development helped boost the monetary authorities' NFA position, as banks and the national government sold part of their foreign exchange holdings to the central bank, the Bangko Sentral ng Pilipinas (BSP). However, NFA contracted in 1996 and was negative in 1997 following the Asian financial crisis. Meanwhile, NDA continued to grow from 1993 to 1997 as the intermediation of capital inflows by banks resulted in the expansion of the industry's resources and, consequently, a rise in credit growth, particularly to the private sector.

Table 4

Domestic liquidity

1990-August 2003

	Level (in millions of pesos)			Annual growth rate (in per cent)		
	NFA	**NDA**	**M3**	**NFA**	**NDA**	**M3**
1990	(93,816)	474,495	300,541	32.74	26.66	18.36
1991	(15,580)	453,822	347,079	83.39	–4.36	15.48
1992	62,986	432,590	385,385	504.27	–4.68	11.04
1993	82,882	552,745	480,329	31.59	27.78	24.64
1994	99,291	690,298	607,614	19.80	24.89	26.50
1995	111,408	907,313	761,430	12.20	31.44	25.31
1996	80,052	1,196,920	881,404	–28.15	31.92	15.76
1997	(76,855)	1,684,692	1,066,017	–196.01	40.75	20.95
1998	140,506	1,538,819	1,144,552	282.82	–8.66	7.37
1999	328,982	1,608,735	1,365,098	134.14	4.54	19.27
2000	342,667	1,736,698	1,427,397	4.16	7.95	4.56
2001	405,326	1,759,550	1,525,032	18.29	1.32	6.84
2002	541,411	1,809,334	1,669,662	33.57	2.83	9.48
Aug 2003	605,338	1,741,001	1,619,013	13.81	4.11	3.77

Source: Bangko Sentral ng Pilipinas.

Beginning in 1998, the growth in M3 declined markedly as the slowdown in NDA offset the continued rise of NFA. The deceleration in NDA may be attributed mainly to lower net credits to the private sector as the weak performance of the corporate sector during this period prompted banks to adopt a more cautious lending stance. At the same time, the economic slowdown and uncertainty in the international and domestic environment dampened the private sector's appetite for credit. The increase in NFA may be attributed partly to revaluation adjustments arising from the general depreciation of the peso starting in 1997.[6]

Dollarisation.[7] The magnitude of dollar-denominated assets held by residents or the degree of dollarisation has been increasing since the 1990s to coincide with the surge in capital inflows.[8] Using the IMF standard, an economy is considered highly dollarised if the ratio of foreign currency deposits (FCDs) to money supply is greater than 30%. Table 5 shows that the ratio of FCDs to M3 for the Philippines increased from 21.2% in 1990 to 40.8% as of August 2003. Meanwhile, the ratio of FCDs to M4 (which is comparable to the IMF methodology) increased from 17.5 to 29.0% in the same period. This implies that the Philippines is nearing the threshold for a highly dollarised economy based on the standard set by the IMF. The increasing trend in dollarisation of the country could be attributed to institutional changes, particularly capital account liberalisation. The liberalisation of foreign exchange regulations in 1992 facilitated greater access of nationals to foreign currency assets and was mainly behind the surge in portfolio investments to the Philippines. The strength of foreign exchange inflows from OFWs and the recovery of exports also contributed to the continued growth in FCDs of non-bank residents. Expectations on the movements of the exchange rate likewise played a role in the build-up of FCDs. The expectation of a depreciating trend in the peso has partly encouraged foreign exchange earners to keep some portion of their dollar receipts in FCDs. The degree of dollarisation peaked in 1998 and has since remained generally at the same level.

Table 5

Ratio of FCDs to broad monetary aggregates

January 1990-August 2003

	M3	FCDs	M4=M3+FCDs	FCDs/M3	FCDs/M4
1990	300,541	63,808	364,349	21.23	17.51
1991	347,079	77,225	424,304	22.25	18.20
1992	385,385	94,458	479,843	24.51	19.69
1993	480,329	136,158	616,487	28.35	22.09
1994	607,614	158,788	766,402	26.13	20.72
1995	761,430	206,691	968,121	27.15	21.35
1996	881,404	317,564	1,198,968	36.03	26.49
1997	1,066,017	433,428	1,499,445	40.66	28.91
1998	1,144,552	477,935	1,622,487	41.76	29.46
1999	1,365,098	521,664	1,886,762	38.21	27.65
2000	1,427,397	585,986	2,013,383	41.05	29.10
2001	1,525,032	586,087	2,111,119	38.43	27.76
2002	1,669,662	628,448	2,298,110	37.64	27.35
Aug 2003	1,619,013	660,658	2,279,671	40.81	28.98

Source: Bangko Sentral ng Pilipinas.

6 The revaluation adjustments to the asset side are reflected under NFA while adjustments to the liability side are reflected under NDA (ie net other items).

7 Official or full dollarisation occurs when foreign currency (the US dollar is the most common) has exclusive or predominant status as full legal tender. This means that not only is foreign currency legal for use in contracts between private parties, but that the government also uses it in payments. Domestic currency may still exist but it is confined to a very minor role, usually coins that are used for small change. Meanwhile, partial dollarisation occurs when people hold a portion of their financial wealth in foreign assets. This is equivalent to "asset substitution" which results from the public's allocation decisions in view of the risk and return characteristics of domestic and foreign assets.

