

Philippines: Selected Issues

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PHILIPPINES

Selected Issues

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Approved by the Asia and Pacific Department

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I. ESTIMATING THE OUTPUT GAP: IMPLICATIONS FOR MONETARY POLICY¹

1. **The output gap—which measures how close the economy is operating to its sustainable level—plays an important role in monetary policy formulation.** The Bangko Sentral ng Pilipinas (BSP) has adopted an inflation targeting framework in January 2002, which has as its primary objective: “promoting price stability conducive to a balanced and sustainable growth of the economy.” Thus, a good inflation forecasting ability is essential, given the lags between policy actions and inflation outcomes. To that end, indicators of potential inflationary pressures, such as the output gap, are helpful in guiding and communicating the Monetary Board’s decisions.
2. **This chapter estimates the Philippine output gap from three perspectives and evaluates the utility of these approaches for policy making.** The gap is taken as the difference between potential GDP, as estimated from these three approaches, and real GDP as reported by the National Statistics Coordination Board. In general, the output gap proves to be useful in identifying future inflation pressures. However, it is not particularly robust, as the results depend on which measure of the gap is used and which time period is chosen. This fragility underscores the need for the BSP to complement any output gap analysis with other assessments in drawing policy conclusions.

A. Estimating the Philippine Output Gap

3. **The challenge in attempting to measure the output gap is overcoming a lack of observable data on the economy’s productive capacity.** Since there are only limited directly observable measures of either potential output in the goods market or the trend rate of unemployment in the labor market, these estimates must be inferred. As such, most estimates have suffered from significant uncertainty, leading some central banks to be reluctant to publish estimates on a regular basis. Instead, most results are used only internally. The BSP is an outlier in this regard, publishing a point estimate of the output gap in the quarterly inflation report since the first quarter of 2007.² While the estimate is not used as the sole base of the monetary policy decision-making process of the BSP, it provides an input to the BSP in shaping its view on the current state of the economy.
4. **The second challenge involves decomposing real output into trend and cyclical components.** Although the economy’s potential output could be defined as the level of output attainable with the maximum utilization of factors of production in an economy, this

¹ Prepared by Ayako Fujita (APD).

² The BSP employs three approaches in output gap estimation, including the Hodrick-Prescott filter, the constant elasticity of substitution production function approach, and the structural VAR estimation that includes the growth rate, the deficit-to-GDP ratio, the 91-day Treasury bill rate, the real exchange rate, and full-time equivalent employment. For more details, see the BSP (2006).

may not be feasible with rising marginal costs at high degrees of factor utilization, such as when the economy is near the peak of a business cycle. Thus, in this chapter, potential output is defined as the trend, i.e., a permanent component which represents the economy's underlying productive capacity factoring in prevailing economic constraints. Meanwhile, cyclical factors represent the output gap, or the temporary fluctuations in demand around the potential output.

5. **This chapter presents results of estimating the output gap—and of overcoming these challenges—from three different approaches.** There are a variety of approaches available (Graff, 2004). Some are merely statistical techniques that measure potential output as the smoothed component of actual output, while other procedures derive an estimate using an economic model. However, all methods have shortcomings. This chapter estimates potential output using following three approaches:

- *Structural Vector Autoregression (SVAR).* Following Blanchard and Quah (1989), activity is decomposed into cyclical and permanent components, relying on the restriction that only supply shocks have a permanent effect on output (i.e., a demand shock has no long-run effect). Here, a bivariate VAR is estimated, which includes output (y_t) and the unemployment rate (u_t) from 1986:1Q–2007:2Q. Lag length of two was chosen based on the Akaike's Information Criterion (AIC). Thus, the estimated VAR is expressed as follows:

$$X_t = \sum_{i=1}^2 A_i X_{t-i} + \varepsilon_t, \text{ where } X_t = \begin{pmatrix} y_t & u_t \end{pmatrix}'$$

- *State space estimation.* This approach specifies potential output as a time-varying parameter, which allows for possible structural changes during the sample period. Additionally, it incorporates some elements of an economic model, which the SVAR approach lacks. The following model was estimated from 1986:1Q–2007:2Q:

$$\begin{aligned} \pi_t &= \alpha_1 * \pi_{t-1} + \alpha_2 * (gdp_t - \overline{gdp_t}) + \alpha_3 * \pi_t^{imp} + \varepsilon_t^\pi, \\ gdp_t &= \overline{gdp_t} + \beta_1 * lr_{t-1} - \varepsilon_t^{gdp} \end{aligned}$$

where, π_t is the inflation rate (q/q, excluding fuel), gdp_t is real GDP, $\overline{gdp_t}$ is potential real GDP, π_t^{imp} is the import price inflation rate, and lr_t is three months moving average of the real interest rate.

- *Production function approach.* The final method estimates the output gap directly, as a weighted average of capital and labor gap, which assumes an explicit economic model of production: inputs are combined with a Cobb-Douglas production function:

$$Y = AK^{1-\alpha}L^\alpha,$$

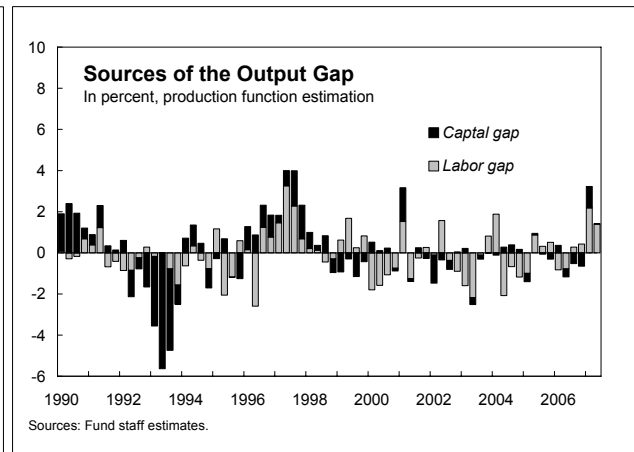
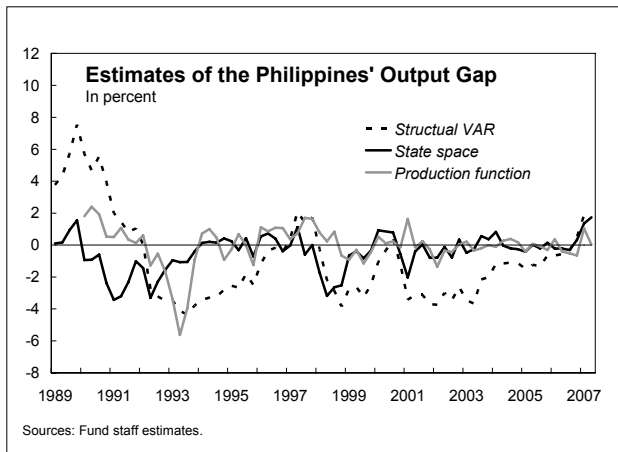
where Y is output, K is a measure of the capital stock, L is labor, A is total factor productivity, and α is the share of labor income in total output. If potential output is

defined similarly, using Y^* as potential output, K^* as the potential capital stock, and L^* as potential labor pool (total factor productivity is assumed to be constant), then, the output gap is (after taking natural logarithms):

$$\ln Y - \ln Y^* = (1 - \alpha)(\ln K - \ln K^*) + \alpha(\ln L - \ln L^*)$$

To measure the gap in each variable, the underlying data are smoothed using the Hodrick-Prescott filter. The labor gap is estimated as a sum of gap in labor force, employment, and working hours. The capital gap is estimated as a weighted average gap in electric energy consumption for both industrial and commercial sectors as a proxy of gap in the capacity utilization.³ The share of labor income is estimated at 65.7 percent, using National Accounts data for 2004-2006.

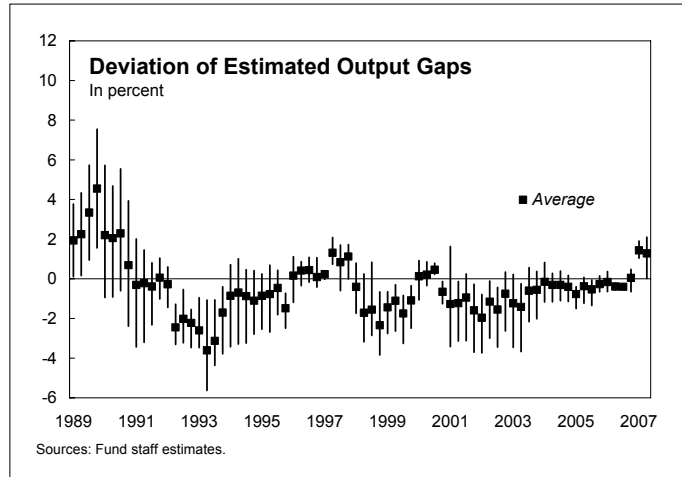
6. **All three approaches tell a broadly similar story, and are in line with the BSP's estimates.** The output gap was positive in the early 1990s, but turned largely negative over 1992-1996, reflecting the serious shortfall in power capacity. The production function approach attributes much of this dip to a sharp widening of the capital gap, consistent with the constraints imposed by power shortages.⁴ After a short recovery, the output gap declined following the Asian crisis in 1997 and remained largely negative throughout the first half of 2000s. This deterioration could be driven by several weather-related shocks, as well as by weak domestic demand due to political instability. More recently, however, a positive output gap has emerged, suggesting that inflationary pressures may be building up.



³ Official data on capacity utilization based on the Monthly Integrated Survey of Selected Industries (MISSI) are not used, since they only capture developments in the industrial sector. Electricity consumption helps to proxy for developments in the service sector, which accounts for nearly 60 percent of capacity (using national accounts data for 1990-2007).

⁴ The labor gap may not be estimated correctly, given the large and increasing number of workers outside of the country (estimated over 8 million) and the high underemployment (over 20 percent).

7. **However, there is a wide range of estimates of the size of the output gap.** On average, the three approaches have differed by as much as three percentage points. The gap estimated from the state space model tends to be the smallest, possibly because it better captures potential changes in the economic structure. The SVAR model consistently provides much larger estimates of the output gap. While the gaps implied by the production function are more moderate, they also fluctuate more, a possible reflection of the variability in the underlying data series. With such high degree of uncertainty, policy makers would find it difficult to base decisions solely on the output gap.



B. Using the Output Gap in Explaining Inflation Developments

8. **Armed with a range of possible estimates for the output gap, it is possible to assess the extent of the trade-off between spare productive capacity and inflation in the Philippines.** To conduct such an evaluation, measures of the output gap estimated by the SVAR and production function approach are assessed for its predictive ability in forecasting inflation and for the stability in the trade-off between inflation and the output gap.⁵ The following Phillips curve-type equation is estimated using each of the two measures of the output gap. The equation relates inflation to the past variables of expected inflation, the output gap, and external price shocks (expressed by import price inflation):

$$\pi_t = \alpha_0 + \alpha_1 \sum_{i=1}^2 \pi_{t-i} + \alpha_2 \pi_{t-1}^{imp} + \alpha_3 \sum_{i=1}^2 gap_{t-i} + \varepsilon_t,$$

where, π_t is the inflation rate, π_t^{imp} is the import price inflation rate, and gap_t is output gap. This approach attempts to measure the extent of correlation between inflation and lagged measures of productive capacity.⁶

⁵ The assessment excludes the output gap estimated by the state space as the latter is partly constructed on a Phillips Curve-type equation.

⁶ To help explain the key inflation determinants, the BSP uses two structural models: the Multi-Equation Model, containing eight behavioral equations and four identities; and a single-equation model, including: M4 as a share of GDP, the national government's cash position, the 91-day T-bill rate, domestic oil prices, nominal wages, non-oil import prices, and a dummy variable for the 1995 rice crisis (McNelis and Baggic, 2007).

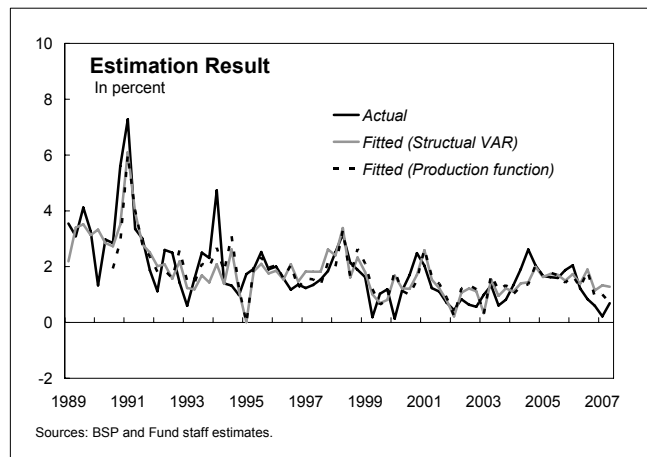
9. **Based on this simple model, it appears that the output gap estimated by the SVAR is a useful leading indicator of inflation.** The estimated coefficients for the output gap are statistically significant for the SVAR estimates, but not for those from the production function. The size of positive coefficients from the SVAR are largely in line with results from Higo and Kuroda-Nakada (2000) for Canada, Germany, Japan, the United Kingdom, and the United States. Thus, it appears that the link between inflation and the variation of spare capacity estimated by the SVAR is similar in the Philippines as in industrial economies.

Comparison of Estimation Result Using Different Output Gap Estimates					
	Constant	Inflation	Import price	Output gap	Adj. R ²
(1989-2007)					
Structural VAR	0.89 (3.98) ^{***}	0.46 (4.75) ^{***}	0.08 (5.39) ^{***}	0.12 (3.12) ^{***}	0.58
Production Function 1/	0.44 (2.28) ^{**}	0.61 (6.54) ^{***}	0.09 (5.98) ^{***}	-0.03 (-0.50)	0.54
(1989-1999)					
Structural VAR	1.13 (3.28) ^{***}	0.38 (2.91) ^{***}	0.09 (4.79) ^{***}	0.11 (2.39) ^{**}	0.55
Production Function 1/	0.62 (1.90) [*]	0.55 (4.28) ^{***}	0.11 (5.33) ^{***}	-0.06 (-0.71)	0.54
(1999-2007)					
Structural VAR	0.89 (2.96) ^{***}	0.46 (2.74) ^{**}	0.03 (1.08)	0.15 (1.20) [*]	0.28
Production Function	0.51 (2.08) ^{**}	0.53 (3.02) ^{***}	0.03 (1.21)	0.05 (0.37)	0.18

Note: Absolute value of asymptotic t-statistics are in parentheses: ^{***}, ^{**}, and ^{*} indicate significant at 1, 5, and 10 percent level, respectively. There are no auto-correlations in estimated residuals for all estimations.

1/ Estimations with data starting from 1990.

