

**FOR
AGENDA**

SM/06/382
Correction 1

December 18, 2006

To: Members of the Executive Board

From: The Secretary

Subject: **India—Selected Issues**

The attached corrections to SM/06/382 (11/30/06) have been provided by the staff:

Factual Errors Not Affecting the Presentation of Staff's Analysis or Views

Page 3, para. 6, line 2: for “capitalization more than trebled”
read “capitalization (BSE+NSE) more than doubled”

Page 4, para. 8, line 2: for “The SENSEX has increased at a compound annual rate of 17 percent since 2003,” read “The SENSEX increased at a compound annual rate of 27 percent between end-December 2003 and end-December 2005”

Page 7, Table 1.3. India: Household Financial Assets,
line 6, column 3: for “2.2” read “2.4”
line 7, column 3: for “1.9” read “1.7”

Page 9, line 4: for “Sharp” read “Sharpe”

Page 10, 1st bullet, line 6: for “on priority sector loans remains low.”
read “on priority sector loans has not been increased.”

2nd bullet, line 3: for “LTV” read “Reported LTV”

3rd bullet, line 1: for “A reserve is built”
read “In some countries, a reserve is built”

para. 21, line 5: for “In 2006, the RBI mandated Indian banks to conduct stress tests of their asset portfolios.” read “In 2006, the RBI issued guidelines for banks to conduct stress tests”

Page 15, para. 1, line 4: for “These are government employees,” read “These are government employees (covered by a noncontributory defined benefit scheme),”

para. 2, line 2: for “Pension System (NPS). The move would shift all new government employees to a defined contribution plan from the current noncontributory defined benefit scheme.” read “Pension System (NPS) (a defined contribution plan) for all new central government employees recruited after January 1, 2004.”

para. 3, line 3: for “at end-2003 are being deducted and credited a rate of return of 8 percent.” read “at end-2003 are being deducted (matched by government contributions) and credited with a rate of return of 8 percent.”

Page 16, para. 7, 2nd bullet, line 1: add footnote 11 “Total annual fees incurred by participants are expected to range from 0.5 to 1 percent of assets in illustrative calculations done by the Ministry of Finance, presented in *The Pension Fund Regulatory and Development Authority Bill, 2005, Twenty First Report*, Standing Committee on Finance (July, 2005).”

Page 17, 2nd bullet, line 2: for “16 state governments that have joined the NPS.” read “17 state governments that are in the process of joining the NPS.”

Box II.1, footnote 1: removed

Pages 18, 1st bullet, line 4: for “imposes investment restrictions beyond the provisions of the draft PRFDA Bill 2005 (see Section C). The latter forbids ... bonds.” read “imposes excessive investment restrictions (see Section C).”

2nd bullet, line 3: for “government sector will be covered, the organized private sector will remain exempt” read “government sector will be covered on a mandatory basis, the organized private sector will remain exempt.”

Page 22, 1st figure: for “Figure II.5. Selected Emerging Countries: Pension Assets” read “Figure II.2. India: Retirement Market”

Questions may be referred to Mr. Kramer (ext. 38491) and Ms. Purfield (ext. 34093) in APD.

