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The Mexican reform process: improving long-run perspectives and mastering short-run turbulences

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The Mexican Reform Process: Improving Long-Run Perspectives and Mastering Short-Run Turbulences

by Rolf J. Langhammer and Rainer Schweickert

CONTENTS

- Mexico's recent financial crisis, culminating in December 1994, threatens the positive effects of the substantial reforms that the country has implemented since 1985 by opening its real sector: first trade has been liberalized unilaterally, then Mexico has joined the GATT, the Uruguay Round, the NAFTA and recently the OECD and thus has committed itself to internationally binding rules and liberalization schedules. Furthermore, foreign direct investment has been invited to formerly closed sectors. With these reforms, Mexico has succeeded in establishing a solid base for a sustainable take-off.
- However, both the legacies of past distortions and the effects of its exchange-rate-based stabilization policy have prevented Mexico from fully harvesting the fruits of its reform efforts. Capital productivity still warrants improvement, investment and domestic savings ratios are lower than in Asia and in the Latin American "success story" Chile. In merchandise trade, non-traditional exports and import-competing domestic industries have suffered from real appreciation.
- FDI flows to Mexico rose after adjustment programmes were implemented. However, absolute increases cannot obscure the fact that Mexico's position in US foreign direct investment (the major source of FDI inflows) only recovered to levels already achieved prior to the debt crisis in 1982. German and particularly Japanese investment remained below this level and even declined in relative terms. Furthermore, there are structural vulnerabilities: Mexico's industrial exports and inward foreign investment heavily concentrate on the motor vehicle industry, which exposes the country to short-term fluctuations in consumer demand for cars, particularly in the United States. In total, even before the December 1994 crisis, Mexico was not as attractive a host to FDI as newly industrializing countries in Asia or transformation economies in Europe.
- Both external factors (increase in US interest rates) and political events (regional upheavals, the assassination of the presidential candidate, elections) led to the outbreak of the financial crisis in December 1994. Yet, the Mexican exchange-rate-based stabilization strategy can be regarded as the real cause of the crisis. This strategy entailed high risks and was also implemented in an inconsistent way: the so-called Pacto agreements failed to provide sufficiently restrictive monetary and wage policies, the fiscal surplus was achieved by cutting public investment rather than taxing consumption, and factor market deregulation was delayed.
- 1995 forecasts of high inflation and negative GDP growth show that Mexico has entered the "bust" phase of exchange-rate-based stabilization strategies. The only short-run option is to continue the present float of the Peso and to establish the credibility of the money supply target. In the medium run, Chile's passive crawl with wide bands provides a blueprint for a low-risk exchange rate management.
- Without re-establishing the credibility of monetary policies, the gains from real sector reforms will not materialize. Yet, even with credibility, Mexico has to remove several bottlenecks, e.g., in human capital and infrastructure before it can fully reap the gains from previous reforms.

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I. Introduction

Since many years, Mexico has been grouped among the six so-called first generation NICs (newly industrializing countries), jointly with Brazil as the only other Latin American country and the four East Asian economies of Hong Kong, Korea, Singapore and Taiwan (OECD 1988: 11). However, contrary to the East Asian members of the group, economic growth was hampered by macroeconomic mismanagement. The debt crisis of the early eighties marked the beginning of an unprecedented depression. To recover from this decline proved to be among the most painful experiences of structural adjustment in all indebted developing countries. Yet, Mexico mastered the challenge with a strong credible package of economic, social and institutional reforms initiated in the second half of the eighties. By the early nineties, it then became a major host of foreign capital again.

This economic progress, which was achieved during the last decade, is presently jeopardized by the financial crisis that broke out in December 1994. To overcome the crisis requires that the short-run turbulences be mastered. This is a necessary condition for Mexico to return to a sustainable growth path. At the same time, there is scope to improve the long-run perspectives. Given the size of its economy, Mexico — after Brazil — has always ranked second among the six first-generation NICs in terms of share in world GDP and world manufacturing value added but, like Brazil, failed to defend the same ranking as concerns world trade. Asian NICs easily bypassed Mexico from the early seventies onwards as dynamic exporters of goods and services. Therefore, policies have to be discussed that contribute to reduce erratic fluctuations, to improve the international competitiveness of Mexican factors of production and to allow trickling down effects of growth to become effective to the low-income segments of the electorate. The latter is of considerable importance for achieving social coherence and peace. Ultimately, Mexican policies will have to aim at including as many private households and companies in a developmental growth coalition

as possible. East Asian countries bear witness to the importance of such broad growth coalitions, which contribute to mobilize domestic savings and to allocate financial resources efficiently.

Hence, the long-run perspectives affecting Mexican trade and investment under international locational competition for mobile resources will be given priority in this study. Chapter II discusses the medium-term perspectives in the real sector that were perceived as achievable before the crisis broke out. Perspectives for trade expansion emerged from three layers: from domestic structural adjustment, from commitments toward trade liberalization within the North American Free Trade Agreement (NAFTA) and, finally, from prospects for Mexico offered by the successful conclusion of the multilateral trade negotiations. However, the extent to which these options could be used were conditioned by productivity increases following the modernization of the capital stock. Evidence suggests that it is foreign direct investment that plays a major role in this respect. Hence, the second part of Chapter II concentrates on the attractiveness of Mexico for private risk capital from abroad relative to competing hosts, for instance, in Latin America and East Asia. It will be shown that in the past Mexico suffered from relatively low productivity of total investment and that one can expect a rebound in output growth once obsolete capital is fully replaced by new more productive equipment.