10. **Nevertheless, further work is required to refine the estimates of the output gap before using it to augment inflation forecasting models.** The mean squared errors for the regressions are still large, indicating relatively weak explanatory power. This may be partly attributed to uncertainties surrounding the output gap estimates, including model settings, parameters, and data. Furthermore, other exogenous factors, such as agricultural supply



shocks, could not have been fully captured in both output gap and the Phillips curve estimation.⁷

11. **In particular, the Philippine Phillips curve could be shifting over time.** Based on estimations with different time periods, the estimated output gap coefficients are somewhat higher in recent years than in the past: at the range of 0.15 for 1999-2007, compared with 0.11 for 1989-1999. Moreover, import prices are not statistically significant during the later sample period. These results suggest that ongoing structural change and globalization could affect the inflation-output gap relationship. This instability would be yet another source of uncertainty for policy makers, as experienced in other countries.

Mean Squared Error (Estimation for 1989-2007)		
	Structural VAR	Production Function 1/
All sample period	0.58	0.60
<i>of which:</i>		
1989-1999	0.75	0.77
1999-2007	0.33	0.38
2005-2007	0.33	0.21

1/ Estimations with data starting from 1990.

C. Policy Implications

12. **Estimates of the output gap are generally useful in assessing the outlook for future price developments.** While there are some trade offs between simplicity and robustness of the three approaches taken here, they do show comparable trends. The output gap-inflation link is also broadly confirmed in the case of the Philippines, except when using results from the production function.

13. **However, sufficient uncertainties exist surrounding the point estimates of the output gap that caveat any attempts to distill policy conclusions.** The wide variability in the estimated size of the output gap, both between the three measures and over time, should raise some concern. Furthermore, this chapter also provides some support to the view of a changing relationship between inflation and the output gap—as estimated in the Phillips curve-type regression presented here. Recognizing these limitations, the BSP uses the output gap as one of several indicators in shaping its view on the evolution of prices.

⁷ Agriculture plays an important role in the Philippines economy: it consists over 15 percent of GDP and 35 percent of total employment, while food items consist over 40 percent of the CPI. Moreover, the Philippine economy is frequently hit by natural disasters that disproportionately affect agricultural production.

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II. INVESTMENT INCENTIVES AND EFFECTIVE TAX RATES IN THE PHILIPPINES: A COMPARISON WITH NEIGHBORING COUNTRIES⁸

14. **After the successful VAT reform, rationalization of tax incentives is the next major tax policy item on the legislative agenda in the Philippines.** From 2002-05, substantial deficit reduction was achieved through expenditure compression. This changed in 2006 with the successful VAT reform that netted almost 1½ percent of GDP in additional revenue. The authorities recognize the need to increase revenue in the medium term, through tax administration reform, but also through reforming tax incentives. In particular, they aim to reduce redundancy; i.e. the provision of tax incentives for activities that would have been taken place anyway.

15. **Unilateral reform of tax holidays is often hampered by tax competition.** One consideration for introducing tax holidays in the Philippines, like in neighboring countries, was to remain regionally competitive. This need is frequently interpreted in the narrow sense of the length of a tax holiday, rather than low effective tax rates to encourage investment and attract firm-specific, internationally mobile capital. The same consideration makes it difficult to reform the incentives regime, despite the recognition in the Philippines and other countries that tax holidays may come at significant fiscal cost.

16. **Rather than just the length of the tax holiday, the effects of the overall taxation regime on investment should be taken into account.** In this context the paper asks the following questions:

- *What are the characteristics of business taxation in the Philippines relative to neighboring countries?* We focus on the overall corporate income tax rate, tax incentives, as well as other provisions that affect incentives to invest such as depreciation methods and allowances, the profitability of an investment project, and whether it is financed through debt or equity.
- *What are the effects of tax holidays on incentives to invest?* We review the theoretical and empirical literature, which suggests limited effectiveness of tax holidays in attracting additional, especially long-term, investment. Instead, a broader view of the tax system is stressed, with a focus on the general corporate income tax rate and depreciation allowances.
- *How do effective tax rates in the Philippines compare to those in neighboring countries?* We extend the methodology by Devereux and Griffith (2003) to evaluate tax incentives and calculate the marginal effective tax rate (METR) and average

⁸ Prepared by Dennis Botman (FAD), Alex Klemm (FAD), and Reza Baqir (APD).

effective tax rate (AETR) to assess the impact of the tax system including income tax holidays on incentives to invest.

- *What is the likely effect of abolishing the income tax holiday on investment incentives?* We analyze the effect on effective tax rates of recent reform proposals under consideration in the Philippines, in particular, the Department of Finance (DoF) sponsored legislation to replace tax holidays with a reduced corporate income tax rate for select exporting companies or a 5 percent tax on gross receipts.

A. A Birds-Eye View of the Taxation Regime

17. **The corporate income tax rate in the Philippines is higher than in neighboring countries** (Table 1). The Philippines increased the standard CIT rate as part of the EVAT reform to 35 percent in November 2005 and plans to reduce the rate to 30 percent by 2009. The latter reform would make the rate identical to the ones in Indonesia and Thailand. For domestic corporations, the tax base is net world-wide income while for resident foreign corporations, the tax base is net Philippine-source income. Regarding depreciation allowances, unlike its neighbors, the Philippines does not prescribe the method or allowable rate. Instead, it allows the straight-line, double-declining balance, or the sum-of-the-years-digits methods, while the rates are based “on economic or useful lives of the asset or the ones used for financial reporting”. The maximum rate of personal income taxation is comparable to other economies.

18. **Incentives in the Philippines appear broadly comparable to those in neighboring countries.** Table 1 compares the coverage, duration of the holiday period, as well as other incentives provided in the Philippines to those provided in Lao P.D.R., Thailand, Vietnam, Malaysia, Cambodia, and Indonesia:

- *Duration of the tax holiday period.* The duration of the holiday period is very similar and usually ranges between 3 and 8 years. The investment incentives broadly target export and technology oriented firms and aim to promote investment in remote or less developed areas. Loss-carry-forward provisions range from 3 years in the Philippines and Lao P.D.R. to 5 years in the other countries except Indonesia (10 years) and Malaysia which offers unlimited loss carry-forward.
- *Reduced corporate income tax (CIT) rate.* Lao P.D.R., Thailand, and Vietnam provide a reduced corporate income tax rate for a number of years after the holiday has ended. This practice ended in Cambodia in September 2005 and is also absent in the Philippines, Malaysia, and Indonesia. However, some firms in the Philippines are subject to a 5 percent tax on gross income, rather than the standard CIT rate, after the holiday expires.
- *Other considerations.* Regarding indirect incentives, most countries provide complete exemption of import duties and VAT for qualifying investment by exporters and, in

some cases, also to supporting industries. Lao P.D.R., Thailand, and Vietnam use exemptions more selectively and tend to rely more on reduced rates. The Philippines offers a deduction for infrastructure spending and labor expenses under certain conditions.

B. International Experience with Tax Holidays

19. International experiences indicate that tax incentives have mixed results in attracting investment.⁹

- *Developed countries.* There is considerable evidence that differences in international taxation affect the volume, location, and character of FDI in developed economies—see Gordon and Hines, 2002.
- *Transition economies.* An OECD study (OECD, 1995) concludes that on balance, tax incentives are unlikely to affect significantly the decision of investors to undertake FDI. In addition, for Central Europe, Mintz and Tsipoulos (1995) find that tax allowances and credits, combined with a moderate tax rate, were probably more cost effective than tax holidays in attracting FDI.
- *Fortune 500 companies.* A survey on foreign investment decisions of 75 of these companies found that nontax factors were the main determinants of their location decisions (Wunder, 2001).
- *Brazil.* Estache and Gaspar (1995) argue that tax incentives are in fact better at reducing revenue than being a decisive factor in the decision to invest. Hence, they have significantly distorted the tax system rather than stimulating investment.
- *Mexico, Pakistan, and Turkey.* Bernstein and Shah (1995) conclude that selective tax incentives, such as investment credits, investment allowances, and accelerated depreciation, are more cost effective for the fiscal authority in promoting investment than selective CIT rate reductions.

20. Tax holidays, in particular, are generally not well targeted and therefore regarded as the most damaging form of tax incentives. One advantage of tax holidays—as opposed to other forms of tax subsidies—is that they provide benefits up front. Indeed, Doyle and van Wijnbergen (1984) show that an initial period of tax concessions followed by gradually rising tax rate can be the outcome of a sequential bargaining process between firms that incur fixed costs of investment and the government. However, the evidence on tax holidays in emerging markets is largely negative, as detailed in Guin-Siu (2004).

⁹ The international experience is described in detail in Guin-Siu (2004). See also Zee, Stotsky, and Ley (2002).

- *Country experience.* In Malaysia, Boadway, Chua and Flatters (1995) find that tax holidays failed to promote investment in desirable activities or assist infant industries and disadvantaged economic and social groups. Thailand: Halvorsen (1995) similarly concludes that corporate tax holidays were ineffective as an investment incentive arguing that the rates of return in several projects were so high that the investments would have taken place regardless of the incentives (redundancy).
- *Problems in cost effectiveness.* Because profits are exempted regardless of their amount. The most profitable investments, which would have taken place in any event, benefit most. Estimates for the Philippines indicate that the revenue loss from redundant incentives could be as large as 1 percent of GDP, providing a windfall gain to receiving firms (Reside, 2006).¹⁰
- *Attractive to footloose industries.* Such firms tend to exit the country at the end of the holiday period. These industries are likely to bring the smallest benefit to the overall economy. Instead, firms investing in long-lived assets whose revenues may not fully recover costs during the period of the holiday, benefit least from tax holidays.
- *Open to abuse.* The rules provide many opportunities for tax avoidance (for instance by using transfer pricing or other devices to shift earnings into holiday companies). This is especially true for countries with weak revenue administrations and insofar leakage occurs from special economic zones. Thus, tax incentives present a risk to government revenue as their mere existence allows for potential abuse by investors not intended to receive them. To mitigate these risks, as is the practice in the Philippines, it is important that firms receiving holidays still complete tax returns.
- *Possible WTO consistency issues.* Favorable corporate tax treatment for the export sector could be run afoul of international trade rule, except for the lowest income countries.
- *Interaction with tax laws elsewhere.* If the home country of the foreign investor operates a worldwide system of taxation, without tax sparing, then the impact of the holiday may be diluted once profits are repatriated. This is because the home country ultimately ensures that repatriated earnings pay tax at its own rate, so any reduction in liability in the Philippines is exactly offset by increased liability there. However, in practice concerned firms are quite successful in avoiding such payments by delaying repatriation and therefore still benefit from tax holidays.

¹⁰ Reside (2006) first analyzes financial indicators of investment project proposals requesting tax incentives. A high ex-ante rate of return—in excess of 15 percent—is considered a necessary, but not a sufficient condition for redundancy. The author next classifies investments according to their sensitivity to incentives: exporters are sensitive, and non-exporting firms are classified as relatively insensitive to investment incentives. As such, incentives received by non-exporting firms with high ex-ante rates of return are considered redundant, which for Board of Investments (BOI) approvals equaled 1 percent of GDP in 2004.

21. Some of the difficulties are aggravated by the well-documented complicated system of granting and overseeing the provision of tax incentives in the Philippines.

There are about ten investment promotions agencies (IPAs) and several national government agencies involved in managing investment activities and administering tax incentives. These include the Board of Investments (BOI), the Philippine Economic Zone Authority (PEZA), the Subic Bay Metropolitan Authority (SBMA), the Clark Development Corporation (CDC), and other bodies mandated by various laws to establish, maintain, and manage special economic or free port zones (see Aldaba, 2006).¹¹ BOI-registered enterprises are allowed income tax holiday up to eight years, tax and duty free importation of spare parts, and tax credits on raw materials (Aldaba, 2006). Under Executive Order 226, the incentives for importing capital equipment duty and tax free and tax credit on purchase of domestic capital equipment expired in 1997. After the lapse of the income tax holiday, the standard corporate tax rate will apply to BOI enterprises. PEZA grants the most generous incentives including income tax holiday, basic income tax rate of 5 percent on gross income, and tax and duty free importation of capital equipment, spare parts, and raw material inputs. Except for the income tax holiday, Clark and Subic enterprises enjoy the same incentives available to PEZA registered enterprises.

C. Effective Tax Rates

Methodology

22. In the end what matters is the marginal effective tax rate (METR) and the average effective tax rate (AETR) and these are determined by all taxes and incentives combined. The METR matters for incentives for incremental domestic investment and the AETR—compared with those available in other countries—for discrete rent-earning investments of multinationals. Statutory rates determine incentives for profit shifting (e.g., through manipulation of transfer prices).

23. A hypothetical investment project is used to calculate effective tax rates along the lines developed by Devereux and Griffith (2003). The AETR measure is based on a simple model that can incorporate discrete investment decisions, based on a value-maximizing firm. The AETR determines the level of the post-tax net present value of an investment project and as such its location. Conditional on the choice of location, the size of investment depends on the “effective marginal tax rate”. Typically, countries appear to have the AETR in mind when referring to the need for tax holidays to remain internationally competitive.

24. The analysis of the impact of the current tax regime is assessed by the difference in the net present value of rent generated with and without taxes scaled by the net present value of the expected income stream. The METR is defined for an investment whose

¹¹ A recent study estimated that at least 83% of all tax and duty exemptions granted to BOI-registered investments are redundant, and 10% in the case of PEZA, Subic and Clark (see Reside, 2006).

economic rent is zero; i.e. a project that just breaks even. The AETR is equal to a weighted average of the METR and the statutory tax rate, and could potentially be adjusted for personal income taxes. As the rate of profit increases, the measure converges to the statutory corporate income tax rate (see Devereux and Griffith, 2003, for further details).

25. **We extend the Devereux and Griffith (2003) methodology to incorporate the effects of tax holidays on effective tax rates.** The original derivation in the paper by Devereux and Griffith is calculated for a one-period perturbation in the capital stock; i.e., they analyze an investment of one unit of capital that is held for one year and then sold at its remaining value. While this is simple and in many cases appropriate, it is not useful for the study of tax holidays, which typically last longer than one period. We have therefore adapted the framework to study a permanent increase in the capital stock by one unit, which is slowly disinvested over time through depreciation.¹² Returns to capital are tax-free during the tax holiday and taxed thereafter, with carry forward of unused depreciation.

26. **The calculation of effective tax rates takes into account the main characteristics of a country's corporate income taxation.** As it is not feasible to include every aspect of tax codes, covering often hundreds of pages, the measure used in this paper takes into account the key taxes specific to an investment project, based on the expected profitability, financing source and potential applicability of tax incentives. Besides the statutory tax rate, the depreciation method and rate have an important bearing on effective tax rates. In this regard, we distinguish between investment in buildings and plant and machinery as these are guided by different depreciation regimes. Moreover, the choice of financing is taken into account, in particular the interest deductibility in the case of debt finance. As the countries considered have open capital accounts and most have similar taxation of capital gains and dividends we ignore personal income taxation for simplicity (see Klemm, 2006, for a discussion of the effects of personal income taxation on effective tax rates).