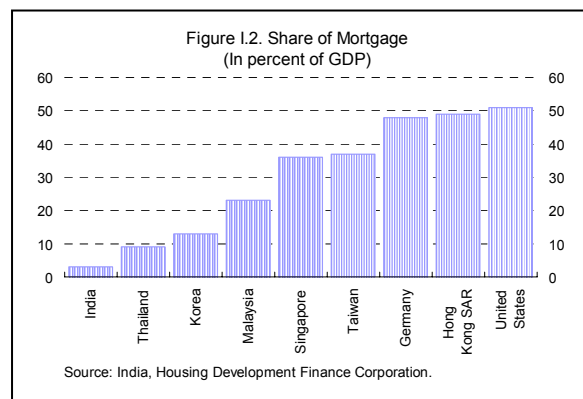
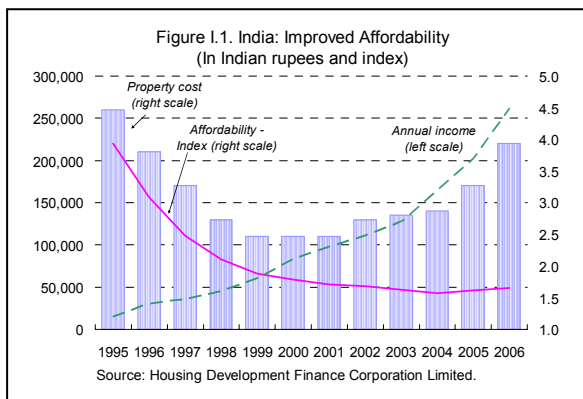
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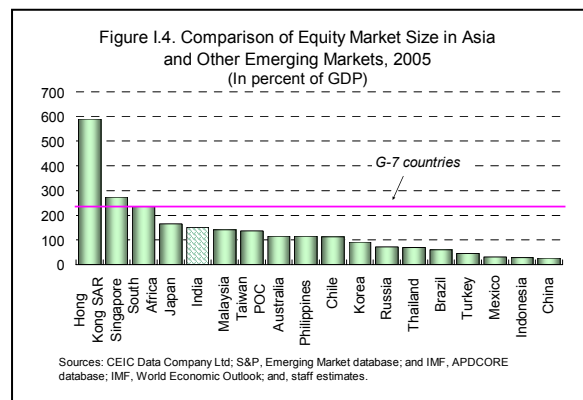
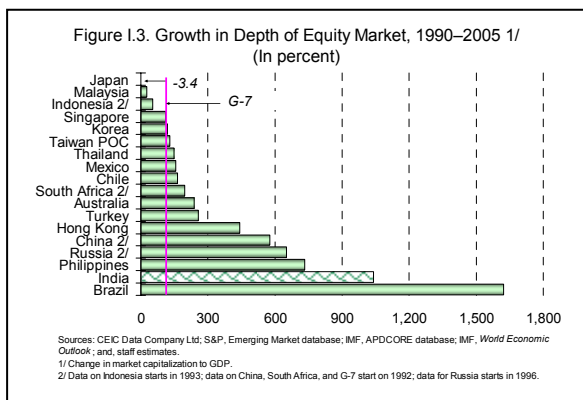
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deregulation of interest rates and land use restrictions, as well as the development of retail mortgage lending. The market is likely to expand even further in coming years: another 31 million housing units are needed to meet pent-up demand, while a further 2.7 million additional units per annum are needed to meet the needs of the growing population (Deutsche Bank, 2006).

5. **The commercial real estate sector in India is also very large.** Deutsche Bank (2006) puts the value of India's commercial real estate stock at \$300 billion (35 percent of GDP), making it the fourth largest commercial real estate market in Asia, after Japan, China, and Korea. The sector has benefited from the rapid development of the services and manufacturing sectors, and greater openness to FDI. Market analysts believe that the market has the potential to grow by \$66 billion in the next five years (Deutsche Bank, 2006).



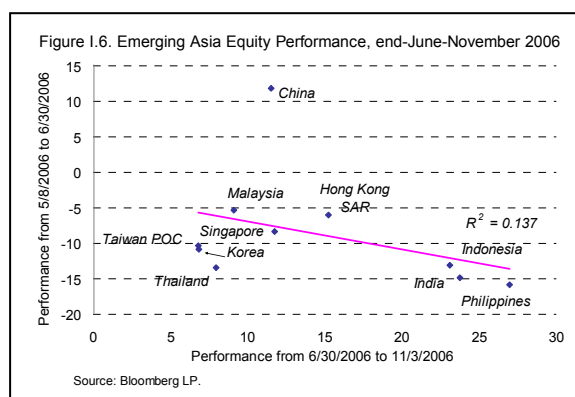
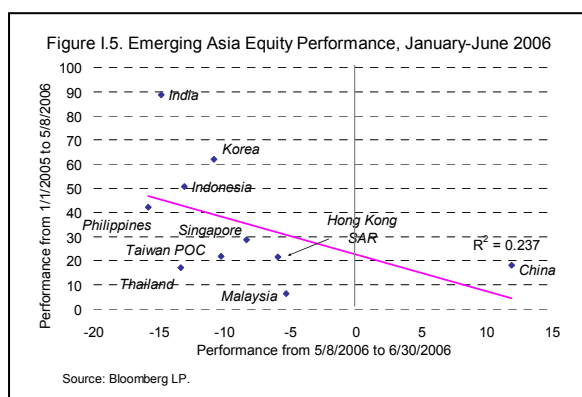
6. **Equity markets are also sizable.** Between 2000 and 2005, stock market capitalization (BSE+NSE) more than doubled to about 137 percent of GDP, reflecting the easing of controls on foreign inflows, the increase in dedicated emerging market funds, rising capital flows, and a growing domestic investor base (Purfield and others, 2006). Foreign investors' equity holdings now account for about 10 percent of GDP (Lane and Milesi-Ferretti, 2006), and up to one-third of stock market turnover. The domestic investor base has expanded: insurance, pension, and mutual funds' assets amount to almost 15 percent of GDP.