Chapter III is devoted to the key prerequisite of realizing options in the real sector: consistent, stable and credible macroeconomic management that is instrumental to cut inflation and to stabilize the real exchange rate. For this purpose, it is necessary first to discuss reasons for the failure of past exchange rate stabilization in Mexico. In this respect, it has to be distinguished between “natural” risks, which are inherent and systemic in each exchange-rate-based stabilization programme, and “policy-induced” risks, which stem from inconsistent implementation. The second part of Chapter III discusses two alternative concepts for returning to exchange rate stabiliza-

tion: first, a renewed fixing of the exchange rate in a currency board framework and second, a rule-based exchange rate management allowing exchange rate flexibility. In assessing the rela-

tive merits of the two approaches, experiences of other developing countries are taken into account. Chapter IV concludes with the results.

II. Long-Run Perspectives: The Real Side

1. Trade Perspectives

a. Reform of the Trading Regime

Next to Brazil, Mexico is the largest single economy in the group of upper-middle income countries. Measured at current exchange rates in 1992 dollars, it just keeps the median position in per capita income in this group of twenty countries. In purchasing power parity (PPP dollars), it more than doubles its per capita income and approaches one-third of the US income. Post-war experience suggests that countries of this size have been tempted to pursue inward-looking trade policies relying on quantitative restrictions much longer than smaller countries with more exposure to world markets have. In addition, these large economies were often commodity-rich and hence preferred to exploit "natural" rents instead of making their human and capital resources internationally competitive. Even if their governments understood the "two-edged sword" role of commodity abundance in economic development and tried to minimize exogenous shocks emerging from the commodity sector, they often had to cope with Dutch-disease syndromes impeding export diversification efforts. Finally, whenever inward-lookingness became unsustainable, trade reform endeavours were usually more half-hearted and less consistent than in other much smaller resource-poor economies.

In many instances, Mexico's post-war development reflects this pattern, though the early export diversification through "border industries" adjacent to the United States may speak against this hypothesis. However, offshore assembly zones isolated from the policy conditions prevailing in the rest of the economy operated in many countries but did not change the inward-

ness of the entire economy. Their main shortcoming was that, due to unchanged import substitution policies in the rest of the economy, they neither used inputs from the rest of the country because these inputs were noncompetitive. Nor did they compete with the output produced under import substitution strategies. Hence, the effects of such zones on the rest of the economy in terms of productivity increases remained very limited. Mexico operated such a trading regime until the mid-eighties.

Trade Policy Reform as a Cornerstone of Structural Adjustment in Mexico

In 1985, first major steps in trade policy reform were taken (Nash 1991: 495–504). Their later success was much determined by the fact that from the very beginning exchange rate measures were part of the reform. In July 1985, the government announced a 20 per cent devaluation of the controlled exchange rate, followed by the start of a managed floating exchange rate and an acceleration of the nominal depreciation rate. Still a dual exchange rate system was maintained but rates were managed in a way to prepare for currency unification. The trading regime in its narrower sense was shaped almost simultaneously (July 1985) by rolling back quantitative restrictions. As a follow-up, GATT membership was requested in 1986 (see Section II.1.c), the maximum tariff was reduced from 100 to 50 per cent, quantitative restrictions (measured as equivalents of domestic production) were announced to be redressed in a step-wise approach, and reference prices on imports were eliminated to comply with GATT anti-dumping procedures.

Trade policy reforms not only embarked upon import liberalization as a means to lower the implicit tax on exports. To directly foster ex-

ports, also export promotion measures (for example, rebating duties and indirect taxes, removing quantitative export controls, consolidating export financing) were adopted with the support of World Bank export development loans. Indirect and direct export orientation became not only accepted as a strategy to earn foreign exchange in a period when oil prices dropped. It was also disseminated nationwide as a way to contain inflation and to ensure the success of monetary stabilization. It is important to note that grave effects on import-substituting industries were either mitigated by simultaneous depreciation or by substituting nontariff measures for tariff measures. In some cases, measures are reported to have been symbolic only, as they were not binding at the time of reforms. Because of depreciation (1981–1987), Mexico became one of the most competitive suppliers among the developing countries in terms of wage costs but failed to stabilize the real exchange rate. Growth of exports in dollar terms could not be sustained after 1987, when the peso began to appreciate in real terms. As a result, between 1985 and 1992, dollar-denominated exports (excluding maquiladora industries) rose by 3.5 per cent annually only, while imports rose by more than 20 per cent (UN/ECLA 1994: 283).