27. **Effective tax rates are sensitive to a number of assumptions, in particular the profitability of a project and the manner in which it is financed.** As a result, we calculate the effective tax rates for different levels of profitability and for debt and equity financed investment projects. Furthermore, we explore the sensitivity to the assumed economic depreciation rate of investment, in contrast to the depreciation allowed under the tax law.

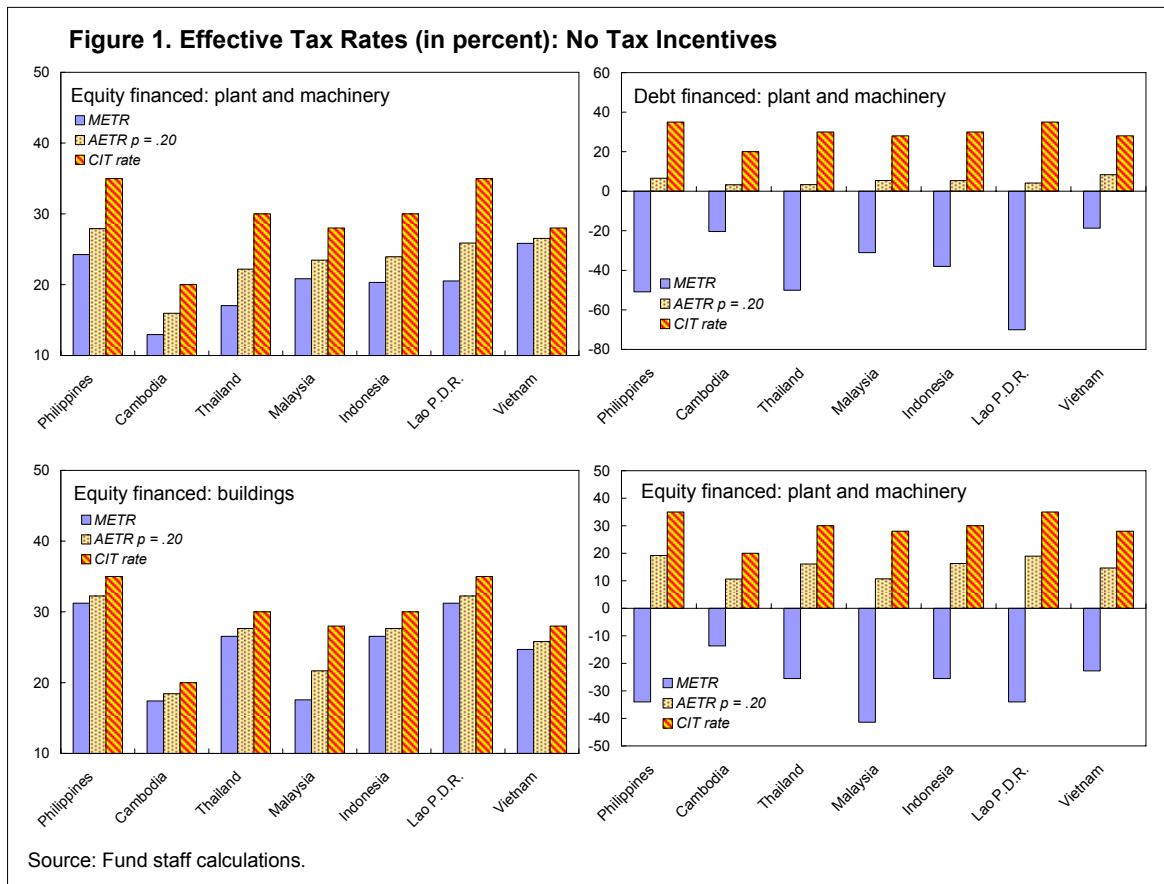
28. **The measures derived below do not incorporate loss-carry forward provisions, which could possibly affect the results for countries with a long provision.** Also, the calculations below do not account for reduced corporate income tax rates after the tax holiday has ended, such as in Vietnam. Additional assumptions include: (i) the level of inflation is set equal to 3.5 percent in all countries; (ii) in line with other applications, economic depreciation for buildings is set equal to 3.61 percent, and for plant and machinery equal to 12.25 percent; and (iii) since the depreciation method and allowance for the Philippines is not specified, we

¹² For details see Klemm (2008).

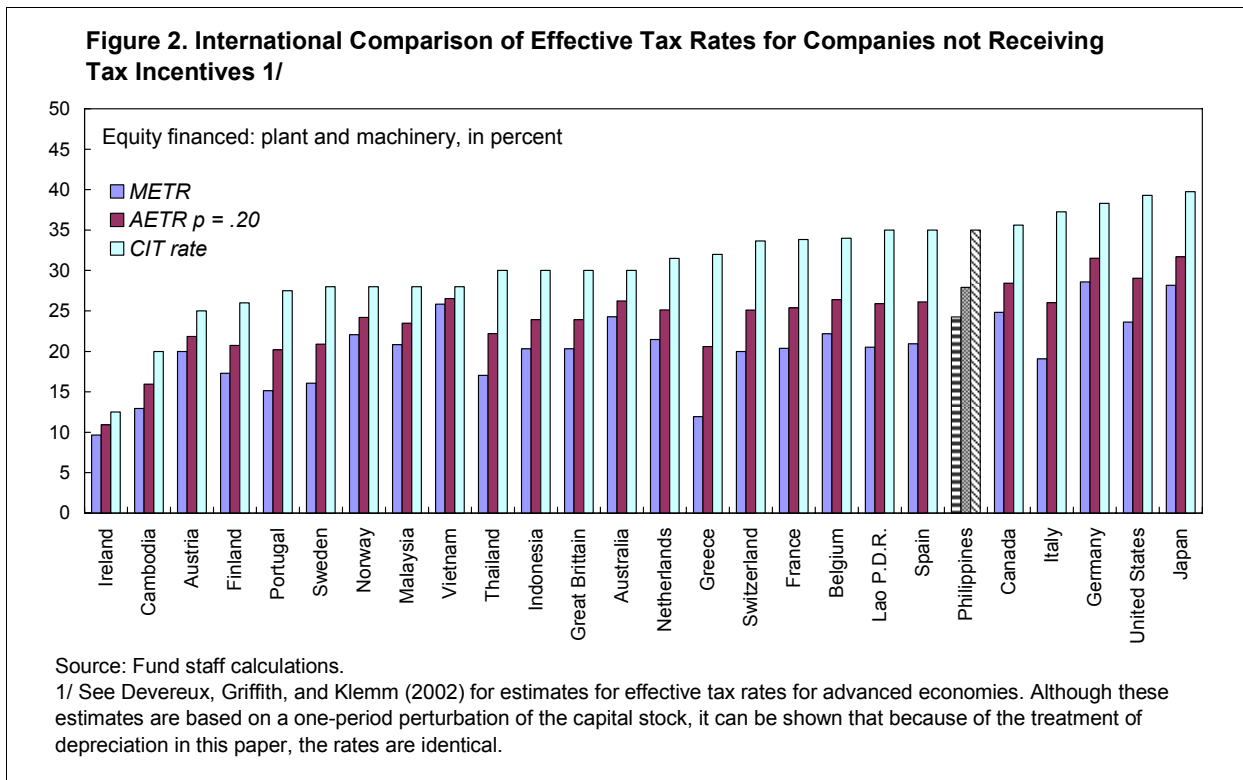
assume that firms select the straight-line balance method at 5 percent for buildings, and the declining-balance method at 25 percent for plant and machinery, in line with regional practice.

D. Estimation Results

29. **For companies that do not receive tax incentives, effective tax rates in the Philippines are higher than in neighboring countries (Figure 1).** The marginal effective tax rate is similar to its neighbors, for investment in both buildings and plant and machinery, but as profitability increases, the average effective rate converges to the statutory CIT rate, which is the highest in the Philippines. This conclusion also applies for debt financed investments, although rates are lower due to interest deductibility. In general, the less generous the depreciation allowance and the higher the CIT rate, the more a firm benefits from interest deductibility, which explains why the Philippines has relatively low effective tax rates for debt financed investments. Marginal effective tax rates are negative under interest deductibility, although a firm will only benefit from this if it has other profits against which these losses can be deducted, for example from profits made in other branches or possibly from foreign sources—although the latter is not allowed in most countries—or in case there is a long loss-carry-forward provision, as for example in Malaysia. Since the difference between tax and economic depreciation is smaller for buildings, effective tax rates are somewhat higher—in the remainder of the paper we focus on plant and machinery.

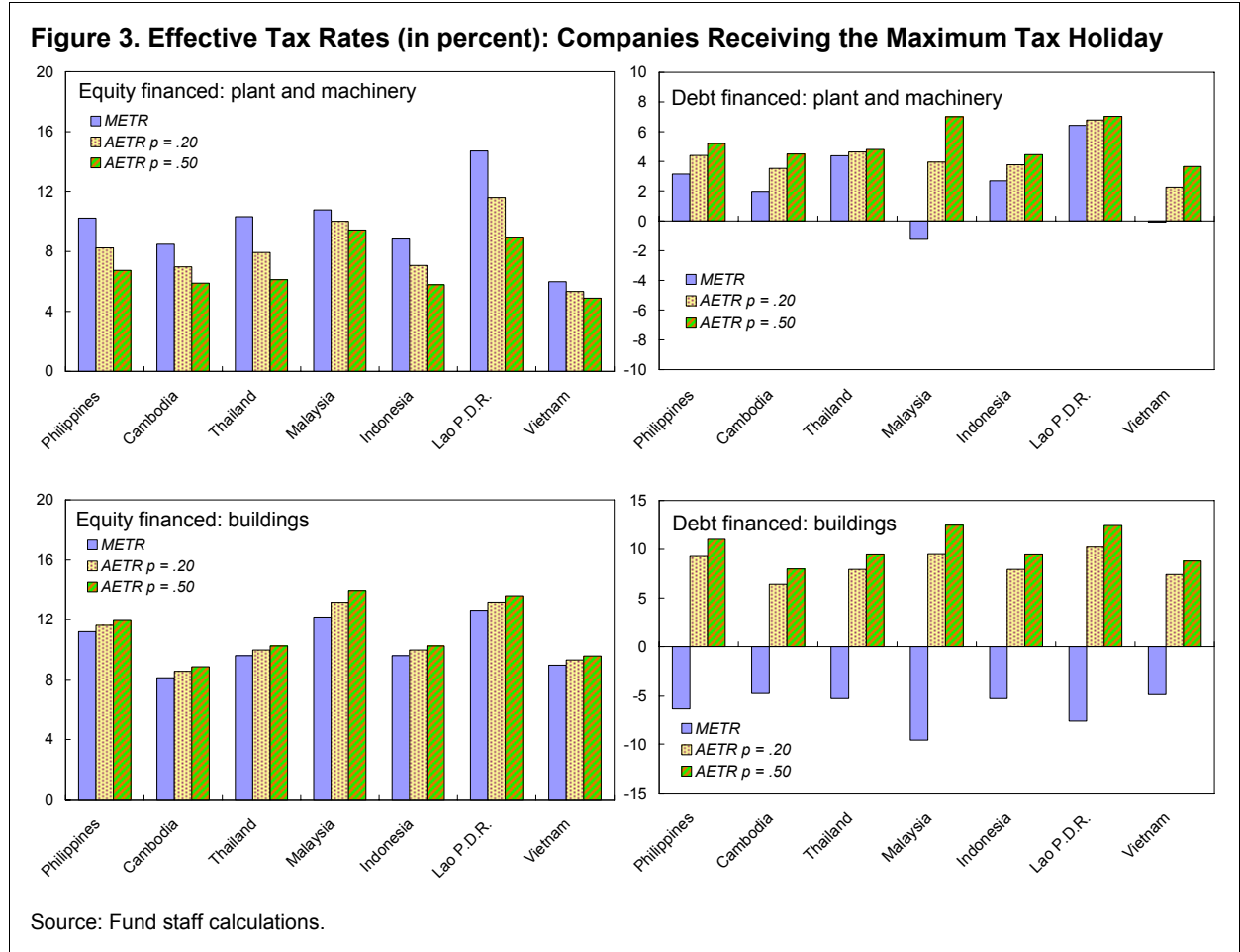


30. **Effective tax rates on capital usually tend to be higher in large and advanced economies compared to emerging markets, but not in the case of the Philippines (Figure 2).** A small economy that reduces its corporate income tax rate will lose relatively little revenue relative to a larger economy as the additional investment attracted is larger as a share of GDP. Furthermore, advanced economies tend to have a stronger investment climate implying that location decisions of investment are less sensitive to tax rates. Nevertheless, by comparing effective tax rates internationally, it can be observed that the rates in the Philippines, average rates in particular, tend to be high relative to its stage of economic development.