7. **Gold represents India's third major asset market.** India is the world's largest consumer of gold, accounting for about 20 percent of annual global gold purchases. With annual gold purchases tripling since 1990, households' gold holdings are estimated to be worth 28–42 percent of GDP in 2002 (Bhattacharya, 2002), or \$204–307 billion. This matches the total savings by individuals in the Indian banking sector (Agarwal, 2004).

C. How Are Asset Prices Evolving in India?

8. **Stock market prices have risen sharply particularly relative to other emerging markets.** The SENSEX increased at a compound annual rate of 27 percent between end-December 2003 and end-December 2005. This reflects large FII inflows (some \$26½ billion in 2003–2005)² and a growing base of domestic institutional investors.³ Notwithstanding the correction in the Indian stock market in May-June 2006, the price-earnings ratio again exceeds 20, with ratios in the mid-cap and technology markets closer to 30. These valuations appear high by recent historical and emerging market standards.



9. **Valuations appear to be broadly in line with India's growth prospects.** Using a standard risk premium assumption of 6 percent, the expected real dividend growth implied by current valuations appears to be consistent with estimated medium-term growth potential of about 7½ percent.⁴ Ex post risk adjusted returns look reasonable. The Sharpe ratio (which

² Indian markets have become more integrated with regional and world markets. India's beta versus world markets has increased from -0.2 in 1995–99, to 0.67 in 2000–03, and almost 1.5 in 2004–2005.

³ For example, domestic mutual funds raised some Rs. 1,018 billion or \$23 billion in 2003/04–2005/06, and in 2005 private provident funds were permitted to invest up to 5 percent of their assets in equity.

⁴ Implied dividend growth rates are calculated with the Gordon valuation model: $P_t = D_t (1 + g_d) / (r_t + \rho_t - g_d)$; where P_t is the equity price; D_t is the dividend; r_t is the real interest rate; ρ_t is the risk premium; and g_d is the real growth rate. The calculations are sensitive to the assumption on equity risk premiums: a higher risk premium of 8½ percent, which is somewhat lower than India's historical equity risk premium of 9.7 percent (Mehra, 2006) would imply dividend growth of about 1–2 percentage points above trend GDP growth.

14. **Several indicators suggest that wealth and financial accelerator effects in the Indian context are however, likely to be small:**

- Indian households' holdings of marketable financial asset holdings are small.** Households' direct holdings of shares account for less than 1 percent of GDP (about 5 percent of households' gross financial assets). If indirect holdings via institutions are included, households' holdings rise to about 5 percent of GDP. However, indirect holdings are primarily in the form of public or defined benefits plans, where changes in value of financial assets have little direct impact on households' wealth.
- Holdings of property and gold are unlikely to be leveraged.** The home equity loan market is not developed. Despite various initiatives to encourage the development of gold markets, retail markets that would allow households to transform gold holdings into capital have failed to flourish (for example, the 1999 gold deposit scheme).
- Corporates' exposure to nondebt asset markets is also small.** Indian corporates primarily invest in government securities rather than equity. Less than 5 percent of corporate funds are invested in mutual funds, and even less in direct equity holdings. Land and property are less than 3 percent of total fixed and financial assets (5.8 percent of GDP). However, financial data could understate the true value of property holdings if valued at historical purchase prices.
- The financial sector could be more exposed to asset price movements, due to indirect exposures via their borrowers and direct exposures on asset holdings.** Private sector credit has grown to 42 percent of GDP (30 percent of GDP in 2000) making the financial sector more exposed to shocks that impact borrowers' repayment capacity. On the other hand, banks' direct holdings of shares and mutual funds are relatively small (0.8 percent of GDP), partly reflecting high statutory liquidity requirements. However, a small number of banks may be relatively exposed owing to the importance of equity-linked earnings. Elsewhere

Table I.3. India: Household Financial Assets

	1993/94	2003/04	2005/06
	(In percent of GDP)		
Total financial assets	12.6	14.0	16.7
Currency	1.5	1.5	1.5
Deposits	5.4	5.8	7.9
Shares and debentures	1.7	0.1	0.8
Government securities/small savings	0.8	2.8	2.5
Insurance funds	1.1	1.9	2.4
Provident and pension funds	2.1	1.9	1.7

Source: Central Statistical Organization; and Reserve Bank of India.