Even if we exclude the exceptional 1990–1992 period (when massive capital inflows eased budget constraints and let import demand increase overproportionately) and concentrate on 1985–1990 only, annual rates of export growth amounted to 4.4 per cent only compared with 18.8 per cent on the import side. One may explain this gap with the usually delayed reaction of export volumes relative to import volumes when trade is liberalized, but it may also indicate a structural vulnerability of the Mexican export supply, both regionally and sectorally. Regionally, the US market absorbs major parts of the Mexican supply even if we disregard the maquiladora industries.¹ Therefore, a recession in this market, as at the turn of the decade, affects the Mexican export industry severely. Risk spreading by shifting export supply to other markets has not yet been achieved as much as it seems necessary. Sectorally, Mexican noncommodity export supply is dominated by metal

manufacturing, basically the motor vehicle industry: in 1992, about one-third of manufacturing exports (one-fifth of total exports) consisted of exports of the motor-vehicle industry. Again, together with the regional focus, this compounds the dependence on US business cycles because output in this industry is largely determined by final consumer demand and, as a durable consumer good, by easy access to consumer credits in the United States. Unlike Asian countries, which increasingly export capital goods and intermediates with a larger regional spread and which seem to have reduced a single market-single industry dependence, Mexico is strongly exposed to determinants of US demand for durable consumer goods.

Hence, the necessity for product innovation (up-grading, diversification) and for the search for new markets outside the United States is given. It is important to mention in this context that product innovation itself depends on raising the skill content in products. Therefore, human capital formation and improvement emerges as one of the most demanding prerequisites of sustainable structural adjustment in Mexico. This holds the more as real appreciation in recent years has contributed to making existing production techniques obsolete, and new technologies incorporated in foreign direct investment (FDI), for instance, will replace them. As concerns policies towards FDI, reforms in 1989 led to substantial liberalization with respect to sector coverage, automatic approval and 100 per cent foreign ownership. About two-thirds of GDP is estimated to be unrestricted for FDI (GATT 1993: 62). Remaining categories of restricted activities include not only the energy sector, which is reserved for the state, but also extractive industries and some manufacturing industries (secondary petrochemicals, auto parts and related industries) in which nonresidents are not allowed to hold equity of more than 30 per cent and 40 per cent respectively. It can be expected that remaining restrictions are binding in the sense that relaxing them would attract more foreign investment to Mexico.

To increase productivity in the new capital stock and to make full use of FDI for the Mexican economy, new technologies must be com-

plemented by joint quality improvements on the labour side, i.e., employing more skilled and flexible workers. This includes not only schooling improvements but also, again demonstrated by the Asian example, improvements in learning on the job. Structural adjustment, thus, should be targeted at high employment levels in order to enable large parts of the labour force to improve their skills on the job.

Challenges to Mexico's Trading Regime

Mexico has substantially streamlined and liberalized its trading regime since 1985. Despite this achievement, Mexico will cope with a number of challenges unilaterally, regionally and multilaterally in the future. *First*, unilaterally, in its own interest, Mexico will have to give distributional targets greater attention (for regional and multilateral challenges see Section II.1.b and c). This is not to say that equity and efficiency are trade-offs. In many developing countries, distributional aspects of policy reforms have proven to be essential for overall acceptance in the electorate and for active participation in middle-class growth coalitions. Such aspects can be considered by institutionalized negotiations (pacta agreements; for these agreements see Section III.1) to ensure concerted actions of interest groups. Latin America in general and Mexico in particular share a large experience with this approach. Alternatively, deliberate policy measures can be taken (or given up) to allow hitherto discriminated groups to participate in the market process and to mobilize idle resources. Policy measures to protect agro-based industries from international competition, for instance, in the sugar industry, bear large medium-term opportunity costs because of neglecting the agricultural sector as a source of income generation and foreign exchange earnings. An important element of more equity in Mexico's income distribution will therefore be to link the potential of the rural sector (including rural-based industries) to the rest of the economy. Agricultural liberalization after concluding the Uruguay round will help to provide preconditions for the expansion of agricultural exports.²

Second, another challenge is to master international tendencies toward stricter technical and environmental standards, including stricter minimum norms concerning intellectual property rights. Mexico has become a target of extraterritorially enforced norms in the tuna dispute with the United States and found its view supported that unilateral measures violate the GATT. However, multilaterally negotiated standards meet the rules of the World Trade Organization (WTO) and bear costs for Mexico in terms of technological up-grading of plants and processes. Burden sharing with foreign investors would be the best strategy for Mexico but is conditioned by Mexico's continuing attractiveness as a host for foreign risk capital (see Section II.2).