8 Theoretically, the extent of dollarisation is measured by the amount of dollar-denominated assets held by nationals. These cover dollar currency circulating within the economy, foreign currency deposits in the domestic economy, and cross-border deposits held in banks abroad. In practice, because of data constraints, the extent of dollarisation is usually measured by the ratio of foreign currency deposits held by residents to a broad money aggregate.

2. Volatility

Foreign exchange market. During the period 1980-89, the Philippine peso was generally stable with the average standard deviation of the daily exchange rates during the period at ₱0.60 (Table 6). Volatility increased to an average of ₱1.12 during the next five years (1990-94) as the rise in capital inflows exerted appreciation pressures on the peso in the foreign exchange market. Average volatility rose further to an average of ₱1.33 in 1995-99 as a result of heightened pressure on the peso following domestic and external shocks, such as the 1995 Tequila, 1997 Asian and 1998 Russian financial crises and the 1995 rice crisis. The spread of investor pessimism on emerging markets following the financial crisis in mid-1997 led to a slowdown in capital inflows into the Philippines and severe depreciation pressure on the peso. Volatility again rose to an average of ₱1.74 in 2000-03 with the sharp depreciation of the peso as a result of persistent negative market sentiment. Domestic political concerns led to a slowdown in foreign exchange inflows and fluctuations in the peso-dollar rate.

Table 6

Average FX volatility[1]

	Average
1980-89	0.60
1990-94	1.12
1995-99	1.33
2000-03	1.74

[1] Standard deviation of the daily FX rates.

Source: Bangko Sentral ng Pilipinas.

Stock market. The volatility of the local equity market during the period 1995-2003 is shown in Table 7. The volatility of the Philippine Stock Market Composite Index (PHISIX) averaged about 270.79 index points during 1995-99 as higher risk aversion and herding behaviour by investors during the 1997 Asian financial crisis reversed portfolio equity flows. The next four years (2000-03) were more stable, with average volatility of 169.22 index points despite the political and security concerns during the period. The local stock market has generally been stable during the past two years due to positive macroeconomic developments in the Philippines.

Table 7

PHISIX average volatility[1]

	Average
1995-99	270.788
2000-03	169.2225

[1] Standard deviation of the daily PHISIX (Philippine Stock Market Composite Index).

Source: Bangko Sentral ng Pilipinas.

3. Real effective exchange rate (REER)

The surge in capital inflows during the first half of the 1990s led to a nominal appreciation of the peso. Inflation during this period was moderate despite the rapid growth of money supply as the economy was undergoing financial deepening and the demand for money increased. The moderate level of inflation combined with the nominal appreciation of the peso contributed to a real appreciation in the REER index of the peso against the currency baskets of its major trading partners (MTPs) and competitor countries (CCs) (Table 8).

Table 8

Average real effective exchange rate index of the peso

Dec 1980 = 100

	Level			Change, in per cent		
	Major trading partners[1]	Competitor countries		Major trading partners[1]	Competitor countries	
		Broad[2]	Narrow[3]		Broad[2]	Narrow[3]
1990	69.20	86.90	124.41	–2.14	–2.97	–0.97
1991	68.18	84.32	126.38	–1.47	–2.97	1.58
1992	76.37	92.68	140.70	12.01	9.91	11.33
1993	74.15	91.48	133.76	–2.91	–1.29	–4.93
1994	79.57	95.75	141.92	7.31	4.67	6.10
1995	84.30	102.20	146.36	5.94	6.74	3.13
1996	90.53	106.57	147.11	7.39	4.28	0.51
1997	88.08	107.09	156.26	–2.71	0.49	6.22
1998	69.00	122.24	218.11	–21.66	14.15	39.58
1999	73.95	117.89	189.70	7.17	–3.56	–13.03
2000	68.68	109.54	169.97	–7.12	–7.08	–10.40
2001	64.19	113.84	180.49	–6.54	3.92	6.19
2002	63.41	106.48	161.41	–1.21	–6.47	–10.57
Oct 2003	57.40	99.24	145.21	–10.50	–7.68	–11.17

Note: Deutsche mark rates derived by dividing the euro-dollar rate by a fixed euro-Deutsche mark rate.

[1] Euro area, Japan, United Kingdom, United States. [2] Hong Kong SAR, Indonesia, Korea, Malaysia, Singapore, Taiwan (China), Thailand. [3] Indonesia, Malaysia, Thailand.

Source: Bangko Sentral ng Pilipinas.

Meanwhile, the slowdown in capital inflows and the eventual reversal to outflows which occurred during the period 1997-2003 led to a depreciation of the REER of the peso against the MTP basket of currencies. Against CCs, the peso initially lost competitiveness as the REER for the broad and narrow baskets of CCs appreciated during the second half of the 1990s. This was due to the greater nominal depreciation of CCs against the US dollar. However, during the last three years, the REER against the broad and narrow baskets of competitor currencies has posted depreciations, due mainly to the nominal depreciation of the peso against the currencies in these baskets and the narrowing of the inflation differentials.