Table I.4. India: Overall Contribution of Equity Linked Businesses and Income to Banks Value

	Equity Linked Businesses	Equity Linked Revenues	Total
	(In percent)		
Kotak	60.0	6.0	66.0
ICICI Bank	19.1	28.0	47.1
HDFC	7.6	25.2	32.8
UTI Bank	0.0	24.7	24.7
HDFC Bank	0.0	9.4	9.4

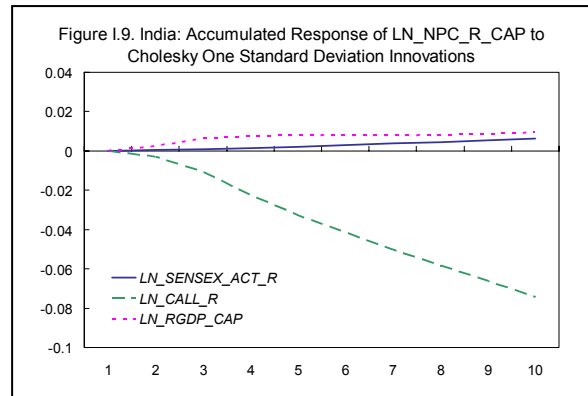
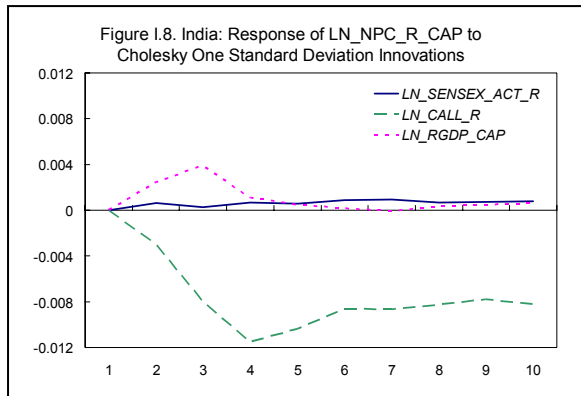
Source: Morgan Stanley, June 2006.

in the financial sector, the insurance sector's exposures to real estate and equity is low and bulk of their assets are held in government securities.⁶

15. **An econometric investigation into the determinants of consumption for India confirms that the macro impact of asset prices is relatively small.** A VECM model is used to examine the linkages between asset prices and consumption using annual data (1979–2005) for four log variables: real private consumption per capita, real stock exchange index to proxy for developments in asset prices, real short-term interest rates to control for the impact of monetary policy, and real per capita income to proxy for income. An exogenous dummy variable to capture the structural changes in the economy following the 1991 balance of payments crisis is included.⁷ The long-run relationship reveals that a 10 percent increase in the stock market index is associated with an increase in consumption of one tenth of 1 percent (with standard errors in parentheses):

$$Consumption = -3.64 + \underset{(0.00373)}{0.01}Sensex - 0.05\underset{(0.00657)}{InterestRate} + 0.60\underset{(0.02093)}{Income}$$

The impulse response and accumulated impulse response functions of real per capita private consumption to a one standard deviation shock in stock prices illustrate the fact that changes in stock market value in India have a very small macroeconomic effect.



⁶ IRDA reports that the total fixed assets of Indian insurers amounted to Rs. 146.6 million in 2005/06. Moreover, investments in equity are restricted to those that carry an AA rating and must be liquid, and investments in equity cannot exceed 50 percent of investor and sector exposure limits (10 percent of free capital and 10 percent of total industrial sector exposure).

⁷ Augmented Dickey Fuller tests confirm that the series are I(1), and Johansen trace statistics reveal the existence of a single cointegration vector with a trend and intercept, which can be interpreted as the consumption function. Lag selection tests suggest a lag of two is sufficient for all variables.

E. Should Macroeconomic Policies Adjust to Asset Price Developments?

16. **There is no broad consensus on the role of monetary policy in dealing with sharp asset price movements.** On one hand, Bernanke (2002) proposes that monetary policy should only respond to observed changes in asset prices to the extent that they signal current or future changes in inflation or output. The alternative view, supported by Cecchetti, Genberg, Lipsky, and Wadhvani (2000) is that monetary policy should try to counter directly the expansionary effects of rising asset prices to preserve financial stability and avert sharp output corrections.

17. **A stringent set of preconditions need to be met for monetary policy to respond effectively to asset prices.** It is necessary that (i) policymakers can accurately identify asset price misalignments and bubbles; (ii) fluctuations in asset prices are sizeable, macroeconomically significant, and lead to fallout that monetary policy cannot readily offset after a correction; (iii) there is an identifiable causal relationship from asset prices to aggregate demand, and (iv) there is a dependable relation between changes in monetary policy and changes in asset prices.