Third, Mexico faces a challenge of success. It has become a rapidly growing exporter of non-factor services. Among such services, consumer services (in particular travel expenditures of nonresidents) have accounted for a rising share in total exports of goods and services. In 1985, foreign exchange income from travel expenditures accounted for 10.6 per cent of Mexican total exports, while seven years later this share rose to 14.5 per cent (UN/ECLA 1994: 283). In other nonfactor services, mainly business services, Mexico has shown a similarly good performance: the share of miscellaneous nonfactor services (except travel and transport) in total Mexican exports doubled from 8 to 16 per cent during the same period. In fact, Mexico has to defend a position as the leading Latin American exporter of commercial services, far ahead of Brazil and at the same level as Taiwan and Korea (GATT 1994a: Table 9). To defend this position, further policy actions toward the liberalization of market access for nonresidents to the Mexican service sector are required. In addition, rapid technological change in service industries, especially in telecommunication, has implications for capital formation, both human and physical. Again, the financial burden should preferably be shared between residents and non-residents by attracting foreign risk capital.

b. Regional Integration: The NAFTA Framework

Mexican Gains from NAFTA

Unlike many other integration schemes in which developing countries participated over the last thirty years, NAFTA is far from being a redundant grouping. Instead, next to the EC-1992 single market programme, it can be labelled as the most effective endeavour to regional integration so far. For Mexico, NAFTA was the logical institutional complement and follow-up of its very intensive economic relations with the United States in trade and factor flows. In fact, the US share of 70 per cent in Mexican trade suggests the United States to be the natural trading partner for Mexico due to mutual complementarity in resource endowment, geographical proximity and large absorptive capacity of the US market. Prior to NAFTA, the growth of maquiladora industries, based on US offshore assembly provisions, had already provided a good momentum for exploiting such complementarity but this sort of liberalization was one-sided and not mutual, and it was regionally and sectorally limited. A full-fledged free trade area

(FTA) comprising not only manufactures but also agriculture and services, free capital flows plus the Canadian membership was a substantially new institutional underpinning.

Under such conditions, economic theory predicts that a FTA leads the periphery low-income country to emerge as a net beneficiary (Ohr 1995). It will gain easier access to goods markets of the core country in relatively labour-intensive and resource-intensive products, and it will import know-how and capital through capital goods imports and FDI. Real convergence in per capita income levels between the centre and the periphery should occur provided that the periphery country refrains from domestic policies that make local factors of production artificially expensive and noncompetitive.

All quantitative assessments on magnitude and regional distribution of net benefits from NAFTA clearly earmarked Mexico as the major gainer before the crisis broke out. Tables 1 and 2 summarize these assessments with respect to changes in real income and trade, respectively. The unanimous finding with respect to changes in real income was, irrespective of the empirical

Table 1 – Effects of NAFTA on Real Income (in per cent)^a

	Static models: perfect competition and CRS ^b technology							
	KPMG Peat Marwick		Berkeley		Roland-Holst et al. ^c		Trela and Whalley ^d	
	(1)	(2)	(1)	(2)	(1)	(2)	(3a)	(3b)
Effects on:								
Mexico	0.3	4.6	0.3	6.4	2.3	n.a.	1.2	1.6
Canada	n.a.	n.a.	n.a.	n.a.	4.9	n.a.	n.a.	n.a.
United States	0.02	0.04	0	0.1	1.7	n.a.	0.01	0.01
	Static models: imperfect competition and IRS ^e technology							
	Cox and Harris ^f		Sobbarzo ^g		Roland-Holst et al. ^a		BSD	
	(1)		tariff removal		(4a)	(4b)	(1)	(2)
	Effects on:							
	Mexico	n.a.		2.0	2.5	3.3	1.6	5.0
Canada	3.11		n.a.		4.1	6.8	0.7	0.7
United States	n.a.		n.a.		1.6	2.6	0.1	0.3

^aSpecific assumptions on liberalization measures are denoted as follows: (1) = removal of tariffs; (2) = (1) plus expansion of import quotas plus liberalization of foreign direct investment inflows; (3) = removal of import quotas for textiles (variant a) or steel (variant b); (4) = removal of NAFTA tariffs and NTBs under Cournot competition (variant a) and contestable markets (variant b). — ^bCRS = constant returns to scale. — ^cRoland-Holst et al. (1992), cited in Brown et al. (1992). Roland-Holst et al. keep foreign direct investment constant. — ^dTrela and Whalley (1992). — ^eIRS = increasing returns to scale. — ^fCox and Harris (1992). — ^gSobbarzo (1992).

Table 2 – Trade Effects of the US–Mexico Free Trade Agreement (in billions of \$)

	ITC ^a	Almon ^b	Brown et al. ^c	For comparison:
	Removal of tariffs and NTBs			actual trade flows
	1988		1989	
Balance of trade				
United States	0.0	7.8	–0.2	–
Mexico	0.0	–2.9	0.0	–
US exports to				
Mexico	2.03	9.1	2.9	25.0
RoW	0.15	1.0	–	338.9
Mexican exports to the				
United States	2.17	2.9	2.9	16.1
RoW	0.15	1.0	–	6.9
Canadian				
exports	n.a.	n.a.	0.0	120.7
imports	n.a.	n.a.	0.0	117.4
RoW				
exports	n.a.	n.a.	–0.1	1,620.0
imports	n.a.	n.a.	–0.3	1,602.2
	KPMG Marwick ^d	CIEMEX/ WEFA ^e	ESI ^f	Hinojosa-Ojeda and Robinson ^g
	Investment in Mexico			
	of \$25 billion in 1988 only	of \$40 billion in 1991–2000	of \$25 billion in 1992–2000	of \$12.5 billion
Balance of trade				
United States	0.0	n.a.	8 to –13	–4.7
Mexico	0.0	–19	n.a.	7.7
US exports to				
Mexico	2.83	54	70	5.31
RoW	0.51	n.a.	n.a.	1.14
Mexican exports to the				
United States	2.76	50	63 to 84	1.71
RoW	0.80	n.a.	n.a.	–1.47