4. Asset price inflation

The surge in capital flows and the growth of the economy were also accompanied by a rapid rise in real estate prices. Selected real property prices in the central financial districts in Metro Manila, Philippines are shown in Table 9.

Table 9

Selected indicators of real property prices in the Philippines

Pesos/sqm

	Commercial land values		Residential capital values[1]	Residential rental values[2]
	Makati[3]	Ortigas	Makati	Makati
1991	80,000	45,000	25,000	250
1992	83,500	50,000	30,000	310
1993	111,500	60,000	34,000	275
1994	182,500	75,000	36,500	300
1995	312,500	110,000	56,000	330
1996	412,500	180,000	64,000	460
1997	425,000	195,000	64,000	475
1998	312,500	120,000	74,000	500
1999	237,500	105,000	72,500	327
2000	223,125	98,750	70,834	369
2001	180,000	80,000	65,000	358
2002	171,250	77,500	64,500	345
2003[4]	171,250	77,500	64,000	331

[1] Residential capital value is computed as price of floor area of commercial/residential condominium space. [2] Monthly rental values. [3] For 1991-96, average commercial land values for the Ayala, Paseo de Roxas and Salcedo Village properties. For 1997 onwards, commercial land values for the whole Makati Central Business District (CBD), including Ayala, Paseo de Roxas and Salcedo Village properties. [4] As of March 2003.

Sources: 1991-97, Cuevo Far East, Inc, Metro Manila; August 1997, Market Overview; 1997-2002, Colliers Jardine Philippines, Inc.

Commercial real property prices in Makati and Ortigas peaked in 1997, having grown more than fivefold and fourfold, respectively, from the price levels in 1991. Residential property prices, on the other hand, peaked in 1998, increasing by about twice the price levels in 1991. Commercial and residential property prices showed a downtrend after 1997 amid investor fears of a property glut occurring in the country similar to that observed in countries more severely affected by the Asian crisis.

The trend in capital flows also partly influenced the performance of the domestic equity market (Table 10). The PHISIX surged by a record 154.8% in 1993 due to the sustained single digit inflation rate, higher GNP growth and significant structural reforms undertaken since the start of the 1990s. Among the important reforms which contributed to brisk activity in the stock market were the liberalisation of foreign investments and the lifting of foreign exchange restrictions. In late 1994 and 1995, however, the PHISIX posted declines of 14.1% and 6.9%, respectively, due to both external (Mexican crisis and fall of Barings) and domestic factors (build-up in inflationary pressures and pending implementation of an oil price hike). The market posted a modest recovery in 1996 but lost momentum in 1997 during the Asian financial crisis. Some strengthening was experienced in 1998 and 1999 with a decline in interest rates and the restoration of some stability in the foreign exchange market. The recovery in the market was, however, not sustained as domestic political and security concerns and global uncertainty tempered investor activity in the equity market from 2000 until late 2003.

Table 10

Stock market for the period 1990-2003

	PHISIX	
	Level	**Growth rate**
1990	653.1	–41.2
1991	1,154.3	76.7
1992	1,272.4	10.2
1993	3,241.9	154.8
1994	2,785.8	–14.1
1995	2,594.2	–6.9
1996	3,170.6	22.2
1997	1,869.2	–41.0
1998	1,968.8	5.3
1999	2,143.0	8.8
2000	1,494.5	–30.3
2001	1,168.1	–21.8
2002	1,018.4	–12.8
Oct 2003	1,399.1	37.4

Source: Bangko Sentral ng Pilipinas.

Policy responses to the increase in the magnitude of capital flows

The increase in the magnitude and the reversal of capital flows brings to the fore various issues that need to be addressed by monetary authorities. The impact of capital flows on liquidity growth, degree of dollarisation and financial markets required adjustments in the conduct of monetary policy. Another response undertaken by monetary authorities to the rise in capital flows was the strengthening of the domestic financial system. These adjustments in monetary and financial sector policies were further complemented by, among others, initiatives to improve the monitoring of capital flows and the development of early warning systems.

Implications for the conduct of monetary policy in the Philippines

Greater financial integration means increased inflows of capital that can ease the foreign exchange requirement of a country. However, the inflows, by their sheer magnitude, could have some destabilising effects on the economy that would complicate the task of monetary and exchange rate management.

During the surge of inflows in the early to mid-1990s, there were concerns that the appreciation of the peso might adversely affect the country's competitiveness. Some participation in the foreign exchange market by the BSP, through dollar purchases, was required to stem the sharp strengthening of the peso and avoid a substantial loss in competitiveness. While such action addresses the competitiveness issue, there were concerns that the accommodation of the capital inflows by the monetary authorities might lead to expansion in liquidity and create inflationary pressures. However, the monetary authorities noted that the economy was undergoing a period of financial deepening and that the demand for money was expanding. The financial deepening was indicated by the notable rise in both the M4/GDP and M3/GDP ratios during the first half of the 1990s as the economy was undergoing a process of financial liberalisation (Table 11). It was also noted that the acceleration in the expansion of domestic liquidity, particularly in 1993-95, was not accompanied by a significant uptick in inflation. Thus, some additional expansion in domestic liquidity might not necessarily be inflationary, as this was used to support the expansion of activities in the economy. Accordingly, monetary policy partly accommodated the capital inflows and tolerated some uptick in the growth of money supply. The BSP built up its net foreign assets with the impact on domestic liquidity only partially sterilised. Changes in the net domestic assets of the BSP did not completely offset the increases in its net foreign assets (Table 12). This approach allowed the provision of adequate liquidity to support economic growth while ensuring that inflation objectives were achieved.