18. **These conditions do not appear to be fulfilled in India.** India's economy is undergoing profound structural change, making reliable identification of periods of asset price misalignment difficult. While real estate ownership and credit are growing rapidly, they are doing so from a relatively small base, making it difficult to decipher if rapid growth reflects misalignment with underlying fundamentals or financial deepening. Even if equity and asset prices are misaligned with fundamentals, the previous analysis suggests that a correction is unlikely to have a sizeable macroeconomic impact. Moreover, there appears to be no strong relationship between monetary policy and asset prices (asset prices have continued to climb despite increasing policy interest rates over the past two years).

19. **This is not to say that there is no role for more targeted policies to address potential risks.** Changes in financial regulation can play a useful role in addressing risks associated with asset prices by ensuring appropriate incentives to limit participation in the buildup of price bubbles, so that the consequences of a bust on the financial system become more limited. The RBI has proactively followed such an approach. In general, such policies are viewed as more effective than general interest rate increases because they specifically target problem sectors, which limits the risk of derailing macroeconomic growth.

20. **Various prudential measures have been adopted effectively in other countries, and India has already adopted some of these measures:**

- *Higher and/or differentiated capital requirements or risk weights:* Bulgaria, Bosnia, Croatia, Norway, and Poland (Hilbers and others, 2005) have increased risk weights by loan type, maturity, or currency composition to reduce overall lending capacity, particularly in categories experiencing rapid growth. In 2005 and 2006, India

progressively raised risk weights on loans for housing, consumer credit, capital market investment and commercial real estate to levels above those recommended by the Basel Capital Accord.

- *Tighter/differential loan classification and provisioning requirements:* Bulgaria, Croatia, and Romania have raised general and/or category specific risk provisions to reduce banks' lending capacity. In India, banks have up to 15 months to classify nonperforming loans as doubtful, which is generous relative to best international practice. While general provisioning rates on loans in high-risk areas have been raised, the provisioning rate on priority sector loans has not been increased.
- *Tightening loan eligibility criterion:* By reducing loan-to-value (LTV) ratios from 90 percent to 70 percent in 1991, and to 40 percent in 1994, Hong Kong's financial system was better able to withstand the 1997 property price correction. Reported LTV ratios of between 60–70 percent in India are relatively conservative. More importantly, lending decisions are primarily based on borrowers' capacity to repay and not asset values.
- *Dynamic provisioning (DP):* In some countries, a reserve is built to cover expected losses from the time a loan is contracted.⁸ A reserve builds up in years where actual losses fall short of expected losses, and is drawn down when losses exceed the expected level. DP requires the recognition of general provisions as a tax deductible expense, as well as the technical capacity to estimate expected losses.

21. **Supervisory policies have also been tightened in various countries.** Thailand conducts stress tests on bank's vulnerability to large falls in property prices, and requires quarterly reports on approvals of high value real estate loans. Korea requires special diagnostic reports on mortgage lending. Japan identified the largest corporate borrowers and those banks that had greatest exposure to them for closer supervision. In 2006, the RBI issued guidelines for banks to conduct stress tests. Using this framework, the RBI could encourage banks to apply stress tests to specific asset market exposures "over the economic cycle" (to see how risks evolve over several years from when the economy is a peak, through to its trough and back again) rather than just at a specific point in time. The RBI is also planning to conduct systemic stress tests.

22. **The development of market instruments to manage risk and tax reform can also help limit potential risks.** For example:

⁸ Spain began DP in 2000 in the context of a property price boom and rapid credit expansion. Loans are divided into six categories (ranging from 'without risk' to 'high risk') with the risk weight for each category determined by historical experience of default over the economic cycle.