^aUS International Trade Commission (1991). — ^bAlmon (1990), cited in Prestowitz, Jr., and Cohen (1991: 36–39). — ^cBrown et al. (1992: Table 5). Scenario (c) assumes the removal of tariffs on trade between the United States and Mexico, plus a 25 per cent expansion of US import quotas imposed on Mexican exports of agriculture, food, textiles, and clothing. — ^dKPMG Peat Marwick (1991), cited in Prestowitz, Jr., and Cohen (1991: 38). — ^eAdams et al. (1991), cited in Prestowitz, Jr., and Cohen (1991: 38). — ^fESI (The Economic Strategy Institute of Washington, D.C.), cited in Prestowitz, Jr., and Cohen (1991: 45–49), Cohen (1991). — ^gHinojosa-Ojeda and Robinson (1991). — RoW = rest of the world.

Source: See footnotes a–g and IMF (1991).

concepts applied, that Mexico was expected to enjoy larger gains in real income than the United States and, except for one study, Canada, too (Table 1). Findings for the trade side are not as clear. Not surprisingly, Mexican exports to the United States would expand further but given deeper liberalization on the Mexican side than on the US side and strong demand for US capital goods, Mexican imports from the United States

were expected to rise, too. Hence, studies were not uniform on the Mexican trade balance due to NAFTA (Table 2). However, even if Mexican import expansion would have been dominated by capital goods and not by consumer goods, a trade deficit would have signalled positive effects for Mexico as the capital stock would be modernized.

Exchange Rate and NAFTA Liberalization

The positive assessment of NAFTA for Mexico became subject to revision when the peso continued to appreciate in real terms. Real appreciation (see Chapter III) turned out to be a clear impediment to Mexican exports and made imports from the United States very much cheaper. In this respect, it acted as a substitute to import liberalization. Domestic suppliers producing import-competing goods faced fierce competition from US products when they were confronted with slow growth of domestic demand, high borrowing costs and cost-price squeeze. Politically, domestic opposition against implementing or even further accelerating intra-NAFTA scheduled tariff reductions can only be reconciled if the peso is allowed to find a new stable level. The present floating can be expected to help Mexican exports to penetrate dollar markets. It would also relax price competition for domestic suppliers, thus making them more prepared to accept further tariff cuts within NAFTA. To private households, good news from tariff cuts after depreciation could be conveyed, as such cuts would help to counteract inflationary pressures arising from depreciation.

Partner Countries' Assistance to Mexico within the NAFTA Framework

The best support NAFTA partner countries can offer to Mexico is to help the country to earn foreign exchange. The instruments are available: the United States and Canada can accelerate their schedules for stepwise dismantling tariffs and nontariff barriers (NTBs) in "sensitive" manufactures and agriculture. If the exchange rate disequilibrium is corrected, Mexico can follow suit. The trade parts of the Europe Agreements of the EU with Central and Eastern European Countries (CEECs) are examples for such asymmetric liberalization between periphery and centre. It is consistent with GATT provided that in the later part of the liberalization period the periphery catches up in its liberalization and arrives at par at the end. In the absence of exchange rate disequilibrium, a symmetric procedure would probably be enforceable. Overall, accelerating cuts of tariffs and quotas in all partner countries would be the most credible

signal that the Mexican crisis has no impact on NAFTA.

A further lesson from the Europe Agreements are antidumping procedures. Even without negotiating a common competition law or allowing nonresidents to invoke national competition laws, the accelerated trade liberalization can help to abandon antidumping procedures against Mexico. Predatory dumping (selling below marginal costs) and also cyclical dumping (selling below average costs) becomes increasingly unlikely if goods markets are liberalized and national oligopolies or monopolies disappear. The United States and Canada can do more by explicitly renouncing to apply antidumping procedures for the time being.³ Mutual recognition of national standards (origin country principle) would also be helpful to trigger Mexico's competitiveness within NAFTA. So would liberalization of public procurement.

Finally, intra-NAFTA liberalization becomes obsolete if there are infrastructural and bureaucratic bottlenecks at the Mexican-US border. Apart from building new hardware, early liberalization of transit procedures and commuter traffic plus recognition of preshipment certificates would not only contribute to faster Mexican exports but would also increase the competitiveness of Mexican suppliers of transport services within total NAFTA.

The Widening of NAFTA

Strategies of the deepening of NAFTA entail the risk to substantiate the traditionally very strong focus of Latin American traders on the North American market and to become decoupled from other absorptive markets (East Asia, the EU or intra-Latin American trade). The best insurance for Mexico against becoming captured in the NAFTA market is to widen NAFTA officially toward Central and other Latin American countries, or, alternatively, to extend NAFTA rules to nonwestern Hemisphere countries, i.e., the EU or East Asia. The former strategy is more easily accessible given bilateral trade agreements of Mexico with other Latin American countries and given the US "hub-and-spoke" approach in the Bush initiative. Yet, economically, it is less attractive for Mexico, as the trade potential within

Latin America is somewhat lower than its potential in trading outside the Americas.