Table 11

Indicators of financial deepening, 1990-2002

	M4/GDP	**M3/GDP**	**M4 growth**	**M3 growth**	**Inflation**
1990	33.82	27.90	22.36	18.36	13.20
1991	34.00	27.81	16.46	15.48	18.50
1992	35.50	28.51	13.09	11.04	8.60
1993	41.81	32.58	28.48	24.64	7.00
1994	45.27	35.89	24.32	26.50	8.30
1995	50.79	39.95	26.32	25.31	8.00
1996	55.20	40.58	23.84	15.76	9.10
1997	61.79	43.93	25.06	20.95	5.90
1998	60.88	42.95	8.21	7.37	9.70
1999	63.38	45.86	16.29	19.27	6.70
2000	60.02	42.55	6.71	4.56	4.40
2001	57.47	41.51	4.85	6.84	6.10
2002	57.13	41.51	8.86	9.48	3.10

Source: Bangko Sentral ng Pilipinas.

Table 12

Change in net foreign assets and net domestic assets of the BSP

In billions of pesos

	NFA	**NDA**
1991	71,997	–51,355
1992	106,711	–91,236
1993	18,607	8,301
1994	35,015	–24,348
1995	26,572	3,750
1996	114,316	–83,793
1997	–20,776	43,978
1998	21,341	–47,973
1999	120,673	–38,775
2000	54,454	–67,973
2001	–13,525	18,185
2002	82,382	–39,171

Source: Bangko Sentral ng Pilipinas.

During the second half of the 1990s, Philippine policymakers again faced conflicting policy choices in times of sudden reversals of capital flows and exaggerated fluctuations in the foreign exchange rate. On the one hand, tight monetary policies were required to adjust to the diminished demand for domestic assets, limit the extent of exchange rate depreciation, and contain inflationary pressures. On the other hand, tight monetary policy could create an adverse impact on corporate and financial health. The BSP undertook a delicate balancing act of limiting the depreciation of the currency and the rise in interest rates. The goal was to allow some depreciation and accept a temporary rise in interest rates to restore stability in the foreign exchange market and at the same time limit the adverse effects on the balance sheets of banks and corporates.

In January 2002, the BSP formally shifted to an inflation targeting framework from a monetary aggregate targeting approach in formulating monetary policy. The shift in the policy framework was prompted by the observation that the historical relationship between inflation and money supply had weakened, thus undermining the effectiveness of a monetary aggregate targeting policy framework. This weakening of the link between inflation and money supply could partly be attributed to the effects of financial liberalisation, such as the emergence of new financial products and increased financial integration.

Under the inflation targeting framework, capital flows can have important implications for monetary policy formulation. They influence monetary policy essentially because of their impact on exchange rates, which in turn affect domestic prices. Massive and sudden outflows of foreign funds result in volatile exchange rates affecting import prices and inflation. Current estimates of the exchange rate pass-through into inflation in the Philippines indicate a minimal influence on consumer prices. Sensitivity analysis shows that a one-peso depreciation against the dollar leads to about a 0.11 percentage point cumulative annual increase in inflation. However, if exchange rate movements subsequently lead to wage and oil price adjustments, then the impact on inflation would be higher. Statistical exercises estimate that a one-peso depreciation against the dollar combined with a 1% increase in domestic oil prices lead to about a 0.16 percentage point cumulative annual increase in inflation. Meanwhile, a 1% increase in wages increases inflation by an average of about 0.065 percentage points over a 12-month period.

Another channel through which capital flows can affect prices and inflation expectations is the interest rate channel. An outflow of capital or a drop in access to foreign financing would imply a corresponding increase in demand for domestic financing, from both banks and non-banks. If the domestic liquidity situation is tight, the loss of access to foreign capital may lead to an increase in interest rates and can have inflationary repercussions.

Finally, capital flows can affect the conduct of monetary policy through their direct impact on money supply, which, in turn, can possibly affect future inflation outcomes. Significant capital flows influence domestic liquidity via changes in net foreign assets and this impact is monitored by monetary authorities. Moreover, increased capital flows can also have important implications on how we measure liquidity in the economy. As the use of foreign exchange in domestic transactions becomes more widespread, the measure of monetary aggregate should include a foreign currency component. Thus, monetary authorities are now monitoring developments in M4, which includes foreign currency denominated deposits held by residents, and assessing their impact on the inflation outlook.