II. FINANCIAL MARKET IMPLICATIONS OF INDIA'S PENSION REFORM¹⁰

A. Introduction

1. **Several factors have given impetus to pension reform in India.** Central government and state government pension liabilities have increased considerably over the past decade and only 13 percent of the workforce is currently covered by pension schemes. These are government employees (covered by a noncontributory defined benefit scheme), and workers in the organized private sector covered by the Employees' Provident Fund (EPF) 1952 (defined contribution scheme) and the Employees' Pension Scheme (EPS) 1995 (defined benefit scheme).
2. **Faced with these challenges, the government envisages the launch of a New Pension System (NPS)** (a defined contribution plan) for all new central government employees recruited after January 1, 2004. Participants will have access to a range of investment products from selected companies, under a proper regulatory framework. Once approved, the system would be open on a voluntary basis to nongovernment workers.
3. **Key legislation, however, is still under discussion in Parliament.** As an interim arrangement, contributions from new civil servants that have joined the scheme following a government notification at end-2003 are being deducted (matched by government contributions) and credited with a rate of return of 8 percent.
4. **This chapter draws lessons from international experience on the financial market implications of India's pension reform, with a focus on the following two questions:**
 - How do the parameters of the NPS compare with privately-managed systems in other countries? Given its parameters, is the NPS likely to generate fast growth of pension assets and stimulate financial market development?
 - To what extent have regulatory limits, conservative investment practices, and lack of options for investments abroad contributed to sub-optimal returns and constrained the growth of the pension sector in countries that implemented similar reforms? What are other pre-conditions for pension reform to drive demand for bonds and equities?

B. Benchmarking India's Pension System

5. **The section reviews to what extent the pension reforms track blazed by Chile, and later followed by other Latin American and Eastern European countries, is now**

¹⁰ Prepared by Hélène K. Poirson.

being followed by India. The main features of India's NPS are compared with privately-managed systems in other countries. The parameters of the pension reform envisaged in India appear in line with best practice. However, two features set India apart from international common reform practice—the absence of a guaranteed minimum pension for participants (the so-called first pillar) and the only partially mandatory character of the NPS—and may prevent the early achievement of sufficient critical mass.

India's Pension Plan in International Perspective

6. **The draft Pension Fund Regulatory and Development Authority (PFRDA) Bill, 2005, sets a framework for the development and regulation of pension funds in India with a view to promoting old age income security for all individuals.** Once passed by Parliament, the Bill will allow the launch of personal pension accounts in India and make the NPS available to workers in the unorganized private sector. It will also be available on a voluntary basis (in addition to his/her mandatory cover) to any person governed by the organized private sector schemes.

7. **While the reform bill sets only the broad contours of the NPS and many details are yet to be finalized, its preliminary provisions place the new system well within international norms.**

- The employee contribution rate of 10 percent (matched by an equal government contribution) is broadly within the international range. Projected terminal replacement rates are in line with international experience and with the standards recommended by the World Bank, and match benefits under the existing system for government employees.
- Expected management costs are comparable to those in other emerging markets¹¹ although high compared to low-cost providers in advanced economies. For instance, the U.S. federal civil servant Thrift Savings Program costs about 0.07 percent of assets and U.S. low-cost private providers such as Vanguard and Fidelity charge fees of 0.2–0.3 percent of assets, less than half the levels envisaged in India (Faulkner-McDonagh, 2005). Larger volumes and larger average accounts for these U.S. providers enable economies of scale and eliminate low balance fees.

¹¹ Total annual fees incurred by participants are expected to range from 0.5 to 1 percent of assets in illustrative calculations done by the Ministry of Finance, presented in *The Pension Fund Regulatory and Development Authority Bill, 2005, Twenty First Report*, Standing Committee on Finance (July, 2005).

8. Two features set India's pension plan apart from common international practice:

- The NPS only provides the second and third pillars (Box II.1). In other countries that have undertaken such reforms, the public pension system continues to provide a first pillar, or comprehensive reform legislation is being considered to introduce one (Chile). India's organized private sector is also covered under a two-pillar system.
- Participation is mandatory only for new employees of the central government and 17 state governments that are in the process of joining the NPS. Existing government employees and organized sector pensions schemes and funds are exempt. Other countries, in contrast, mandated participation for all new entrants to the workforce and in some cases also for younger workers.

Box II.1. The New Pension System

The system comprises one (or more) central recordkeeping agency (CRA), a set of pension fund managers (PFMs), point-of-presence agencies (PoPs), and a two-tier structure.

- The CRA shall maintain records, accounts, and effect all instructions regarding subscription, switching of options, and withdrawals, by the subscriber (any individual who joins the NPS). The subscriber may access the CRA directly for information.
- The PFMs will offer a set of schemes with varying risk-return profiles and manage the assets of subscribers. Every subscriber shall have an individual pension account (IPA). He/she has the option of selecting the PFMs and schemes composing his/her portfolio.
- The PFRDA shall regulate the NPS and other pension schemes under its purview, protect the interests of subscribers, and establish a grievance mechanism.
- There will be no first pillar. The mandatory second pillar (10 percent contribution matched by the government) will have no withdrawals authorized until exit. A third pillar will provide an option to contribute a further amount into a withdrawable account, which will not have any contribution by the government.