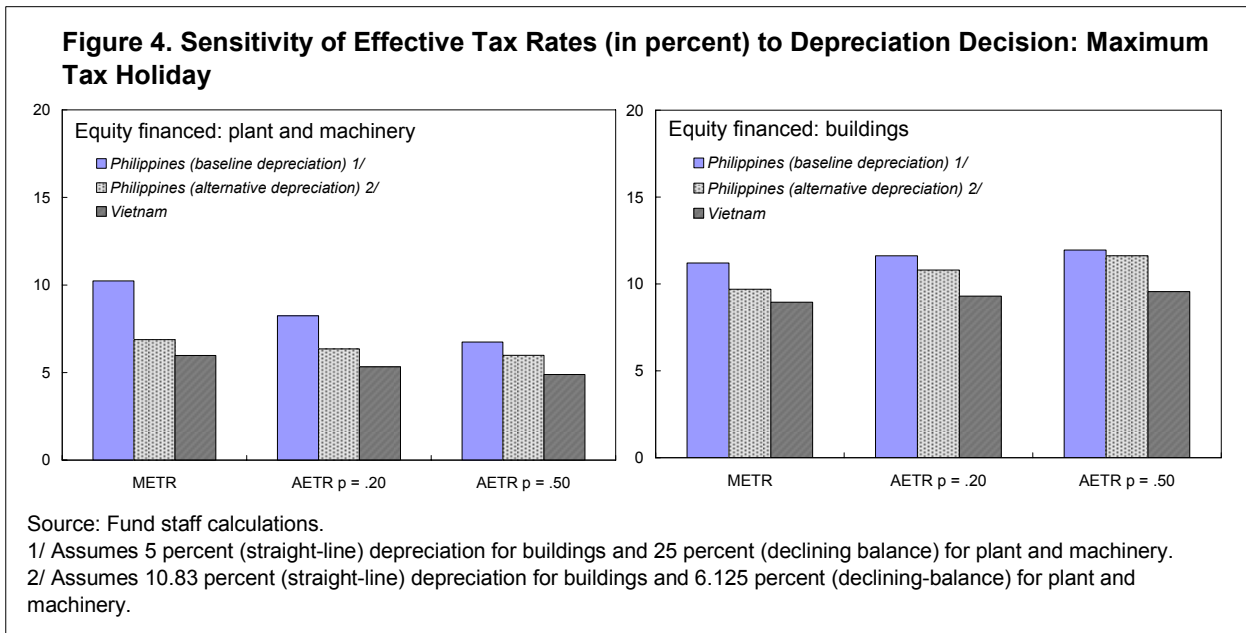
31. **Tax incentives are broadly comparable in the Philippines and neighboring countries and reduce effective tax rates significantly.** Figure 3 illustrates effective tax rates for firms receiving the maximum duration of the holiday in each country. It should be noted that the effective tax rate is positive under the holiday, because there is a tax payment to be made after the holiday. As the firm is forward-looking, when deciding whether to invest it takes into account, but discounts, the real payments that need to be made after the holiday expires. Given that most of the asset will be depreciated by then for tax purposes, the proportion of profit subject to tax will in fact be quite high. However, because of the many tax free years and because of discounting, the resulting tax rate is still very low early in the holiday period. The effective tax rates faced by firms on equity-financed investments made in the first year of the holiday is between 7-10 percent in the Philippines for plant and machinery and about 11½ percent for buildings. Vietnam's rates are lower, not because of more generous tax incentives, but because the CIT rate after the holiday is lower. Effective

tax rates for debt-financed investments are lower, as not all of the interest deductibility is exhausted during the holiday period.



32. **The tax holiday in the Philippines becomes more generous if firms optimally select the depreciation deduction.** In principle, firms receiving a tax holiday will face a lower effective tax rate if tax depreciation is more backloaded. Since firms in the Philippines have an option to select the depreciation method and amount, Figure 3 underestimates the generosity of the holiday in the Philippines. Firms have an incentive to choose a method and level of depreciation that maximizes the residual depreciation allowance after the holiday expires. In doing so, for investment in both buildings and in plants and machinery, a firm can significantly lower effective tax rates—aligning them with those in Vietnam (Figure 4). For plant and machinery, using the declining balance method at 6.2 percent per year, leaves about 60 percent of the asset to be depreciated for tax purposes, rather than 10 percent in our baseline. For buildings, depreciating at a lower rate than the 5 percent assumed in the baseline would not reduce effective tax rates as the higher residual value for depreciating purposes it more than outweighed by the lower depreciation rate itself. Instead, a firm can reduce effective tax rates by choosing depreciation of about 11 percent per year. Thus,

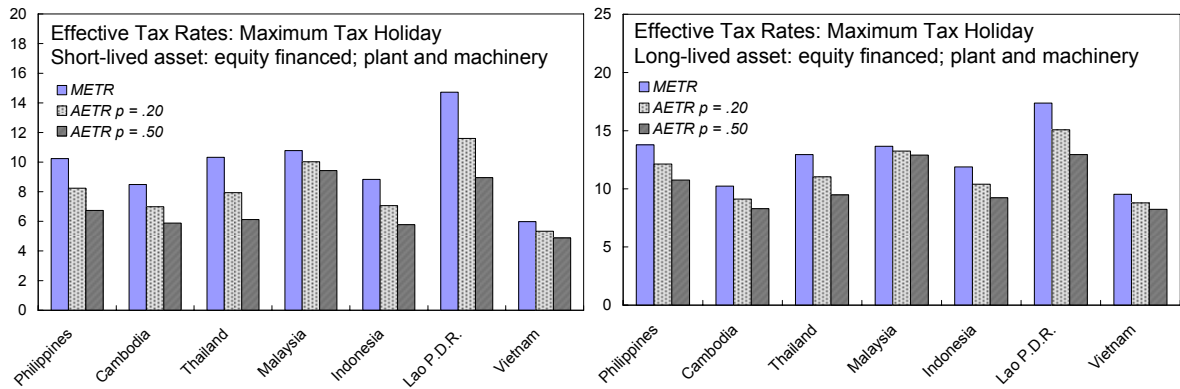
accelerated depreciation—depreciation exceeding “true” economic depreciation—may sometimes offer a benefit even when a firm receives a tax holiday.



33. **Tax holidays are most attractive for highly profitable investments, possibly, but by no means necessarily creating redundancy.** As noted in Section III, one disadvantage of tax holidays is that incentives may be offered to firms that would have invested without them as well. We indeed find that incentives are most beneficial at high profit rates, but whether this leads to redundancy depends critically on whether the rents from the investment are firm or location specific and thus whether the holiday is well-targeted. By reducing effective tax rates, holidays increase incentives more for FDI and new investment than for incremental investment. As noted previously, for the former the AETR matters, while for the latter the METR is critical and holidays reduce average more than marginal rates for equity financed investment. Holidays are not attractive for incremental debt financed investments unless negative taxes are offset elsewhere or carried forward.

34. **Tax incentives are most attractive for investing in short-lived assets (Figure 5).** Focusing on equity financed projects, effective tax rates under the maximum tax holiday increase as economic depreciation declines. This supports one criticism of tax holidays that they tend to support foot-loose companies. In the extreme, effective tax rates are zero on investment projects in short-term capital that fully depreciates before the end of the holiday.

Figure 5. Effective Tax Rates (in percent): Impact of Tax Incentives on Short- or Long-Lived Assets 1/

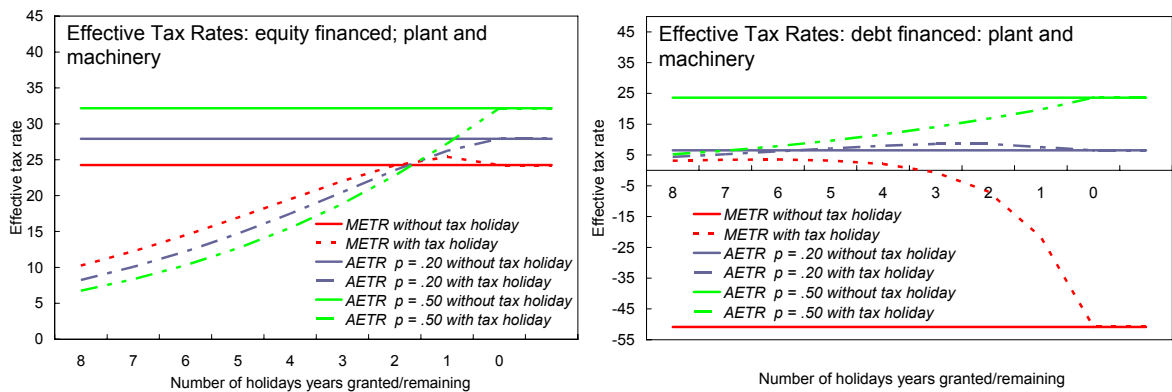


Source: Fund staff calculations.

1/ Economic depreciation for plant and machinery for short-lived assets is assumed at 12.5 percent (baseline), while long-lived assets have a depreciation rate of 6.25 percent. Economic depreciation for buildings for short-lived assets is assumed at 3.61 percent (baseline), while long-lived assets have a depreciation rate of 1.81 percent.

35. **Effective tax rates increase rapidly as the holiday expires, especially for profitable firms (Figure 6).** This result is consistent with Mintz (1990) who also concludes that tax holiday provisions for investment in long-lived assets are not as generous to the firm as one might initially believe. This characteristic of holidays implies on the one hand an advantage, in the sense that the benefits are provided upfront, but also has the undesirable side effect that firms have an incentive to lump all investment together at the moment the holiday starts. It also highlights the incentives for firms as the holiday progresses to try to organize new investment by registering a new company or through a joint venture, or instead to leave the country altogether as the holiday expires. As illustrated, marginal effective tax rates towards the end of the holiday period can in fact be higher than when the holiday ends. This finding supports the hypothesis in Mintz (1990) that the difference between the effective tax rate with and without the holiday at some point becomes smaller than the cost to the firm from not being able to deduct depreciation.

Figure 6. Effective Tax Rates (in percent): Under Different Holiday Years Granted/Remaining



Source: Fund staff calculations.

E. Incentive Reform in the Philippines

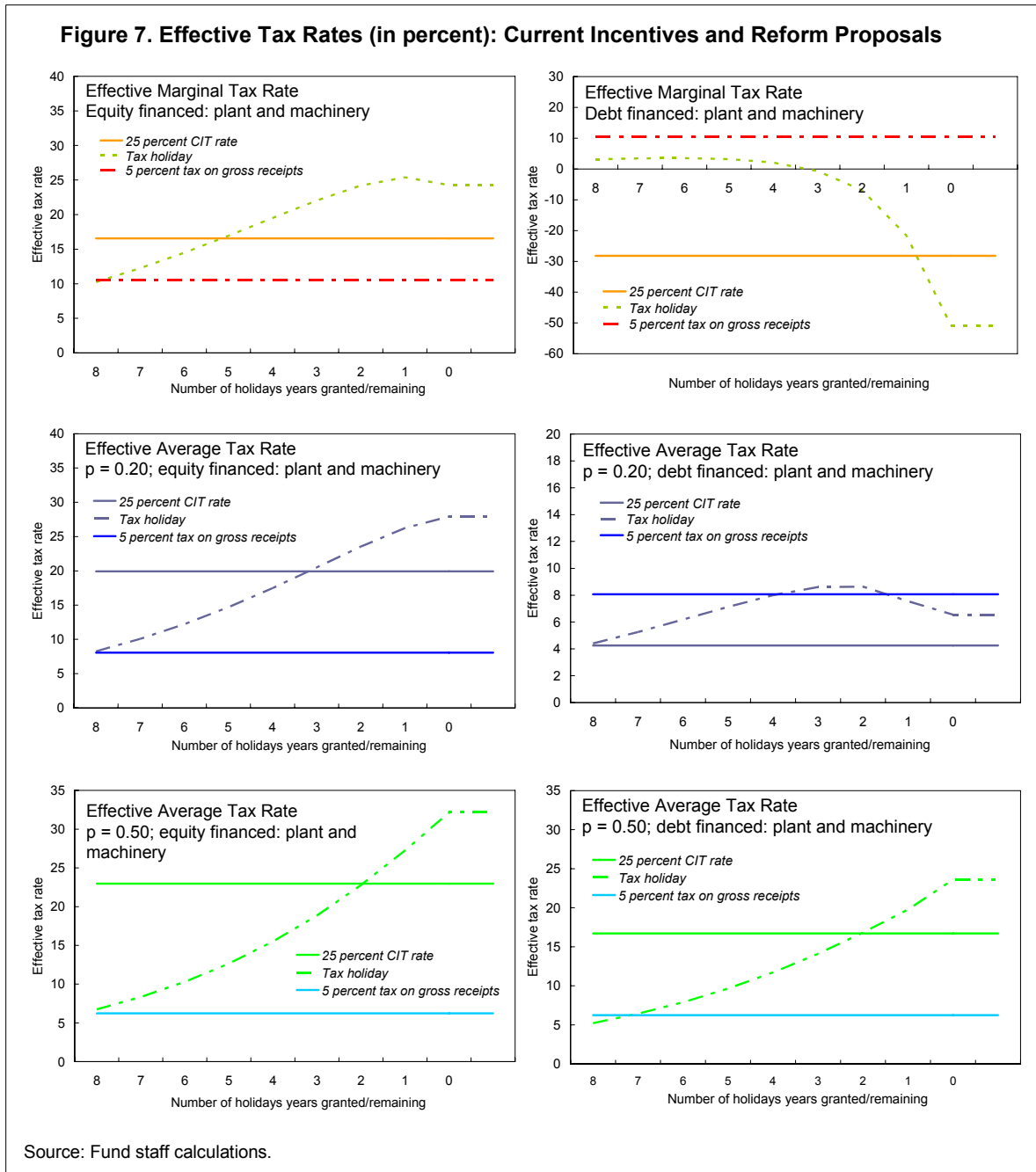
36. Several countries have recently started to move away from special incentives systems:

- *Egypt.* A new income tax law was passed in mid-2005 that reduced the top marginal tax rates on income and profits from 32 to 20 percent for individuals and from 40 to 20 percent for corporations and partnerships (rates for petroleum, the Suez Canal authority, and the central bank were left at 40 percent). This reform also increased the exemption threshold, liberalized depreciation, broadened the tax base by eliminating deductions, and provided for the phasing out of tax holidays while grandfathering current beneficiaries. Importantly, these reforms have been accompanied by extensive and continuing reforms of tax administration, including the successful introduction of self-assessment and a reform of the tax treatment of SMEs.
- *Mauritius.* The 2006 budget speech announced a package of reforms including the integration of EPZ (export processing zone companies and others) and non-EPZ sectors, the removal of all existing provisions relating to tax credits and tax holidays. At the same time, the corporate tax rate was reduced from 25 to 22.5 percent with a view to reducing it to 15 percent by 2009 (with the intention of also taxing personal income at the same flat rate). Depreciation is to be shifted from straight line to declining balance for all assets, except for non-hotel buildings, and the ceiling for equipment or machinery to be fully expensed in the first year will be raised from Rs 10,000 to Rs 30,000.
- *The Slovak Republic.* In 2004, a single rate of 19 percent was adopted and applied to both corporate and personal income. The reduction in the corporation tax, previously at 25 percent, was combined with more rapid depreciation, more generous carry forward rules, the elimination of tax holidays for new enterprises and tighter rules in respect of provisioning and reserves.

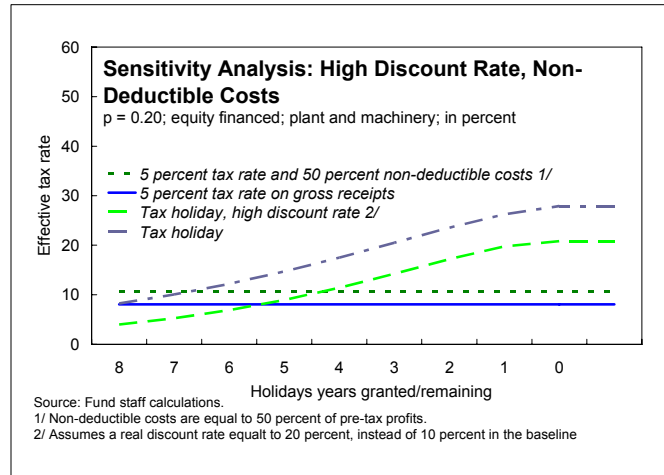
37. **The DoF sponsored Bill for reforming tax incentives strengthens incentives to invest relative to the current tax holidays by lowering effective tax rates** (Figure 7).