Promotion of the stability and efficiency of the domestic financial system to support stable capital flows

The new globalised economic environment has created opportunities as well as risks in the financial system. The risks have been highlighted by the impact of the 1997 Asian crisis on the banking system. For example, as the performance of the corporate sector slowed down and the property market declined, the quality of banks' loan portfolios significantly deteriorated (see Table 13 in the next section). However, the impact of the crisis on the banking sector was not as dramatic as that observed in the other crisis-hit countries. This may be attributed to the fact that other countries experienced a surge in capital flows earlier than the Philippines (see, for example, Table 1). Thus, the Philippine banking system was not as exposed as those in the other countries, such as in the property sector or in accumulating foreign exchange liabilities.

In response to the distress experienced in the banking sector, the BSP embarked on an aggressive and wide-ranging reform process. It adopted changes in the regulatory and supervisory framework to be able to effectively meet the demands and challenges of globally integrated financial markets and the growing sophistication of financial products and services. This process of reform is geared towards greater commitment to risk management, strengthening of the regulatory framework and supervision techniques, promotion of transparency and good corporate governance, and putting in place the necessary infrastructure requirements. The BSP, working closely with the banking sector, has made important progress on these fronts.

The umbrella for the reform process was the enactment of the General Banking Law (GBL) in May 2000. This legislation amended the old banking law and comprehensively updated the basic legal framework for the regulation and supervision of the banking system. The law provided for the enhancement of the supervisory capability and enforcement powers of the BSP, the improvement of prudential and regulatory standards, and the encouragement of greater competition in the financial industry. Some of the specific features of this new law include:

- granting authority to the Monetary Board to require banks to adopt internationally accepted standards relating to risk-based capital adequacy;
- providing for stricter rules governing bank exposure to directors, officers, stockholders and related interests (DOSRI);
- strengthening current regulations with respect to transparency practices;
- adopting fit-and-proper rule tests in the appointment of bank directors and senior bank officials; and
- liberalising further the ownership participation of foreign banks in the local banking system to 100% within seven years of the Act coming into force.

In terms of upgrading the regulatory framework, the BSP adopted a risk-based approach to bank supervision to effectively manage risks inherent in today's highly complex financial environment and avoid potential bank as well as systemic problems. A key element of this approach is the introduction of a risk-based capital adequacy framework consistent with international best practice.[9] Initially, the new capital requirement covers only credit risk and prescribes a 10% risk-based capital ratio on a solo and consolidated basis.[10] Recently the BSP released the guidelines for incorporating market risk into the capital adequacy framework.

The emergence of financial conglomerates also raised concerns on the effectiveness of the traditional approach to managing banking risks. Thus, the BSP implemented a consolidated approach to supervision. With this approach the BSP has strengthened its regulatory oversight by having a more comprehensive assessment of the risks involved in the activities of financial groups.[11]

Furthermore, to avoid systemic failures, the BSP launched intensive monitoring of banks by improving its on- and off-site surveillance system, adopting a proactive approach in managing problem banks, and designating specialised prompt corrective action units to handle potential problem banks.

To facilitate the efforts by banks to improve the quality of their loan portfolios, the BSP supported the passage of the Special Purpose Vehicle Act (SPVA) of 2002. The SPVA provides tax incentives to facilitate the establishment of private sector led asset management companies which would buy banks' non-performing assets and enable banks to clean up their balance sheets. Already, two asset management firms have registered with the Securities and Exchange Commission since the enactment of the SPVA. There are no transactions yet involving the bulk transfer of non-performing assets of banks but there are ongoing negotiations, primarily on pricing differences. In a survey conducted by the BSP in August 2003, about 20 commercial banks expressed intentions to avail themselves of the benefits provided under the SPVA.

---

[9] The legal basis for the risk-based capital requirement is embodied in Section 34 of the General Banking Law of 2000.

[10] Circular no 280 dated 29 March 2001 contained the guidelines on the risk-based capital adequacy framework which initially covered only capital requirements for credit risks. Circular no 360 dated 3 December 2002 specified the guidelines to incorporate market risk into the framework for universal and commercial banks.

[11] In fact, the BSP reorganised its departments under the Supervision and Examination Sector (SES) and a regrouping of the banks assigned to the various bank examination departments whereby parent banks are grouped with their subsidiaries and affiliates in line with consolidated supervision.

The BSP also strengthened and aligned its prudential standards with international norms for better corporate governance, greater transparency and reduced moral hazard. These measures highlight the fundamental obligation of the board of directors that it is held primarily responsible for the proper governance of the bank. Some of the specific initiatives to this end include:

- expanding the duties and responsibilities of the board of directors to achieve a more prudent and efficient administration of banks;
- requiring directors to attend special seminars on corporate governance;
- requiring the election of independent directors as members of the boards of directors of banks;
- selecting external auditors with a high level of competence and integrity; and
- adopting sound accounting rules in the compilation of financial statements, including those relating to classification of loan account, loan loss provisioning and loan restructuring.

Support infrastructure was upgraded to make the financial system more efficient. Along this line, the BSP initiated the upgrading of the existing payment system to a real-time gross settlement (RTGS) system. The Philippine RTGS, also known as the Philippine Payment System or PhilPASS, was formally launched in December 2002. It is expected to minimise systemic risk as it allows real-time high-value payments between banks to be made using their deposit accounts with the BSP.