9. The potential for such schemes to build up assets and drive demand for public and private securities is sizeable (see Section D). However, the two features of India's reform discussed above limit that potential.

- The absence of a first pillar may induce a relatively high share of participants to opt for a conservative asset allocation, as subscribers seek to minimize the risk of an unfavorable ex post return on their assets. This “safety bias” could be magnified if the regulator, concerned about investment risk, imposes excessive investment restrictions (see Section C).
- Second, a reform largely limited to new government workers may not generate sufficient critical mass early on to kick start financial market development. Over time, while the entire government sector will be covered on a mandatory basis, the organized private sector will remain exempt.

10. **The scope for voluntary take-up will depend on the relative attractiveness of the new schemes.** Existing private savings instruments in India include small savings (which provide a tax-exempt, above-market rate of return), real estate, or own business. In other countries, while participation of the self-employed has remained low, broad coverage was achieved by providing an option to switch to workers covered under the old system and by keeping the old system’s benefits less generous. Tax incentives also played a role, but India’s fiscal situation constrains that option. Currently, NPS contributions are exempt, while benefits are taxed. To promote a level playing field, different savings products should be subject to the same tax treatment.

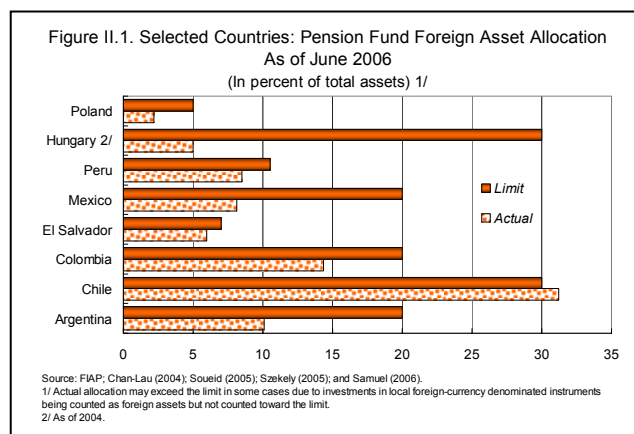
11. **In addition to portfolio diversification (see Section C), keeping costs low will ensure net returns that attract new subscribers and provide adequate replacement rates.** High management fees can dramatically reduce returns: net real returns in Chile averaged only 3 percent into the late 1980s, after fees equivalent to 6 percentage points (ppts) of gross returns. In Poland, total fees have also lowered net real returns in the first four years of the reforms to an annual average of only 3 percent (Székely, 2005).

12. **Economies of scale and industry competition can help achieve cost savings.** For instance, operations of an administrative nature—such as collecting contributions—can be centralized (as planned in India). Fees also tend to decline as growth of assets under management (AUM) enables industry consolidation. However, consolidation has raised concerns about market power in some countries (Roldos, 2006). International experience suggests that industry competition is best enhanced by avoiding regulatory imperatives that weaken PFMs’ ability to compete on the basis of rates of return and result in excessive marketing costs—such as minimum return requirements relative to the industry average and overly tight investments guidelines.

13. **The fee structure can also encourage strong performance.** An upfront fee structure results in providers focusing on attracting new accounts rather than achieving higher returns on existing accounts. A fee structure with both fixed and variable components

Diversification Abroad

19. **Emerging market pension fund portfolios are also biased toward domestic assets, with the notable exception of Chile** (Figure II.1).¹² Polish pension funds invest only about 2 percent of their assets in foreign securities, perhaps because the foreign investment ceiling is too small to make it worthwhile for pension funds to develop the related expertise. In El Salvador, pension portfolios are also home-biased as investments in foreign securities, until recently, were limited to those that are traded on the local stock exchange (Samuel, 2006).¹³



20. **Two factors appear to have contributed to Chile's success in achieving global pension asset diversification:** (i) allowing Chilean funds to hedge foreign currency exposure using currency forwards and (ii) allowing them to invest in global mutual funds, bypassing the lack of experience of PFM's. After the 1998 crisis caused domestic returns to plummet, higher foreign allocations also allowed Chilean funds to achieve higher returns and to meet the needs of a sizeable retirement market without crowding-out the local capital markets. Many countries are, however, reluctant to follow that route, in part because it complicates monitoring and involves additional fees, and also due to the accompanying policy objective of developing local markets.