There are currently several bills under consideration in the Philippines to reform tax incentives, some abolishing tax holidays and others lengthening the holiday period (Box 1). Some of the proposed bills in the House would further extend the length of tax incentives to up to 20 years. Instead, the DoF sponsored bill abolishes tax holidays and instead proposes to give select exporting firms the option of either a 25 percent CIT rate or a 5 percent tax on gross receipts. The implied METR for equity-financed investments is found to be lower than under tax holidays and the AETR is lower still. In fact, effective tax rates are lower even for firms making investment in the initial year of an eight-year holiday period, while in practice the average holiday granted in the Philippines is four years. Furthermore, by maintaining a constant rate over the lifetime of investment projects, further investment is not discouraged

as under tax holidays. Firms using equity financing will prefer the 5 percent tax on gross receipts, especially if profitability is high. For low and intermediate levels of profitability, firms using debt financing will instead opt for the 25 percent CIT rate on taxable income to take advantage of interest deductibility. Also, for debt-financed investment projects, AETRs would be lower than those at the start of even the maximum holiday period. Since we concluded previously that investment incentives are broadly comparable to those in neighboring countries, the DoF supported Bill would ensure that the Philippines remains an attractive destination for firm-specific, internationally mobile, investment, at least from a taxation perspective.



38. **Firms that face considerable uncertainty or those that have large non-deductible costs will also have stronger incentives to invest under the DoF sponsored legislation than under the current tax holiday, although to a smaller extent.** As mentioned, one advantage of tax holidays is that they provide benefits upfront. Essentially, holidays are a form of risk sharing between the government and the firm and this may be particularly attractive for firms that face uncertainty about the prospects of their investment, as formalized here by a high discount rate. However, even after doubling the real discount rate to 20 percent, the 5 percent tax on gross receipts still provides stronger incentives than for investments made with four years holiday granted or remaining (text chart). Apart from allowances for depreciation and interest expenses, the definition of gross receipts in the DoF sponsored legislation does also not allow the deduction of marketing, administrative, and selling costs. As illustrated in the chart below, even if these costs amount to 50 percent of pre-tax profits investment incentives are stronger under the DoF sponsored bill than for firms receiving less than seven years tax holiday.¹³



39. **The reform would also improve short- and especially medium-term revenue collection.** Unlike under tax holidays, the effective tax rates by firms faced under the DoF supported proposal will lead to actual tax payments. As a result, revenue collected under the reform will increase. Furthermore, the reform would reduce redundancies. As firms currently receiving a holiday will be grandfathered, higher revenue from exporting firms is likely to be modest in the very short term.

40. **By aligning incentives, the DoF supported Bill also offers the opportunity for a significant streamlining of the institutional structure governing the granting and oversight of tax incentives.** Essentially the abolition of the tax holiday would bring incentives provided by the Board of Investments (BOI) and the Philippine Economic Zone Authority (PEZA) more in line with those provided by the Subic Bay Metropolitan Authority (SBMA) and the Clark Development Corporation (CDC), while adding the option for a reduced CIT rate. Indeed, the DoF supported Bill proposes a major restructuring of the regulatory agencies, effectively merging BOI and PEZA into a single organization—the Philippines Investment Promotion Agency. Furthermore, incentives are likely to be focused on exporters—either new exporters or those expanding existing operations. In addition, the bill mandates submission of a tax expenditure budget each year to the Congressional Oversight Committee.

¹³ For each ten-percent non-deductible costs as a share of pre-tax profits, the effective tax rate under the 5 percent tax on gross receipts option increases by 0.5 percentage points.

Box 1. Incentive Reform Bills Under Consideration in the House of Representatives

Four Bills for reforming tax incentives in the Philippines have been tabled in the House. The Bills differ markedly in terms of reforming the income tax holiday (ITH) and the government agency to take the lead in formulating and monitoring incentives policies. Other incentive policies in the bills are quite similar, such as offering double deduction for training and R&D, accelerated depreciation, and loss-carry forward provisions.

House Bill No. 2278—Introduced by Representative Javier (Department of Finance (DoF) sponsored bill) and House Bill No. 2712—Introduced by Representative Almario.

Incentives. Phase out of ITH within three years, offering instead a 25 percent CIT rate on taxable income or a 5 percent tax on gross income earned in lieu of all national and local taxes, except real property tax on land. Applies to registered exporting firms and firms located in the 30 poorest provinces. Gross income is defined as gross revenue net of sale discounts, sales returns, and allowances minus cost of sales or direct costs, but before deductions for administrative, marketing, selling, operating expenses, or incidental losses.

Institutional reform. DoF formulates and monitors tax and nontax incentives policies; Board of Investments (BoI) in charge of investment promotions; Philippine Economic Zone Authorities (PEZA) and other Investment Promotion Agencies (IPAs) implement investment laws.

Other considerations. Evaluate rationale for a tax expenditure budget, possibly as part of the annual General Appropriations Act; export enterprises registered with IPAs and located inside the ecozones or Free Ports are VAT exempt on imports of capital equipment; registered firms with PEZA and located outside ecozones or freeports are subject to VAT and Customs Duty Refund Mechanism through a Trust Liability Account.

House Bill No. 2530—Introduced by Representative Cua.

Incentives. Exporting firms regardless of location entitled to eight years ITH; after ITH, reduced CIT rate of 15 percent for twelve years; after ITH for firms in Special Economic Zones, Free Trade and Freeport Zones, a five percent tax on gross income in lieu of all national and local taxes, except for real property tax on land, and a twelve-year investment tax allowance of thirty percent. Firms in 30 poorest provinces can choose either an eight year ITH or a reduced CIT rate of 15 percent for 20 years. Micro, small, and medium enterprises are entitled to eight years ITH. Fiscal incentives can be extended beyond twenty years for industries deemed indispensable to national development as determined by the Industrial Development Board (IDB).

Institutional reform. BOI will be the national investments promotion agency attached to the Department of Trade and Industry (DTI). Creation of the IDB (consisting of BOI, PEZA, and other IPAs), attached to the DTI, responsible for development programs, including formulating and monitoring incentives policies.

Other considerations. Exemption of taxes and customs duties for import of capital equipment.

House Bill No. 1757—Introduced by Representative Javier (similar to HB 3295 which failed to win Senate approval in the previous Congress).

Incentives. ITH of four years in highly developed areas, six years in less developed areas or producing/rendering new products/services with strong backward or forward linkages, and six years for exporting firms (eight years if located outside Metro Manila). Additional investments in the project, if listed in the initial investment priorities plan, will also receive eight years ITH, with a maximum of twenty years total ITH. Instead of ITH, 5 percent tax rate on gross income earned in lieu of local and national taxes, except real property tax on land (not available to BOI registered companies).

Institutional reform. BOI shall be responsible for the regulation and promotion of investments and granting of incentives to registered companies and monitoring investment promotion of all IPAs.

Other considerations. Zero rating of VAT of inputs from domestic manufacturers for the production of machinery and capital equipment.

F. Conclusions

41. **We compared the general tax provisions and investment incentives in seven east-Asian economies—the Philippines, Malaysia, Indonesia, Lao, Vietnam, Cambodia, and Thailand—in order to provide input into the ongoing debate in the Philippines about reforming tax holidays.** Instead of focusing on one aspect of incentives, such as the length of the tax holiday period, we argued for considering the overall structure of taxation and we estimated the effective marginal and average effective tax rates accordingly. Our conclusions can be summarized as follows:

- *For companies that do not receive tax incentives, effective tax rates in the Philippines are higher than in neighboring countries.*
- *Tax incentives are broadly comparable in the Philippines and neighboring countries and reduce effective tax rates significantly.* The wedge between taxation of companies with and without tax incentives in the Philippines is one of the largest.
- *Tax holidays are most attractive for highly profitable investments, possibly, but by no means necessarily, creating redundancy.* Whether incentives on highly profitable investment cause redundancy depends critically on whether the profits are firm or location specific, and in the former case an average effective tax rate in line with neighboring countries will be essential to attract investment.
- *Holidays are more effective in providing incentives for FDI and new investment, rather than incremental investment.* As noted previously, for the former the AETR matters, while for the latter the METR is critical and holidays reduce average more than marginal rates for equity financed investment.
- *Tax holidays are most attractive for investing in short-lived assets.* Focusing on equity financed projects, effective tax rates under the maximum tax holiday increase as economic depreciation declines. We also found that effective tax rates increase rapidly as the holiday expires, especially for profitable firms. As such, footloose companies benefit more from income tax holidays.
- *The DoF supported Bill compares favorably to other Bills tabled in the House for reforming incentives.*
- *Under most circumstances, introducing the DoF legislation and abolishing tax holidays reduces effective tax rates and improves incentives to invest, while also improving short- and medium-term revenue collection.* Investment incentives would only decline for firms investing in short-term capital that is fully depreciated at the end of their holiday period.
- *The DoF supported Bill also offers the opportunity for a significant streamlining of the institutional structure governing the granting and oversight of tax incentives.*

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Annex II.I. Investment Incentives in Cambodia, Lao P.D.R., Thailand, and Vietnam

	Cambodia	Lao P.D.R. PDR	Thailand	Vietnam
I. Profit Tax				
1. Standard CIT (for legal persons)	<ul style="list-style-type: none"> 20% 	<ul style="list-style-type: none"> 35% 	<ul style="list-style-type: none"> Generally 30%, but progressive rate for small businesses (with paid-up capital below 5 million baht) or company registered at the Stock Exchange of Thailand from 20% to 25% to 30%. 	<ul style="list-style-type: none"> 28%
2. Personal income tax (PIT) rate (and PIT on dividends, interest, and capital gains)	<ul style="list-style-type: none"> Progressive; 0-20 percent depending on amount of taxable income. Interest: 4 percent. Dividends: 0 percent. Capital gains: 0 percent. 	<ul style="list-style-type: none"> Progressive; 0-45 percent depending on amount of taxable income. Interest: 10 percent. Dividends: 10 percent. Capital gains: 10 percent. 	<ul style="list-style-type: none"> Progressive; 0-37 percent depending on amount of taxable income. Interest: 15 percent. Dividends: 10 percent. Capital gains: 0 percent. 	<ul style="list-style-type: none"> Progressive; 0-40 percent depending on amount of taxable income. Interest: 0 percent. Dividends: 0 percent. Capital gains: 0 percent.
3. Depreciation (method and allowance; buildings versus plant and machinery)	<ul style="list-style-type: none"> Buildings: straight-line-basis; 5 percent. Plant and machinery: 25 percent declining balance or 12.5 percent straight line. 	<ul style="list-style-type: none"> Buildings: straight-line-basis; 6 percent. Plant and machinery: straight-line-basis; 5 percent. 	<ul style="list-style-type: none"> Buildings: straight-line-basis; 5 percent. Plant and machinery: straight-line-basis; 20 percent. 	<ul style="list-style-type: none"> Buildings: straight-line-basis; 5 percent. Plant and machinery: straight-line-basis; 10 percent.
II. Tax Incentives				
1. Sectors, geographical areas, and labor incentives	Pioneer or high-tech, job creation, export, tourism, agro-and processing, infrastructure, energy, rural development, environment, and SEZ's.	Regions 1, 2, and 3 (see below)	Technology, use domestic sources, job creation, basic and support industry, earn foreign exchange, growth outside BKK; infrastructure, energy conservation and environment protection.	Forestation, infrastructure construction, mass-transit, export production and trading, offshore fishing, agricultural processing, research and services of science and technology, plant variety production, and animal breeding.
2. Tax holidays	<ul style="list-style-type: none"> Holiday not limited by commencement of operations Either: 6 to 9 years starting in first year of sales Or: 3-6 years from the last day of the tax year immediately preceding the tax year in which profits are first derived 5-year loss carry forward 	<ul style="list-style-type: none"> 3 to 7-years from the commencement of operations; 7 years in region 1; inaccessible areas; 5 years in region 2; partly accessible; 2 years in region 3; accessible areas; Up to 3-year loss carry forward 	<ul style="list-style-type: none"> 3 to 8-years from the commencement of operations; 3 years in IE of Zone I 3-5 years in Zone II (5 years in IE) 8 years in Zone III 5-year loss carry forward 	<ul style="list-style-type: none"> Holiday not limited by commencement of operations or by sales taking place 1 – 8 years from the last day of the tax year immediately preceding the tax year in which profits are first derived: IZ providing services: 1 year EPZ providing services: 2 years IZ production enterprise: 2 years IZ exporting 50 percent or more of products: 2 years All zones – infrastructure construction/provision projects: 4 years EPZ production enterprise and OEZ (Chu Lai): 4 years HTZ (high-tech zone): 8 years 5-year loss carry forward
3. Reduced CIT after tax holiday period, incentives provided instead of a tax holiday, or other incentives	<ul style="list-style-type: none"> After tax holiday: 9% (QIP's) for five years (starting from the tax year occurring after 2003 Loi promulgation) and 20% thereafter Instead of tax holiday: 40% special depreciation for QIP's not using tax holiday period 	<ul style="list-style-type: none"> 10% (region 1) 7.5% for 3 years and then 15% (region 2); 10% for 2 years and then 20% (region 3) 0% if profit is reinvested 	<ul style="list-style-type: none"> 50% reduction for 5 years in Zone III provided that capital investment is at least 10 million baht; Exemption of withholding tax 	<ul style="list-style-type: none"> After tax holiday: IZ providing services: 10% for 2 years; EPZ providing services: 7.5% for 3 years; IZ production enterprise: 7.5% for 3 years; IZ exporting 50% or more of products: 7.5 percent for 3 years; All zones – infrastructure construction/provision projects: 5% for 4 years; EPZ production enterprise: 5% for 4 years; OEZ (Chu Lai): 5% for 9 years HTZ: no reduction in CIT Instead of tax holiday: reduced CIT (depending on sector/area): 10% (for 15 yrs), 15% (for 12 yrs), or 20% (for 10 yrs); Reduction of withholding tax to 3% (normal rate is 7%)
4. Import duties and VAT exemptions	<ul style="list-style-type: none"> 100% duty and VAT exemption on inputs for qualified sectors under II - 1; Exempt from 1% turnover tax for QIPs; VAT exemption on both inputs and sales of supporting industries (their contractors receive only VAT exemption on sales) to export-oriented garment and footwear sectors. 	<ul style="list-style-type: none"> Duty and taxes on import of: Tools, spare parts, vehicles directly used for production; Raw materials unavailable or insufficient locally; Semi-processing products for export; Export (at least 70% of the total production). 	<ul style="list-style-type: none"> Exemptions and reduced import duty and VAT rates on inputs on exports and in certain sectors 	<ul style="list-style-type: none"> VAT and import duty exemptions: Commodities (except materials) imported for export proc. of foreign contractors imported for ODA projects or exported upon completion Import for export or vice-versa for exhibition Goods imported to form fixed assets (equip, machineries, specialized means of transport, materials) Imported raw materials, parts, accessories, and materials for exportation.