To contribute to raising the quality of credit ratings the BSP issued a set of rules and regulations that will govern the recognition and derecognition of domestic credit rating agencies for bank supervisory purposes. The rules and regulations prescribe that:

- an applicant rating agency will be recognised by the BSP upon satisfaction of the minimum eligibility criteria, which include, among others, objectivity, independence, transparency, credibility, and compliance with internal procedures and certain disclosure requirements;
- while no minimum capital is required, credit rating agencies should have the financial capability to invest in the necessary technological infrastructure and employ sufficient professional analytical staff to ensure proper discharge of their duties and responsibilities; and
- existing credit rating agencies should have a track record of at least five years in the issuance of reliable and credible ratings, while in the case of new entrants, a probationary status may be granted on condition that they employ professional analytical staff with sufficient experience in the credit rating business.

The adoption of the criteria for the accreditation of credit rating agencies will help ensure that the reliance of industry players and regulators on their ratings is well placed.

Another measure that contributes to the build-up of market infrastructure is the establishment of the Fixed Income Exchange by the Bankers Association of the Philippines (BAP). At the time of writing there was no organised venue for the trading of debt securities, with Government Securities Eligible Dealers (GSEDs) and other SEC-registered selling agencies facilitating the trading of government and corporate instruments. To address this concern the BSP supported the establishment of an alternative fixed income exchange (FIE) that will provide the platform for the secondary trading of private and public fixed income securities such as government securities, commercial paper and asset-backed securities issued by companies.[12] The setting-up of the FIE will promote transparency and price

[12] In relation to this, the Monetary Board, in May 2003, approved the BAP proposal for the BSP to act as a central custodian of banks' proprietary holdings of government securities. At present, these are held electronically at the Registry of Scripless Securities of the Bureau of the Treasury (BTr), which registers the ownership of uncertificated and scripless government securities by debiting or crediting the respective securities account of the banks that are RoSS members while the cash settlement is performed by the BSP upon the advice of the BTr. The BSP's custodianship will effectively eliminate settlement risk, as there will be simultaneous execution of cash and government securities settlement by one institution. The BSP can also do the marking-to-market of securities for a credible valuation of banks' government securities holdings. The Monetary Board also approved in principle the operational framework of the Philippine Depository and Trust Company (PDTC) to provide a central securities depository and registry system, among others. Moreover, in July 2003, the BSP issued regulations allowing universal/commercial/thrift banks to invest in the FIE.

discovery in fixed income securities and further boost the deepening of the capital market. The growth of the capital market is expected to reduce the reliance on bank lending for credit.

Improvements in the monitoring and transparency of capital flows

In response to the increase in the volume of capital flows, there is a need to upgrade monitoring and transparency mechanisms with respect to such flows. A timely and comprehensive set of data on capital flows is important in guiding policymaking and in facilitating the functioning of markets. Information on capital flows can help economic authorities anticipate possible exchange rate movements or evaluate access conditions in international capital markets. Transparent data on capital flows can also help investors in evaluating the sustainability of a country's external imbalances and economic prospects. To help reduce external vulnerability, the BSP has been strengthening its capacity to monitor capital movements and improving its balance of payments statistics. Monetary authorities are closely monitoring the magnitude and maturity profile of external obligations to avoid any bunching of maturities. Moreover, advance portfolio investment data from top custodian banks are being used and certain data are being incorporated into existing reporting requirements submitted by banks to the BSP to serve as early signs of any shifts in investor sentiment.

To improve the transparency of economic information, the Philippines started subscribing to the IMF's Special Data Dissemination Standards (SDDS) in 1996. By January 2001, the Philippines was in full compliance with the SDDS in the dissemination of the relevant data through the internet in accordance with the prescribed timeliness and frequency. The BSP's participation in the SDDS has enhanced its capability to generate accurate and comparable macroeconomic and financial information on a regular and timely basis. This will contribute significantly to improving the quality and depth of its early warning system database.

To facilitate the adoption of international norms, the Philippines is also participating in the formulation of Reports on the Observance of Standards and Codes (ROSCs). These reports will assess the extent to which the Philippines conforms to various key international standards and codes that are relevant to the effective functioning of its economic and financial system.[13] Recently, the Data Module of the ROSC was conducted for the Philippines, aimed at inducing improvements in data needed by market participants and other users.[14] Resulting gains in transparency are expected to enable market participants and others to formulate better analysis, forecasts and investment decisions, thus reducing uncertainty and helping investors price risk on a sounder basis. The module covered assessment of dissemination practices as well as data quality for national accounts, consumer prices, producer prices, balance of payments, government finance, and monetary statistics.