C. Pension Funds and Capital Market Development

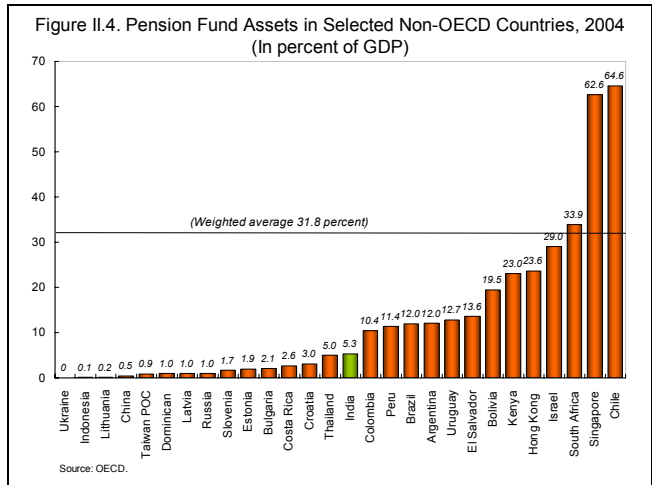
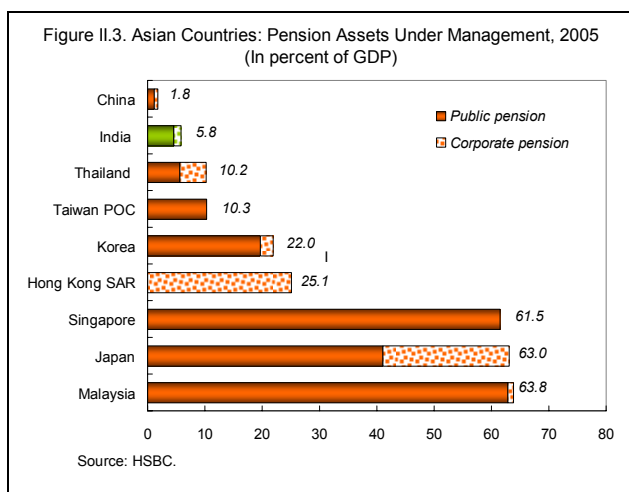
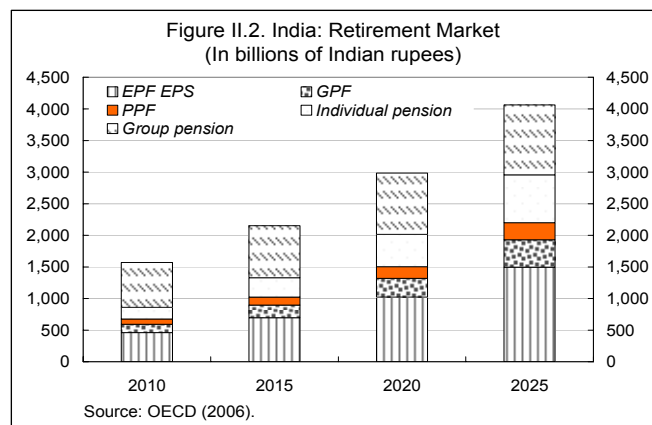
21. **Pension reform is a logical catalyst for increased local institutional investment and asset diversification, resulting in improved allocation of financial savings and instruments.** Sustainable fund inflows into local asset markets reduce volatility and can induce a repricing of equities. Pension reform can also have qualitative effects, including on transparency and governance, market microstructure, and financial product innovation.

¹² Even Chilean pension funds did not diversify meaningfully abroad until after the 1997 Asian crisis, despite the gradual loosening of foreign investment limits, due to high domestic returns (Roldos, 2004).

¹³ A law passed in August 2006 allows 10 percent of pension portfolios to be invested abroad.

Financial Depth

22. **India's pension sector is small relative to more advanced Asian economies and other emerging countries.** While demographic trends should contribute to rising demand for retirement services in the next two decades (Figure II.2), pension assets currently amount to only 5¼ percent of GDP, much below Singapore or Chile (Figures II.3 and II.4).



23. **Emerging market pension fund assets are growing rapidly.** Chile's pension AUM are nearing 65 percent of GDP after 22 years of operation of the fully funded system—a growth equivalent to nearly 3 ppts per year. While still below the U.S. level (95 percent of GDP), the size of Chile's pension sector is now similar to the United Kingdom. In the rest of Latin America, pension assets have reached around 12 percent of GDP in AUM in the last decade, implying annual growth of 1–1½ ppts, in line with G-7 experience since 1980 (Roldos, 2004). Later reformers, including Mexico, Poland, and Hungary, have experienced similarly rapid growth (Figure II.5).