Annex II.1. cont. Investment Incentives in Malaysia, the Philippines, and Indonesia

	Malaysia	Philippines	Indonesia
I. Regular business Taxation Regime			
1. Standard CIT rate on dividends and retained earnings (for legal persons)	<ul style="list-style-type: none"> 28% 	<ul style="list-style-type: none"> 35% 	<ul style="list-style-type: none"> 30%
2. Personal income tax (PIT) rate (and PIT on dividends, interest, and capital gains)	<ul style="list-style-type: none"> Progressive rate from 0-28 percent depending on amount of taxable income. Interest: 28 percent. Dividends: 0 percent. Capital gains: 0 percent. 	<ul style="list-style-type: none"> Progressive rate from 5-32 percent depending on amount of taxable income. Interest: 20 percent. Dividends: 10 percent. Capital gains: 10.5 percent. 	<ul style="list-style-type: none"> Progressive rate from 5-35 percent depending on amount of taxable income. Interest: 15 percent. Dividends: 15 percent. Capital gains: 35 percent.
3. Depreciation (method and allowance; buildings versus plant and machinery)	<p>Buildings: straight-line-basis; 10 percent first year, 3 percent thereafter.</p> <p>Plant and machinery: straight-line basis; 14 percent for 6 years.</p>	<p>Buildings and plant and machinery: Straight-line, double-declining balance, or the sum-of-the-years-digits methods; Rates not defined; based on economic or useful lives of the asset or the ones used for financial reporting.</p>	<p>Buildings: straight-line-basis; 5 percent.</p> <p>Plant and machinery: 25 percent declining balance or 12.5 percent straight line.</p>
II. Tax Incentives			
1. Sectors, geographical areas, and labor incentives	<p>High-technology or resource based industries, R&D, shipping, fund management, hypermarkets, waste recycling, manufacturing, offshore trading, technical and vocational training, agriculture and agro-based industry, communication, utilities, and transportation, hotel, tourism, and service sectors, environmental conservation and in certain areas.</p>	<p>Areas of investment identified annually in the Investment Priorities Plan (IPP), or if at least 50 (70) percent of production is for exports for domestically-owned (majority foreign-owned) firms.</p>	<p>These include investment priority sectors, strategic role in economic development, employment creation, location, and partnership with cooperative.</p>
2. Tax holidays	<ul style="list-style-type: none"> Holiday starts at commencement of production 5 years: a contract research and development company or a high technology companies (such as automation, bio-technology, electronics, building material sciences, information technology and renewable energy technology). A high technology company is expected to expend at least 1% of its annual sales turnover on research and development activities and 7% of its workforce should consist of Science graduates. 10-5 years: exemption of 75%-85% of profits for other companies with a pioneer status concession (10 years available for commercialization of R&D findings). Unlimited loss carry forward and tax depreciation. 	<ul style="list-style-type: none"> 3 to 8-years (BOI, PEZA) from the scheduled start of commercial operations; or 6 years: new projects with pioneer status or projects in Less Developed Areas; 4 years: new non-pioneer projects; 3 years: expansion and modernization projects (ITH limited to incremental sales in revenue/volume); Additional (up to 2) years can be granted depending on raw materials content, capital to worker ratio, or net foreign exchange earnings. Up to 3-year loss carry forward. 	<ul style="list-style-type: none"> 3-8 years from the commencement of commercial operations, or five years after the project is licensed, whichever comes first; domestic and foreign investors will be granted a tax holiday for a maximum period of time for 3 years (5 years in location outside of Bali and Java islands). The criteria for such tax incentives is provided in a Presidential Decree No.71/1999 although it is not consistently applied and under revision pending implementing regulation to the new investment law; an additional holiday year is offered for each of the following criteria being met: if the company (i) employs more than 2000 workers; (ii) at least 20% shareholding by cooperatives; and (iii) at least US\$200 million investment realization (excl. land and building). 10-year loss carry forward for companies in economic development zones or in priority sectors (standard loss-carry forward provision is 5 years).
3. Reduced CIT after tax holiday period, incentives provided instead of a tax holiday, or other incentives	<ul style="list-style-type: none"> Double deduction incentives for approved training expenditure; Industrial adjustment allowances may be granted up to 100% of capital expenditure; Tax exempt dividends out of exempt income; Accelerated depreciation available for computers, information technology, environment protection, and waste recycling equipment, and agricultural industries. 	<ul style="list-style-type: none"> Full deduction of infrastructure spending in less-developed areas; 50% deduction of incremental labor expenses if the prescribed ratio of capital assets to annual labor is met (100% percent if located in a less-developed area; Tax credit for income taxes paid to a foreign country if no deduction claimed and for duties and taxes paid for inputs for export products and breeding stocks and genetic materials. <p>PEZA: after tax holiday, exemption from national and local taxes, but instead 5 percent tax on gross income.</p>	<ul style="list-style-type: none"> Investment tax allowance: 6 years maximum, 30 percent reduction in taxable income. Accelerated depreciation and amortization; 10% income tax on dividend payments (or lower if tax treaty exists) to nonresidents. 50 percent reduction in land and building tax in certain regions and sectors.
4. Import duties and VAT exemptions	<ul style="list-style-type: none"> Duty free import of raw materials and spare parts for re-exports; Import duty and sales tax exemption on machinery and equipment not produced domestically; Sales tax and excise exemption on locally purchased machinery and equipment. 	<ul style="list-style-type: none"> Exemption from taxes and duties on imported supplies and spare parts. 	<ul style="list-style-type: none"> Maximum 5 percent import duty on imports of capital goods and raw materials for 2 years from the date of commercial production; Special duty drawback and VAT exemption for companies with an export ratio above 65 percent VAT and sales tax, import duty, and excise exemption in bonded zones.

Sources: KPMG Asia Pacific Taxation, 2003; Fletcher 2002, Tax Incentives in Cambodia, Lao P.D.R. PDR, and Vietnam, IMF (unpublished); Cambodia: Investment Law 1994 and its 2003 Amendment, and Law on Taxation; Lao P.D.R. PDR: Law on the Promotion of Foreign Investment and its draft subdecree, 10/22/2004; Thailand: Board of Investment, Labor Law and Land Law; Vietnam: Law on Foreign Investment, Labor Law and Land Law; Business Issues Bulletin Number 2, IFC/MPDF, 2004; Chalk, 2001, Tax Incentives in the Philippines, IMF Working Paper 01/181, Washington, DC; FIAS, 2007, Transition Issues in Investment Incentives Reform, Draft, April; Various editions of deloitte tax guide.

III. ASSESSING THE STRUCTURE OF THE PHILIPPINE FINANCIAL ACCOUNT: AN EXTERNAL ASSET-LIABILITIES PERSPECTIVE¹⁴

42. **Since 2005, the Philippines has experienced a surge in net foreign exchange inflows.** These inflows were predominantly driven by the current account, particularly very strong inflows of transfers and remittances. By contrast, the financial account has remained broadly balanced, leaving reserves accumulation as the primary absorber of inflows (see Annex III.I).

43. **The broadly balanced financial account, however, masks major compositional shifts.**

Philippines: Balance of Payments, 2004-07					
	2004	2005	2006	2006	2007
			Q1-Q3		Q1-Q3
(In billions of U.S. dollars)					
CA excl. transfers & remittances	-10.38	-12.30	-7.63	-10.04	-8.37
Transfers & remittances	12.01	14.28	11.44	15.94	12.54
FDI (net)	0.11	1.67	1.47	1.98	-1.22
Portfolio (net)	-1.71	3.48	1.92	2.36	2.81
Other capital (net)	-0.02	-2.91	-3.82	-5.81	1.72
(In percent of GDP)					
CA excl. transfers & remittances	-11.94	-12.46	-9.16	-8.54	-8.28
Transfers & remittances	13.82	14.47	13.74	13.56	12.41
FDI (net)	0.13	1.69	1.76	1.69	-1.20 1/
Portfolio (net)	-1.97	3.52	2.31	2.01	2.78
Other capital (net)	-0.02	-2.95	-4.59	-4.94	1.70 1/
Sources: BSP, and Fund staff calculations.					
1/ FDI and other capital in 2007Q2 are distorted by a one-off sale of a large foreign-owned firm.					

- Net foreign direct investment (FDI) flows, which had been very weak in previous years, turned strongly positive since 2005.
- Portfolio flows took an even more pronounced swing during the same time period.
- By contrast, net other investment (essentially loans) showed a large increase in outflows, reflecting stepped up debt prepayments by both the public and the corporate sector, as well as increased foreign lending by Philippine banks. Additionally, currency outflows also picked up, as domestic investors sought to increase the diversification of their holdings.

¹⁴ Prepared by Ioannis Halikias.

44. **This chapter examines some of these recent developments using the *stocks of external assets and liabilities*, which carries several distinct advantages:**

- Stocks are a natural benchmark for international comparisons, allowing assessment of the Philippine portfolio allocation against other emerging markets;
- Stocks are more indicative of medium-term trends and vulnerabilities, including economy-wide balance sheet mismatches.

Annex III.II contains a description of the data used and countries included in this chapter.

A. Developments in the Broad Composition of External Assets and Liabilities

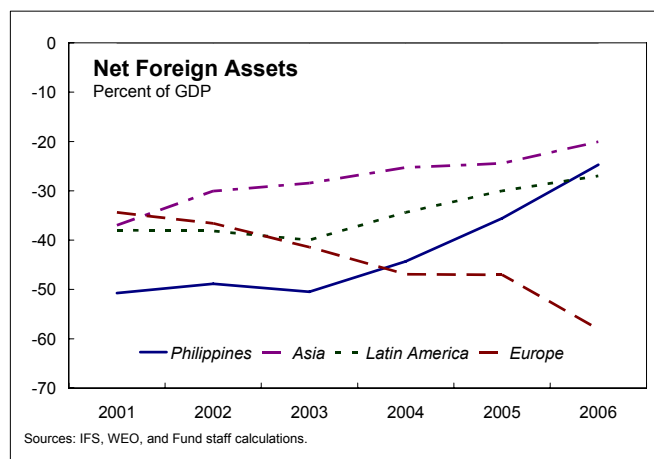
Net international investment position

45. **All through 2001-2006, the Philippines has been in a negative net International Investment Position (IIP), as would be expected in most emerging markets.**

Traditionally, developing economies have a comparatively high rate of return on capital, encouraging foreign investment and leverage.

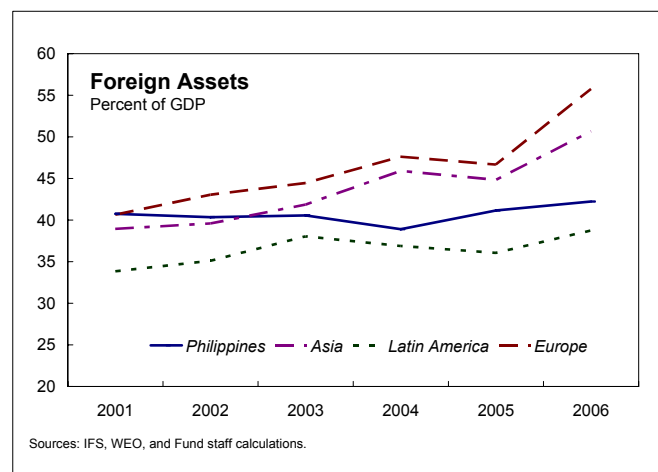
46. **At the same time, the Philippines' negative net IIP has been steadily narrowing from 2004 on, at a pace much faster than other Emerging Market Economies (EMEs): between 2001 and 2006, its net IIP had improved by over 25 percentage points of GDP.**

As a result, the Philippines, starting from a position of a clear outlier compared to all three EME regional groups, by 2006 had reached a comparable net international investment position.



Philippine Holdings of External Assets

47. **Philippine external assets (gross reserves, gross FDI and portfolio assets abroad, and gross other investment claims on the rest of the world) has been broadly stable as a share of GDP since 2001.** Initially, the stock of assets fell slightly, before marginally recovering in 2005. By 2006, Philippine gross foreign assets were just 1½ percent of GDP higher than their 2001 level.

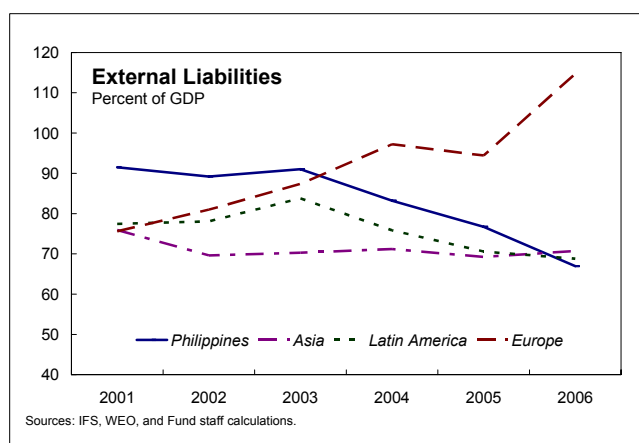


48. **By contrast, gross external assets to GDP rose much faster elsewhere.** In emerging Asia, this was due mainly to reserve accumulation. In emerging Europe, primarily FDI, but also portfolio and other assets, rose sharply. The corresponding upward trend in emerging Latin America was, however, much milder.

49. **As a result, by 2006, the Philippines' gross asset position was much lower relative to emerging Europe (by some 15 percentage points of GDP) and the rest of emerging Asia (by some 10 percentage points of GDP),** but remained above that of emerging Latin America (by some 5 percentage points of GDP).

External Holdings of Philippine Assets (Gross Foreign Liabilities)

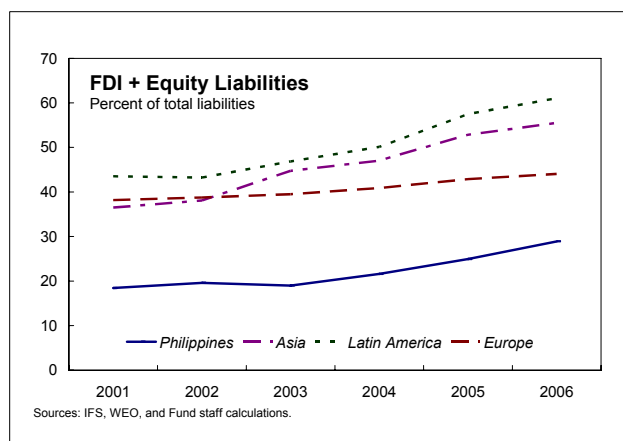
50. **External liabilities by Philippine residents (as measured by FDI liabilities, gross portfolio liabilities, and other liabilities—currency and deposits, as well as loans) have fallen sharply since 2004.** Starting from a level above 90 percent of GDP, which was raising serious sustainability concerns, external liabilities had declined by over 20 percentage points of GDP by 2006. This sharp decline reflects the significant debt prepayments of the general government and corporate sectors (including the highly indebted power sector).