To complement the activities under the ROSCs the Philippines is also participating in the IMF-World Bank Financial Sector Assessment Program (FSAP), which is aimed at providing a comprehensive assessment of the strengths, risks and vulnerabilities of the financial system. The BSP and the Department of Finance agreed to a phased implementation of the FSAP, with the first mission having visited the country in October 2001. The results of the exercise are expected to help the national authorities identify and prioritise policy responses to enhance the efficiency and improve the resiliency of the financial sector against economic and other disturbances. Furthermore, the FSAP will also guide the IMF and the World Bank in their provision of development and technical assistance to the Philippine financial sector in the future. The FSAP mission in the Philippines recognised the important reforms in the financial sector that have been implemented and are still being pursued by the

---

[13] Initially, the Philippines participated in the experimental stage of the ROSCs and was benchmarked against the standards and codes in the areas of corporate governance, accounting and auditing, and insolvency and creditor rights. The Philippine ROSC on Corporate Governance, which was released in September 2001, cited the advances made by the Philippines in the formation of bodies focused on governance issues (eg the Philippine Commission on Governance and the Institute for Corporate Directors) and the implementation of legal and regulatory reforms (eg the Securities Regulation Code). To strengthen the Philippine corporate governance system, the report suggested that further measures need to be pursued relating to issues on disclosure of non-financial information, strengthening the rights of shareholders, enhancing the role of boards of directors and ensuring the independence of audit. Three ROSC modules have been completed for the Philippines to date: Fiscal Transparency (5-18 September 2001); Monetary and Financial Policy Transparency (latter part of 2001); and the Data Module (1-16 September 2003).

[14] The assessment of data quality was based on the Data Quality Assessment Framework (DQAF) developed by the IMF Statistics Department and focused on methodological soundness, accuracy and reliability, serviceability and accessibility.

authorities. At the same time, the mission emphasised the need to strengthen the supervision and resolution framework, including a more defined and explicit prompt corrective action framework as well as legal reforms to strengthen the enforcement powers of supervisory authorities. In this regard, the BSP is currently reviewing its prompt corrective action framework while the initiative to enhance its supervisory powers is included in the amendments to the New Central Bank Act being supported by the BSP.

The Philippine government also created an Investor Relations Office in July 2001 to formalise and facilitate active dialogue between government authorities and market participants. This serves as a mechanism for the government to identify early signs of concerns on the part of market participants, and thus help prevent crises. Information generated from this arrangement can provide important inputs and helpful validating tools for the BSP's early warning systems.

Early identification of vulnerability to external crises

The magnitude and volatility of the capital flows in the past decade underscores the need for developing early warning indicators to anticipate foreign exchange and banking crises and to complement traditional macroeconomic models. At international level, multilateral institutions (eg the IMF, ADB and BIS) have been developing indicators and undertaking surveillance and monitoring activities.

The BSP has developed a Bank Failure Early Warning System. The Bank Failure EWS produces a one-year ahead forecast of a bank's solvency.[15] The adoption of this EWS allows the BSP to prioritise its supervisory focus to the most vulnerable banks based on the results and to initiate prompt corrective measures to prevent a larger problem down the road. The BSP is also currently developing an EWS for the Philippine economy that will identify in advance the vulnerable areas of the economy and alert the authorities in the event of an impending macroeconomic or financial crisis.

Has the banking sector become more resilient?

Having pursued a wide-ranging set of reforms, is the banking sector now more prepared to withstand the adverse effects of large and volatile capital flows?

The regulatory and supervisory framework for banks has improved with the changes that are being implemented as outlined in the previous section. The shift to risk-based supervision, the adoption of consolidated supervision and the development of an early warning system place the supervisory authorities in a better position to identify emerging weaknesses at both the institutional and sectoral levels of the financial system. Moreover, the BSP is seeking amendments to the New Central Bank Act of 1993 to further strengthen the supervisory capability of the central bank. Important reforms being proposed in this regard involve: (1) providing the BSP with sufficient flexibility to conduct banking examinations depending on bank risk profile; (2) implementing prompt corrective action in the case of problem/distressed banks; and (3) imposing stronger criminal and administrative penalties for violation of banking laws and regulations.

In terms of the performance of financial institutions, banks in the Philippines have made some progress in recovering after the 1997 Asian financial crisis (Table 13). The liquidity of the banking system has been steadily increasing since the crisis as banks build up investments in risk-free government securities and cash positions. The banking system is also adequately capitalised as capital ratios remain above the 10% minimum requirement. The resiliency of the banking system is further seen in the improvement of bank profitability in 2001 and 2002 after a string of earnings contractions in 1998-2000. Profitability was buoyed by non-interest income, particularly trading gains

---

[15] The EWS produces a one-year ahead forecast of a bank's Residual Capital Cover (RCC) ratio, a variable constructed to proxy for bank solvency. Conceptually, the RCC represents the residual capital after non-performing assets are written down in proportion to net assets. A negative RCC value implies that bank capital is effectively wiped out. On the other hand, the larger the positive value, the more capital is available to back up assets. Referring to the Basel Committee recommendation of a minimum Tier 1 (core) capital of 4%, the critical RCC value should be at least positive 4%.

in government securities. Interest income, sourced mainly from the resurgence of credit card lending and the continued build-up of investments in government securities, grew only modestly. The improvement in the profitability of banks also reflects the diminishing impact of required provisioning on the bottom line of banks. As the non-performing loans (NPLs) of banks stabilise, the need for additional provisioning becomes less and this allows banks to register improvements in their net incomes.