Additionally, trade patterns still differ significantly between Mexican exports to the United States and, e.g., its exports to Europe. Trade in income-elastic manufactures dominates in the exports to the United States, while commodity-based products account for a larger share in exports to Europe. At a time when the EU is considering launching a new policy for trading with Latin America that includes bilateral trade agreements with Latin American countries, Mexico could initiate a bilateral free trade arrangement without violating NAFTA rules just as the US continues the double track of its free trade agreement with Canada parallel to NAFTA. Orientation to the EU market would not only help to diversify the export structure. It would also be instrumental to spread exchange risks if the ecu/dollar exchange rate offsets price effects of the peso/dollar rate. Yet, as long as the dollar depreciates against the EU currencies and the peso depreciates against the dollar, exports to Europe may gain enough momentum even in the absence of tariff cuts (unless price advantages are offset by large dependence on EU sourcing becoming more expensive). In this situation, bilateral tariff reductions between Mexico and the EU may produce little additional effects compared with a situation in which the ecu/dollar rate diverges from the peso/dollar rate. The institutionally rigid way of bilateral FTAs is unlikely to be the appropriate way to intensify trade with Asian countries which traditionally shy away from legalized regionalism. The multilateral way (see next chapter) seems more recommendable for regarding trade with these countries.

c. Worldwide Integration: The WTO Framework

Mexican Trade Policies Applied and Committed

Since becoming a party to the GATT in 1986, Mexico has actively participated as a Contracting Party, both by liberalizing unilaterally and by contributing to the multilateral trade negotiations under the Uruguay round. In fact, remov-

ing tariff barriers, binding tariffs and dismantling nontariff restrictions on imports, such as a priori import licenses, proved to be among the cornerstones of structural adjustment programmes in the second half of the eighties. As a result, pre-Uruguay round applied tariff rates were cut to an average of 13 per cent and bound at a rate of 50 per cent. Hence, the margin between applied and bound rates remained fairly high, thus allowing discretionary tariff rate changes without impairing GATT rules. Compared with 1982, when 100 per cent of tariff lines were subject to import licensing, only less than 2 per cent were still affected by this measure ten years later. Furthermore, direct export subsidies and fiscal incentives were eliminated, while agricultural subsidies were reduced. Anti-dumping procedures, one of the great shortcomings of the GATT, have been assessed as relatively clear and transparent (GATT 1993: 7).

Yet, in spite of these remarkable achievements, rationalizing trade policies has still fallen short of completeness. Apart from large margins between applied and bound tariff rates, tariff escalation by the degree of processing has still been maintained, thus protecting domestic value added in finished goods more than indicated by nominal legal rates. Table 3 illustrates tariff escalation with increasing stage of processing, as well as large tariff dispersion within industries. Variable levies and seasonal tariffs have been imposed upon some agricultural products. Other sectorally discriminating import restrictions have protected the local motor vehicle in-

Table 3 – Characteristics of Mexican Applied Nominal Tariff Rates, 1991/92 (in per cent)

	Number of observations	Mean	Dispersion	Minimum	Maximum
Total broad sectors	12,226	13	33.9	0	20
Petroleum	1	10	n.a.	10	10
Agriculture	980	13.7	46.0	0	20
Industry	11,245	13	32.3	0	20
By stage of processing ^a					
Total	7,768	12.6	35.7	0	20
Raw materials	802	10.8	57.4	0	20
Semimanufactured goods	4,305	11.4	28.1	0	20
Finished goods	2,661	15.0	32.0	0	20

^aGroups comprising more than one processing stage.

Source: GATT (1993: 76, 190).

Table 4 – Tariff Commitments of Mexico under the Uruguay Round

	Trade weighted tariff averages (bound tariffs) in per cent			Percentage bound		Percentage of imports duty-free	
	pre-Uruguay round	post-Uruguay round	reduction	pre-Uruguay round	post-Uruguay round	pre-Uruguay round	post-Uruguay round
Mexico	46.1	33.7	27	100	100	0	1
<i>For comparison:</i>							
Developing countries	15.3	12.3	20	15	58	52	49
Developed countries	6.3	3.9	39	94	99	20	44

Source: Hoda (1994: Tables 1–6), GATT (1994b, Appendix Table 2–6).

dustry, i.e., import ceilings, foreign exchange balance requirements, local content rules and restrictions on foreign investment.