51. **This reduction is particularly stark in comparison with other countries.** The Philippines was a clear outlier at the start of the decade. Since then, the Philippines' total gross foreign liabilities (as a share of GDP) have converged rapidly to the levels of emerging Asia and emerging Latin America., and by 2006 had actually fallen slightly below the averages of both regional groups. During the same period, emerging Europe has diverged sharply from the other regional groups, with its stock of gross foreign liabilities exceeding 110 percent of GDP by 2006, driven both by debt and non-debt flows, as discussed in the next section.

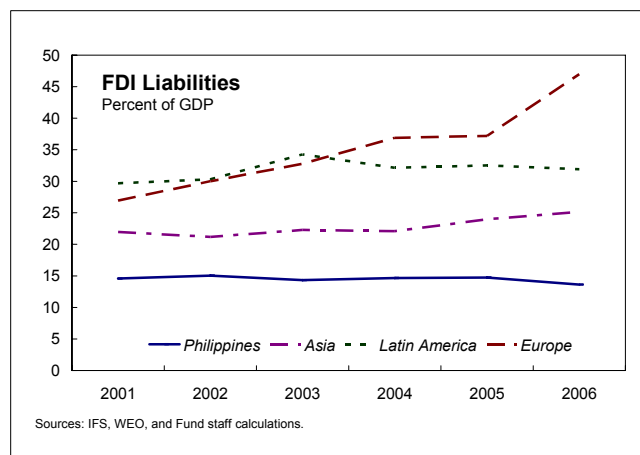
B. Comparison of FDI and Equity Inflows

52. **There is a major shift afoot in the composition of financial flows.** In the Philippines, this involves a *reallocation* of liabilities away from debt and toward FDI and equity holdings by foreigners. However, this trend appears to reflect a sharp *global* shift in the composition of EME portfolio allocations. Since the Asian and Russian crises of the late 1990s, global flows to EMEs have shifted sharply

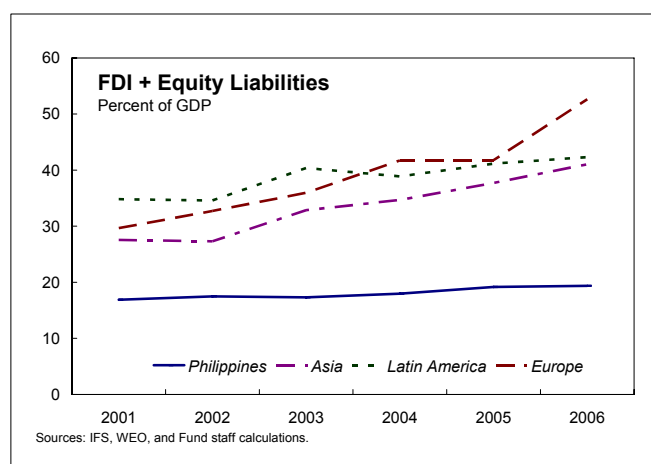


in favor of FDI and portfolio equity investment, and away from debt instruments. In this respect, it appears that the Philippines has not fully participated in this shift, recent trends notwithstanding.

53. **For example, while FDI flows have increased, the Philippines remains a clear outlier, with relatively low levels of foreign investment.** Moreover, the gaps relative to all three EME groups have grown, and by 2006 amounted to 10 percent points of GDP relative to emerging Asia, more than 15 percent of GDP relative to emerging Latin America, and more than 30 percent of GDP relative to emerging Europe.



54. **The Philippines' relative standing does not improve if foreign holdings of portfolio equity are included along with FDI.**¹⁵ By 2006, the Philippines' broader equity aggregate was some 15-20 percentage points of GDP lower relative to the emerging Asia and emerging Latin America averages and some 35 percent of GDP lower relative to the emerging Europe average.



55. **However, the Philippines has made progress at a similar pace as in other countries in paring the importance of debt in financing foreign claims on Philippine assets.** For example, the “debt-equity ratio” (the share of foreign equity and FDI holdings to total foreign liabilities) has risen at a similar pace as in other EMEs. Nevertheless, foreign equity stakes remain relatively small compared with other EMEs.

C. Structural Explanations of the Low Level of Philippine Equity Foreign Ownership

56. **Two potential reasons have often been cited as explanations of the low level of Philippine equity held by nonresidents:** (i) the high degree of non-capital intensive service industries imparts a downward bias; and (ii) problems in collecting data on equity liabilities.

¹⁵ The division between equity investment and FDI is relatively arbitrary. For classification purposes, a 10 percent ownership threshold is typically used to distinguish between FDI and portfolio equity. In addition, the vulnerability implications of equity and FDI holdings are more similar to each other than to debt (as neither involves necessarily regular scheduled payments of principal and interest in a foreign currency, and the size of payments against these liabilities tends to vary counter cyclically with the state of the domestic economy).

This section argues that neither of these hypotheses is particularly compelling. However, a broader set of structural factors, including governance, financial development, and competition issues, could be much more relevant; this is taken up in the next section.

Philippine industrial structure

57. **The Philippines has a somewhat unusual industrial structure for a low-income EME.** In particular, services constitute a large share of GDP and manufacturing a relatively low share. With the service sector characterized by relatively low capital intensity, some have argued that there is only a relatively small need to attract foreign capital.

58. **However, there are two problems with this view.** First, sectoral shares in GDP are an imperfect measure of the attractiveness of foreign capital. For example, the electronics sector (despite the relatively small value added because of high import content) is a major share of goods exports and was an important destination of FDI in the 1980s and early 1990s. Second, capital inflows should be driven by the present discounted value of returns to the industry (in turn reflecting comparative advantage patterns), and not its capital intensity.¹⁶

59. **These considerations are validated by empirical evidence from other EMEs:**

- Cross-sectional and panel studies fail to detect a statistically significant impact of sectoral composition on the magnitude of foreign equity inflows.¹⁷
- Some EMEs also have a large shares of services (the Baltics, Hungary, Czech Republic, and Chile), but are significantly more successful in attracting FDI and equity inflows.
- In individual EMEs, the manufacturing sector is not systematically more likely to attract higher foreign equity. Rather, the sectoral destination of inflows appears broadly in line with patterns of comparative advantage.¹⁸

Under-reporting of financial flows

60. **The balance of payments data could be understating FDI and portfolio equity inflow, especially in recent years.** For example, the recent surge in remittances may have a financial component, rather than current one, since many of these funds were used to purchase real estate.

¹⁶ For an early contribution on the role of international comparative advantage, see Baldwin (1989).

¹⁷ At the macroeconomic level, studies include Chakrabarti (2001) and Harms and Lutz (2006). On industry- or firm-level studies, an early empirical reference is Horst (1972); see also Devereux and Griffith (1998) and Buch et. al. (2005).

¹⁸ See Eichengreen (2001), which draws on numerous World Bank country studies. On the empirical link to comparative advantage, see Svaleryd and Vlachos (2005) and Do and Levchenko (2007).

61. **However, these flows appear too small to materially change the results in this section.** At most,¹⁹ the financial component of remittances during the past two years is estimated to some 1-1½ percent of GDP annually. By contrast, equity and FDI liabilities are between 15 and 35 percent of GDP lower in the Philippines than elsewhere.

D. Outlook and Policy Implications

62. **If total equity inflows could be increased and foreign holdings of Philippine companies be brought closer to other EME standards,** there would be substantial benefits:

- By facilitating faster technology transfer and moving the economy closer to the global technological frontier, it could provide a powerful self-reinforcing mechanism supporting faster income convergence.²⁰
- Closing of the “equity gap” could provide a more diversified source of balance of payments financing over the near and medium term. It could also help ensure that the strategy of retiring external debt does not entail pressure on reserves or the peso.
- Switching from debt (denominated in a foreign currency) to peso-denominated equity financing could reduce economy-wide balance sheet vulnerabilities arising for currency mismatches, such as a sudden rise in demand for foreign exchange causing runs on reserves in periods of stress.²¹

63. **However, policy makers face the question of *how* to increase the attractiveness of Philippine shares to foreign investors.** There is increasing empirical evidence that the *quality* of growth is important, which would require that the Philippines achieve a more balanced growth profile. In particular, the slump in investment (as a share of GDP) needs to be reversed. Sustaining key supporting policies, notably the planned shift of government expenditure away from current spending and toward infrastructure, would be crucial. Moreover, expanding domestic employment opportunities, so as to limit (or reverse) outward migration of skilled labor, could also play an important role—given the well-established strong skilled labor-capital complementarity. This would reverse the recent, arguably second-best pattern, whereby convergence in capital-labor ratios has been effectively taking place through labor migration (and recently increasingly of skilled labor) rather than via import of capital.

¹⁹ It should be noted that data collection and classification, at least as regards financial flows via the banking system, have improved substantially in recent years.

²⁰ The staff’s reform scenario discussed in the staff report provides a stylized description of such a mechanism. On the impact of equity investment on recipient economies, see Henry (2003, 2007) and Prasad et. al. (2003).

²¹ See, for example, Rosenberg et. al. (2005).

64. **More recent research has also identified the key role of microeconomic factors in attracting equity capital.** For example, Harms and Lutz (2006) estimate a panel regression model, that attempts to link the determinants of foreign investment to a broad range of explanatory variables, including per capita income, governance, foreign aid per capita, and openness to trade. Specifically, the authors estimate a number of alternative specification, each employing a different governance indicator. The tabulation below summarizes the estimated partial elasticities only of GDP per capita and various governance indicators that are of special interest to this chapter.

Dependent variable: log (Private foreign investment per capita)						
<i>Governance indicator</i>	Voice and accountability	Political instability and violence	Government effectiveness	Regulatory burden	Rule of law	Graft
log (GDP per capita)	0.394 [2.64]*	0.569 [2.53]*	0.468 [2.01]*	0.400 [3.28]**	0.381 [2.14]*	0.389 [2.11]*
Governance	1.063 [1.79]+	1.261 [2.15]*	0.689 [1.07]	2.977 [5.32]**	0.981 [2.00]*	0.964 [1.45]

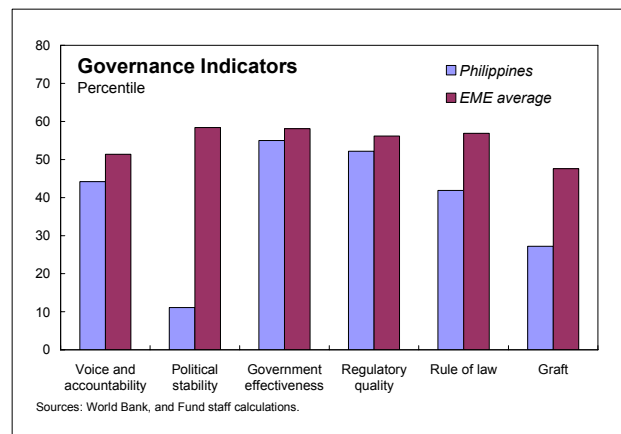
t-statistics in brackets; +, *, and ** denote significance at 10%, 5%, and 1% levels, respectively.

Source: Harms and Lutz (2006).

65. **On the basis of the average estimated elasticity of the GDP variable, full income convergence by the Philippines to the sample average would be consistent with a rise of FDI and equity per capita by over 35 percent from its current level.** Assuming a Cobb-Douglas production function specification, and a labor income share of 65 percent (see Chapter I),²² this would translate into a higher level of total equity by some 5 percentage points of GDP. In addition, if institutional reforms were introduced that would raise the governance indicators to their sample average,²³ a further increase in total equity by over 6 percentage points of GDP could be realized. The overall impact is likely to be quite substantial, closing more than half of the Philippines' equity gap relative to other EMEs.

66. **Some specific suggestions include:**

- With regard to *FDI*, the emerging consensus seems to be that factors such as improving governance, strengthening property rights,



²² See Chapter 1.

²³ With the exception of the political stability index, which is conservatively assumed to be independent of policy.

reducing firm set-up costs and costs of doing business, and ensuring a competitive market environment and freedom of entry are crucial. On the basis of these indicators, the Philippines generally falls short of the standards of other EMEs, especially in the areas of political stability, the rule of law, and corruption.²⁴ Also, the lack of an effective competition policy and a high degree of cartelization of important sectors in the Philippines could further deter foreign entry.

- With regard to *portfolio equity*, financial and capital markets need to be developed further. The banking system, despite considerable recent progress, requires additional resolution of longstanding structural weaknesses. Despite a substantial reduction in recent years,²⁵ non-performing loans are high by EME standards, and bank profitability and the degree of financial intermediation are low. The state of capital market development is arguably even more problematic: the number of listed companies is extremely low even by the standards of much less developed economies. Lack of progress in these areas could pose serious constraints in the Philippines' ability to attract portfolio equity capital. In this regard, recent legislative initiatives²⁶ to address moral hazard and asymmetric information problems are particularly encouraging.

E. Summary

67. This chapter has explored the main features of the Philippines' financial account, in an effort to identify key recent trends and make inferences on future prospects. The analysis focused on stocks of foreign assets and liabilities and adopted a cross-country perspective to help determine the Philippines' position within a broader universe of emerging market economies. The main conclusions of the analysis can be summarized as follows:

- In terms of its net international investment position, the Philippines is currently well in line with other EMEs: while remaining a net debtor, it has seen its net liability position improve sharply since the time of the Asian crisis.
- With regard to gross foreign assets, while there is considerable regional variation across EMEs, the Philippines does not constitute an outlier.

²⁴ For a detailed discussion on, and the latest vintage of, the indicators in question, see Kaufmann, Kraay, and Mastruzzi (2007).

²⁵ Non-performing loans have come down from 13 percent of total loans in 2003 to 7 percent in 2006. Moreover, in contrast to other Asian countries, this improvement in the Philippine banks' asset portfolios was achieved without government financial support.

²⁶ These include laws submitted to Congress on credit information disclosure, corporate bankruptcy, and the regulatory framework.