Table 13

Selected financial ratios of the Philippine banking system
1990-March 2003

In per cent

	Liquidity (liq assets/ liq liabs[1])	Profitability		Capital adequacy		NPL ratio[4]	Total loan provisions[5] / Total loans	Total real estate loans[6]/ Total loans (w/out IBL)
		ROE[2]	ROA[3]	Old	New			
1990	56.1	24.6	3.1	18.0	...	7.9	4.4	...
1991	54.7	20.5	2.8	19.5	...	7.3	3.8	...
1992	53.2	17.3	2.4	20.2	...	6.8	3.3	...
1993	44.7	15.1	1.9	19.2	...	5.3	2.5	...
1994	44.3	15.4	2.0	18.6	...	4.7	2.0	...
1995	39.9	14.8	2.1	18.8	...	4.0	1.7	...
1996	35.8	16.4	2.2	16.8	...	3.5	1.4	...
1997	33.7	12.4	1.7	16.0	...	5.4	2.3	...
1998	36.2	5.8	0.9	17.7	...	11.0	4.0	...
1999	36.7	2.9	0.5	17.5	...	12.7	5.8	13.5
2000	39.7	2.6	0.4	16.2	...	15.0	6.5	12.7
2001	42.0	2.9	0.5	16.1	14.5	16.9	7.6	12.3
2002	45.2	4.8	0.8	16.7	15.7	14.9	7.5	11.9
2003	45.9	1.6	0.3	17.0	16.8	14.9	7.4	11.78[7]

[1] Computed as (total liquid assets/total liquid liabilities)*ROA. [2] Computed as (total assets/total capital)*ROA. [3] Computed as (net profit before tax/total assets). [4] Latest NPL ratio is as of August 2003. [5] Latest loan loss provisions ratio is as of August 2003. [6] Real estate loans before 1999 was included under the item "Financing, insurance and business services". [7] As of June 2003.

In terms of covering foreign exchange risk exposures it may be observed that there has been an increase in hedging activities by both financial institutions and corporates. For instance, the volume of foreign exchange forward and swap transactions of commercial banks grew from about 21% of their foreign exchange transactions in 2000 to 22% in 2002 (Table 14).

Table 14

Volume of forward and swap foreign exchange transactions
of commercial banks

As a percentage of total foreign exchange transactions

	Forward	Swap	Total
2000	5.1	16.0	21.1
2001	4.7	16.9	21.6
2002	5.0	17.1	22.0

The asset quality of the banking system, however, remains a key issue that needs attention. Overall, the NPL ratio of banks has gone down from the peaks of late 2001 and early 2002 (Table 13). However, a significant decline in the magnitude of NPLs is needed to bring the ratio to more tolerable levels. The creation of private asset management companies, induced by the passage of the SPVA, can contribute to this effort. It may also be noted that while NPLs have improved, banks have been increasing their loan loss reserves, which has resulted in a higher loan loss reserves to loans ratio. Moreover, commercial bank lending to the real estate sector as a proportion of total loans has also declined, reducing the banking system's exposure to this business cycle-sensitive sector. Overall, the regulatory framework and the banking sector have undergone some adjustments to be better able to adapt to changes in capital flows.

Concluding remarks

The Philippines experienced surges in capital flows in the 1990s. These flows influenced the level of domestic liquidity, the volatility of financial markets, the trend in the real exchange rate and the growth of asset prices. In response, adjustments in the conduct of monetary policy were made by the BSP. The adjustments included partial sterilisation in times of heavy capital inflows and a balancing of interest rate increases and peso depreciation during periods of capital flow reversals. With the recent adoption of an inflation targeting framework, the BSP continues to monitor and assess the impact of capital flows on domestic prices through the exchange rate, interest rate and liquidity channels. The BSP has also embarked on a wide-ranging banking sector reform process. The reform process involves among others the strengthening of the regulatory framework, promotion of good corporate governance practices and improvements to the infrastructure. It is hoped that these initiatives will contribute in enhancing the economy's capacity to take advantage of the opportunities provided by a more integrated financial environment and in building resilience against the adverse effects of surges in capital flows.

References

Bosworth, B and S Collins (1999): "Capital flows, investment and growth", *Tokyo Club Papers 1999*, vol 12, http://www.tcf.or.jp/tcp/tcp12/5BrookingsMaster1.PDF.

International Monetary Fund (2003): *International financial statistics*, International Monetary Fund.

International Monetary Fund and World Bank (2003): *Financial Sector Assessment Program - review, lessons, and issues going forward*, International Monetary Fund, February.

Lamberte, M B (1995): "Managing surges in capital inflows: the Philippine case", *Journal of Philippine Development*, vol 12, no 1, pp 43-88.

McCauley, R N (2003): "Capital flows in East Asia since the 1997 crisis", *BIS Quarterly Review*, June, pp 41-55.

Montiel, P J (1994): "Capital mobility in developing countries: some measurement issues and empirical estimates", *The World Bank Economic Review*, vol 8, no 3, pp 311-50.

Prasad, E, K Rogoff, Shang-Jin Wei and M Ayhan Kose (2003): "Effects of financial globalization on developing countries: some empirical evidence", *IMF Occasional Paper* no 220, March.

Yap, J T (2001): "Dollarization: concepts and implications for monetary and exchange rate policy in the Philippines", *Philippine Journal of Development*, vol 28, no 1, pp 87-105.