The overall positive judgement on Mexico's unilateral trade policy reforms had not to be revised when the country tabled its offers in the Uruguay round. Apart from commitments in all major elements of rule-making (reforms of GATT/WTO legal framework), rule-enforcement (streamlining dispute settlement), and extension of legal scope of GATT/WTO (TRIMS, TRIPS, services), Mexico has offered to cut bound tariffs by an average of 27 per cent. Hence, post-Uruguay round tariffs will amount to 33.7 per cent (Table 4), thus substantially reducing the margin between applied and bound rates. Furthermore, there has been no change as regards the complete binding of all tariff lines. Compared with offers of all developing countries, Mexico scores well. Its depth of tariff cuts and the percentage of bound tariffs are much higher than those of other developing countries, thus protecting investors against risks of short-term tariff manoeuvring. However, given Mexico's new status as an OECD member state (since 1994), the comparison with developed countries is more demanding and relevant. In this perspective, some desiderata emerge from Table 4. Mexico is still far from one-digit bound rates achieved by other OECD countries, and also its reduction rate in the Uruguay round is lower than the OECD average. In addition, commitments to guarantee duty-free treatment to imports cover but a very small share of all imports (only 1 per cent of total imports) — even compared with developing countries — while, in

practice, duty-free treatment is much more applied (19 per cent of total imports in 1991; GATT 1993: 79).

Estimates of Uruguay Round Effects on Mexican Macroeconomic Variables

Effects of Uruguay round liberalization on Mexico's welfare (real income), GDP and other macroeconomic variables have been assessed by means of so-called computable general equilibrium models (CGEs) calibrated and run by the OECD (Goldin et al. 1993). CGEs depart from base run (status quo) scenarios and simulate scenarios of policy changes, whose net effects are captured as deviations from the base run. CGEs have been designed to assess the effects of the Uruguay round on prices of individual agricultural goods and on welfare of sub-regions and individual countries including Mexico. The liberalization scenarios chosen for the simulations were first a multilateral 30 per cent reduction in all border measures, both in agriculture and nonagriculture including a reduction in agricultural input subsidies by the same amount (partial multilateral liberalization). Alternatively, a second scenario assumes the multilateral removal of all distortions in order to illustrate the maximum potential gains from reform (full multilateral liberalization). Finally, for illustration, the effects of full unilateral liberalization of Mexico without reciprocity from other trading partners have been assessed (full unilateral liberalization). All three scenarios begin with 1985 as base year and show liberalization effects as deviations from the status quo scenario in the year 2002.

Hence, before discussing the effects of multi-lateral liberalization, it is illustrative to present the results of base run scenarios of the CGEs for Mexico, i.e., what would happen until 2002 if no liberalization occurred (Goldin et al. 1993: Chapter 4, Table 4.7). The base run suggests that

- the rural share of GDP in Mexico would remain virtually constant (1985:10 per cent; 2002: 10.6 per cent);
- the rural share of the labour force would decrease from 33 to 23 per cent due to rural-to-urban migration;
- the rural-urban income parity would rise from 22 (a very low level by Latin American standards) to 39 per cent. Such improvement in income equity would be driven by the increase in the share of agricultural exports in total exports from 7 to 23 per cent. Behind this relative improvement of the rural incomes stands the assumption that Mexico's real wages in the urban sector will become compressed, particularly because the compression of world energy prices is expected, which will affect Mexico as a net energy exporter.⁴ Such compression will be not as strong in the rural sector because rural factor prices partly benefit from a reduction in input costs;
- in spite of increases in the share of agricultural imports in total imports from 10 to 26 per cent, Mexico is expected to become a net agricultural exporter by 2002.

The results of deviations from this base-run scenario due to Uruguay round liberalization reflect the typical first-round mechanism of CGEs and have to be interpreted accordingly. Under the first scenario (partial multilateral liberalization), Mexico would enjoy increases in both rural and urban value added (Table 5) because overall production increases. Hence, its GDP rises. Yet, the urban sector would incur a decline in welfare (real income) due to lower protection of the manufacturing industry, which stands for "urban" production. This would mean a real devaluation in this sector necessary to meet the balance of payments constraint. Given the much larger share of the urban sector relative to the rural sector in Mexican GDP (9:1 in

1985), such losses would be larger than the income gains for the agricultural sector, whose implicit taxation would be removed. Income losses are mirrored in the deterioration of Mexican terms of trade. They stem from increases in import prices (mainly due to the food sector, as Mexico is a net food importer) not compensated for by similar export price increases, as oil prices decline. Thus, overall, there are small urban-sector-driven welfare losses (much smaller than for Brazil, for instance) as first-round effects. Second-round effects after real devaluation in the urban sector are more favourable but cannot be captured in the models. They would bring substantial sectoral shifts in favour for the export sector, in agricultural goods but primarily in exportable manufactured products.

Table 5 – CGE-Based Estimates^a of Effects of Different Liberalization Scenarios under the Uruguay Round on Key Macroeconomic Variables of Mexico

	Real income (welfare)	Rural value added	Urban value added	Rural/urban income parity	Food prices	Terms of trade
Partial multilateral liberalization ^b	-0.9	0.9	1.4	8.0	5.0	-2.8
Full multilateral liberalization ^b	1.8	2.9	4.4	20.4	8.3	-3.4
Full unilateral liberalization ^b	2.5	-0.2	4.7	7.1	0.3	0.1
For comparison: Effects of higher OECD growth ^c	1.0	-0.4	-2.0	-2.5	-1.4	-0.1
Effects of increase in net transfers ^d	2.3	-0.4	2.2	-3.5	-1.2	-0.2

^aPer cent change in the year 2002 from the base simulation. — ^bComprises liberalization in the agricultural and nonagricultural sector. — ^cIncrease in OECD growth = Growth rates of 4-5 per cent instead of 2-3 per cent. — ^dIncrease in net transfers = assumption of increase in net transfers of \$3 billion to Mexico, starting in 1993. — Partial liberalization: cut of tariffs, NTB equivalents and input subsidies by 30 per cent. — Full liberalization: full removal of all distortions.