- Similarly, with regard to total gross external liabilities, the Philippines has reached a position well in line with other EMEs, starting from a position of borderline unsustainability at the time of the Asian crisis.
- The Philippines' gross equity liability position remains remarkably low by EME standards; this is a key component of its external balance sheet where it constitutes a clear outlier relative to virtually every other EME: This "equity gap" is very large and persistent, irrespective of whether one focuses on FDI alone or on the aggregate of FDI and portfolio equity.
- This equity gap highlights important missed opportunities by the Philippines in a period marked by a major shift in global capital flows from debt towards equity. At the same time, it suggests considerable "catch up" potential looking forward: such catching up could have major beneficial implications for income convergence, providing stable balance of payments financing, and addressing key balance sheet vulnerabilities.
- Such catching up would depend critically on a some key prerequisites: while considerable progress has already been made on the macroeconomic front, there is an important outstanding agenda in the areas of structural reform and institution building. The empirical literature suggests that the gains from such reforms towards closing the Philippines' "equity gap" can be substantial.

68. **Over the medium-term, there is greater potential for diversification-driven capital outflows in the wake of the recent rounds of financial account liberalization.** These non-debt capital flows could be increasingly called upon to provide balance of payments financing, especially given the authorities' intentions to continue with debt prepayments and the likelihood that remittances will fall to more traditional levels.

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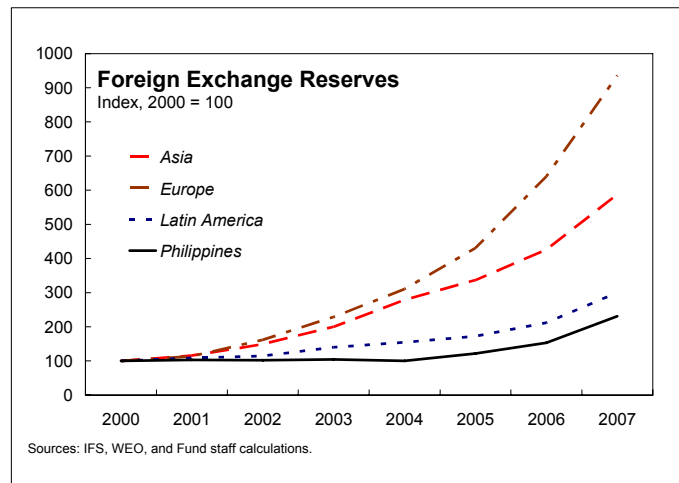
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ANNEX III.I: ASSESSING THE PHILIPPINES' FOREIGN EXCHANGE RESERVE POSITION

Following the crises of the late 1990s and early 2000s, Emerging Market Economies (EMEs) have accumulated a large amount of foreign exchange reserves. While EME reserve accumulation has been a global phenomenon, it has been particularly pronounced in Asia and Europe. This development reflects a combination of post-crisis competitive exchange rates and a quick resumption of global capital inflows, particularly the non-debt component FDI and portfolio equity.

The Philippines has lagged behind other EMEs as regards reserve accumulation since it was not able to fully benefit from the resurgent global capital flows. From 2005, however, the Philippines' authorities took advantage of higher remittance inflows and stronger FDI and portfolio equity to build up reserves, even as they prepaid a substantial amount of external debt. Reserve accumulation was particularly strong in 2007, rising by over US\$22 billion (including swaps), doubling their end-2006 level.



This recent trends raise the question of whether the Philippines' current reserve levels can be regarded as adequate, or whether further reserve accumulation is called for, on insurance or other grounds. A key function of reserves is to provide a buffer against sudden balance of payments shocks. Accordingly, the literature suggests a number of indicators, expressing reserves scaled by the main components of current and capital account outflows, as a way to gauge an economy's relative vulnerability to such shocks. This annex looks at the following vulnerability indicators:

- Reserve import coverage:** This indicator, defined as end-year reserves in months of next year's imports, attempts to capture an economy's vulnerability to shocks to the current account. While theory provides little guidance on an appropriate numerical value, a benchmark of 3 months of imports is sometimes used as a "safe" threshold. It should be noted, however, that in countries with an open capital account, this measure is less relevant.
- Ratio of reserves to broad money:** This indicator attempts to capture vulnerability to sudden capital outflows ("capital flight")—with broad money meant to provide an upper limit to demand for foreign exchange by domestic residents. Full reserve coverage of broad money would clearly provide complete insurance in this regard, but such a threshold is typically viewed as too stringent—even some formal currency boards limit coverage to the monetary base.

- **Ratio of reserves to short-term debt (by residual maturity):** This indicator attempts to capture “sudden stop” or rollover risk. An often-discussed threshold is the so-called Greenspan-Guidotti rule, which stipulates 100 percent reserve coverage of short-term debt as a minimum “safe” level. This measure is more relevant in countries with an open capital account.

The tabulation below summarizes the evolution of the Philippines’ *import coverage ratio* against selected EME comparators and corresponding regional group averages, dropping outliers as appropriate.²⁷

Reserve Coverage of Imports (in months)								
	2000	2001	2002	2003	2004	2005	2006	2007
Asia	5.8	5.8	6.2	6.2	6.5	5.9	6.1	6.7
India	6.4	7.3	8.7	9.1	8.3	6.9	7.1	9.3
Indonesia	6.8	6.3	6.6	5.9	4.6	4.2	4.4	5.1
Korea	6.7	6.7	6.8	6.9	7.6	6.8	6.6	5.9
Malaysia	3.9	3.9	4.2	4.4	6.1	5.7	6.0	6.9
Philippines	3.7	3.6	3.4	3.3	2.9	3.2	3.7	5.0
Thailand	5.6	5.3	5.4	4.6	4.4	4.2	5.0	5.0
Europe	3.1	3.2	3.9	3.7	3.3	3.6	3.5	3.7
Croatia	3.9	4.3	4.1	4.9	4.8	4.3	4.6	5.0
Czech Republic	3.7	3.7	4.8	4.2	4.0	3.4	2.7	2.7
Estonia	2.2	1.7	1.6	1.7	1.8	1.5	1.9	1.9
Latvia	2.4	2.9	2.4	2.1	2.3	2.1	2.9	3.1
Lithuania	2.4	2.3	2.7	3.0	2.5	2.1	2.7	3.2
Turkey	5.2	3.7	4.0	3.7	3.3	3.9	4.0	4.4
Ukraine	0.8	1.6	1.8	2.2	2.6	4.3	4.1	5.2
Latin America	3.9	4.3	4.5	4.5	4.3	4.2	4.0	3.8
Chile	8.4	8.3	7.8	6.4	5.0	4.6	4.6	3.7
Colombia	6.7	7.9	7.7	6.5	6.5	5.8	4.8	6.1
Mexico	2.3	2.9	3.2	3.3	3.2	3.2	2.9	3.0
Peru	10.5	10.5	10.4	9.3	9.6	8.9	9.2	8.8
Uruguay	8.0	14.9	3.4	6.6	6.5	6.3	5.5	6.6
Venezuela	6.6	6.4	7.3	8.9	7.6	7.6	6.9	4.2

Source: IFS, WEO and Fund staff calculations.

Reflecting trends in gross reserves, the Philippines’ import coverage ratio rose sharply in 2007. Its current import coverage remains well below the very high Asia average and equals the levels of Indonesia and Thailand. It is, however, well above average European and

²⁷ Outliers include some large (and relatively closed) EMEs: China in the Asia group, Russia in the Europe group, and Brazil in the Latin America group.

Latin American EME levels, and substantially exceeds the 3-month threshold. It also needs to be taken into account that the indicator in question could be understating the effective coverage provided by a given level of reserves given the high import content of the Philippines' exports; in particular, electronics, by far the dominant export category, has an estimated import content of over 70 percent.

The evolution and cross-country comparison of the Philippines' reserves to broad money ratio are summarized in the tabulation below:

Gross International Reserves to Broad Money (in percent)								
	2000	2001	2002	2003	2004	2005	2006	2007
Asia	15	16	18	20	25	27	29	33
Mainland China	10	11	13	15	20	25	27	32
India	14	15	20	24	26	22	24	30
Indonesia	34	35	34	32	31	28	28	31
Korea	26	28	29	33	41	38	39	39
Malaysia	24	24	26	32	42	40	41	46
Philippines	41	45	41	43	39	43	41	52
Thailand	24	26	30	29	32	31	36	37
Europe	33	34	41	45	47	49	55	58
Croatia	40	37	40	43	38	34	37	36
Czech Republic	36	34	47	43	39	35	32	31
Estonia	47	35	37	38	39	30	33	31
Latvia	40	47	41	36	36	32	45	38
Lithuania	49	50	56	56	44	35	43	40
Russia	44	45	49	57	66	69	79	79
Turkey	25	22	31	34	28	30	31	30
Ukraine	23	35	35	38	40	50	42	46
Latin America	22	22	23	28	27	24	24	30
Brazil	21	27	28	37	32	23	28	49
Chile	42	44	47	50	39	33	31	25
Colombia	34	40	44	47	45	37	34	35
Mexico	13	14	15	17	17	17	15	16
Peru	61	62	64	65	74	76	81	76
Uruguay	16	17	7	22	24	23	20	25
Venezuela	59	41	52	88	82	78	47	29

Sources: IFS, WEO and Fund staff calculations.

The Philippines' reserves-to-broad money ratio has been consistently high throughout the period under consideration, partly reflecting its low degree of monetization relative to other EMEs. As with other reserve indicators, this ratio exhibits a distinct jump in 2007, to over 50 percent, exceeding the levels in most other EMEs.

Finally, the tabulation below summarizes the recent trends in the *reserves to short-term debt ratio* (on a residual maturity basis) for the Philippines and the rest of the EME sample, with regional averages computed after dropping a few clear outliers:²⁸

Gross International Reserves to Short-term Debt (in percent)								
	2000	2001	2002	2003	2004	2005	2006	2007
Asia	343	246	318	389	437	430	475	584
Mainland China	680	269	340	375	430	438	470	598
Indonesia	87	72	114	150	144	118	171	207
Korea
Malaysia	289	250	232	317	361	376	403	576
Philippines	108	96	99	97	100	103	145	201
Thailand	117	119	150	215	196	171	193	217
Europe	62	66	87	90	97	108	158	213
Croatia	152	209	212	151	113	80	98	110
Czech Republic	63	65	96	83	87	86	80	81
Estonia	68	54	56	71	78	54	63	66
Latvia	25	33	25	21	19	22	31	27
Lithuania	43	29	30	33	34	26	32	33
Russia	75	78	96	110	137	152	300	424
Turkey	51	52	82	81	63	78	81	105
Latin America	71	77	85	108	106	104	144	164
Brazil	51	55	59	83	68	72	118	168
Chile	143	125	134	107	116	93	140	115
Colombia	113	100	106	121	100	109	155	160
Mexico	66	91	110	138	162	127	154	161
Peru	151	143	204	205	155	262	373	354
Uruguay	26	26	11	34	45	48	48	74
Venezuela	109	82	63	119	154	149	217	160

Sources: IFS, WEO and Fund staff calculations.

The table above confirms the substantial improvement registered by the Philippines in the last few years, both relative to its own past trends and other EMEs. After hovering around, or even below, the Greenspan-Guidotti 100 percent threshold, the reserve-to short-term debt ratio rose sharply during 2006-07, essentially doubling by end-2007. Even so, the Philippines' high short-term debt (as a share of GDP) by EME standards, has kept this indicator significantly below the Asia average and slightly below the Europe average (which contains a number of very highly indebted countries); the indicator edges above the Latin American average only in 2007.

²⁸ The outliers are EMEs with very low short-term debt: India in the Asia group and Ukraine in the Europe group.

To summarize, the evolution of the three vulnerability indicators of this annex suggests a broadly consistent picture: starting from a relatively vulnerable position, rapid reserve accumulation in the last two years has placed the Philippines economy in a much more robust position, both relative to its own past trends and in relation to other EMEs. The strengthened reserve position appears to have rendered the economy particularly robust to trade shocks (especially if one takes into account the high import content of exports) and shocks to capital outflows; and while the high level of short-term debt continues to create some rollover or “sudden stop” risk relative to other EMEs, this risk has also been sharply reduced very recently, with the reserve-to-short-term debt ratio at twice the Greenspan-Guidotti threshold.

ANNEX III.II: DATA DESCRIPTION AND COUNTRY COVERAGE

International Investment Position (IIP) Data Description

This chapter utilizes IIP data on a broad sample of emerging market economies (EMEs). The IIP data record holdings of foreign assets and liabilities (or a residency basis) broken down into FDI, portfolio investment (equity and debt separately), and other investment (essentially non-portfolio debt). While important strides have been made in improving the accuracy and international comparability of IIP data, two important caveats remain:²⁹

- The treatment of nonresident holdings of domestic currency instruments (mainly government paper) is not consistent. While many countries include such holdings in their IIP data (as they should), data availability (or other) problems preclude others from adopting the same treatment. Given the rapid expansion of such holdings in recent years,³⁰ such differential treatment could generate increasingly serious comparability issues.
- IIP stocks are not always consistent with recorded balance of payments flows, even after correcting for valuation changes. While this problem impacts on a number of external asset and liability components, it appears to be quantitatively more significant in the case of short-term capital outflows, due primarily to incomplete information on the types of assets.

Also, IIP data are generally available only over a short time period, typically since 2001, although this limitation is not particularly serious for the issues addressed in this chapter. First, the 2001-06 period arguably constitutes a sufficient basis for forward-looking inferences, the main point of interest of this chapter. Second, focusing on this period is interesting in its own right, as it coincides with a major post-crisis shift in global EME flows from debt to equity instruments.

Country Comparisons

Philippine holdings of external assets and liabilities are compared with the average of three regional EME groupings: Asia (excluding the Philippines), Latin America, and Europe. Some countries were excluded, because of their atypical nature:

²⁹ For a comprehensive discussion of IIP data issues, and attempts at addressing them, the standard reference is the pioneering work of Philip Lane and Gian Maria Milesi-Ferretti, in particular Lane and Milesi-Ferretti (2001, 2003). For the most recent vintage of this work, see Lane and Milesi-Ferretti (2007).

³⁰ See GFSR, various issues.

- Mainland China and Hong Kong SAR were dropped from the emerging Asia group due to their non-typical (by EME standards) net foreign asset (NFA) position—the latter also because of its status as a financial center and currency board regime.
- Argentina and Uruguay were dropped from the Latin America group as their large debt restructuring had a one-off impact on their external liability position—it turns out that including them would not materially affect the results.
- Russia was dropped from the Europe group due to its non-typical NFA position. Bulgaria and Lithuania were also dropped to control for their currency board regime—results are robust to their inclusion, however.

In summary, the full EME sample used for the purposes of this chapter, broken down by region, is presented in the tabulation below:

Emerging Market Sample		
Asia	Latin America	Europe
India	Brazil	Croatia
Indonesia	Chile	Czech Republic
Korea	Colombia	Estonia
Malaysia	Mexico	Hungary
Philippines	Peru	Latvia
Thailand	Uruguay	Poland
		Romania
		Slovenia
		Turkey
		Ukraine