Source: Goldin et al. (1993: Tables 4.8-4.13).

Maximum effects arise from the second scenario (full multilateral liberalization), which of course was neither targeted by nor achieved in the Uruguay round and, hence, is discussed here for illustrative purposes only. As this scenario holds for all regions and countries, Mexico is expected to enjoy an increase in real income that

would amount to less than 2 per cent. Compared with the other countries and regions (including Brazil and other Latin America), which would gain by 4–10 per cent, the Mexican benefits from full multilateral liberalization appear surprisingly small. This “outlier” result reflects the fact that Mexico as an oil exporter will incur a negative terms-of-trade shock due to the expected decline in oil prices after the liberalization in worldwide manufacturing industries and the ensuing decline in manufactured goods prices. The increase in urban GDP by more than 4 per cent is remarkably higher under full liberalization than in the first scenario and stems from the elimination of unemployment. As in the first scenario, the rural sector benefits from rising world market prices and the reduction in implicit taxation because manufacturing import tariffs are reduced.

The third scenario (full unilateral liberalization) is helpful to capture effects of Mexico’s structural adjustment programmes, which included unilateral liberalization as one of the key elements (albeit not full liberalization as the scenario implies but only partial). Here, an amazing finding warrants explanation: income gains for Mexico from unilateral liberalization are even larger than from full multilateral liberalization. This holds first because Mexico would not face a significant decline in energy prices because world manufacturing goods prices would not change. Hence, its terms of trade would remain virtually constant. Second, as a net food importer, Mexico benefits from unchanged food prices and thus pays for a lower import bill than under multilateral liberalization.

Apart from the three liberalization scenarios, the OECD model introduces two alternative scenarios suitable to inject higher growth in the Mexican economy. One comprises an autonomous net inflow of transfers of \$3 billion annually from 1993 onwards, financed by the OECD countries and the Upper Income Asia region. The second one assumes higher growth in OECD countries (by about 1–2 percentage points higher than in the base run simulation). Under the first scenario, benefits to Mexico are sizeable but, contrasting to Brazil, appear only gradually over time with the full effect by 2002.

It is the urban sector that benefits most, particularly from the demand effect: while investment is divided between the two sectors, rural investment leads to increasing demand for urban goods, whereas urban investment is not expected to likewise push demand for rural goods. Hence, this scenario would be instrumental to drive a wedge in income parities between urban and rural income. The same effect of deteriorating income distribution would occur under the “higher OECD growth” scenario. In this scenario, external demand-driven growth in Mexico would be only about 1 per cent higher than in the base run because the simulation assumes no change in trade distortions in Mexico, which prevents the country from fully exploiting its comparative advantages. Following these results, Mexico would not be well advised to rely on a demand pull effect of autonomous higher growth in the OECD area including the United States.

Are the estimates plausible? An answer to this question has to take the assumptions into account. In this respect, two comments are at stake:

First, it is not obvious that the assumption of constant terms of trade, and thus declining oil prices, would really hold if multilateral liberalization were accomplished. There are other scenarios likely, too, that would be based on the perception of a fixed link between manufacturing prices and energy prices. For instance, rising energy prices could be demand-driven or politically triggered by energy taxation in OECD countries, while, at the same time, manufacturing prices would rise less because of intensified competition.

Second, and more important, the CGE models basically capture income effects influenced by terms of trade shifts. They cannot take account of allocation effects, which are crucial for Mexico. Should Mexico really move through a period of declining oil prices and real devaluation, the following period (second-round) would push export growth of both manufactures and some agricultural products and stimulate resources to flow into these sectors. Beyond allocative arguments, the main message from the liberalization

scenarios focuses on more equitable income distribution between the rural and urban sector and hence on social peace.

Comparing the three liberalization scenarios plus the transfer scenario and the demand pull scenario yields the superiority of liberalization scenarios for Latin America in general. However, Mexico's case is special because of its oil sector. Because of its role as net oil exporter, changing oil prices have a strong effect on its terms-of-trade effects (Dutch disease) and thus on its income. Therefore, full multilateral liberalization triggers real income gains in Mexico because removing internal distortions more than offsets losses due to declining oil prices. As this scenario is for illustrative purposes only, unilateral liberalization fares best next because it does not influence world oil prices in a downward direction. The first scenario, which we may call the Uruguay round scenario, does not seem overly appealing for Mexico because it brings terms of trade losses following declining oil prices as well as income losses for the dominant urban sector suffering from real devaluation.

2. Investment Perspectives

a. Domestic Resource Mobilization and Allocation

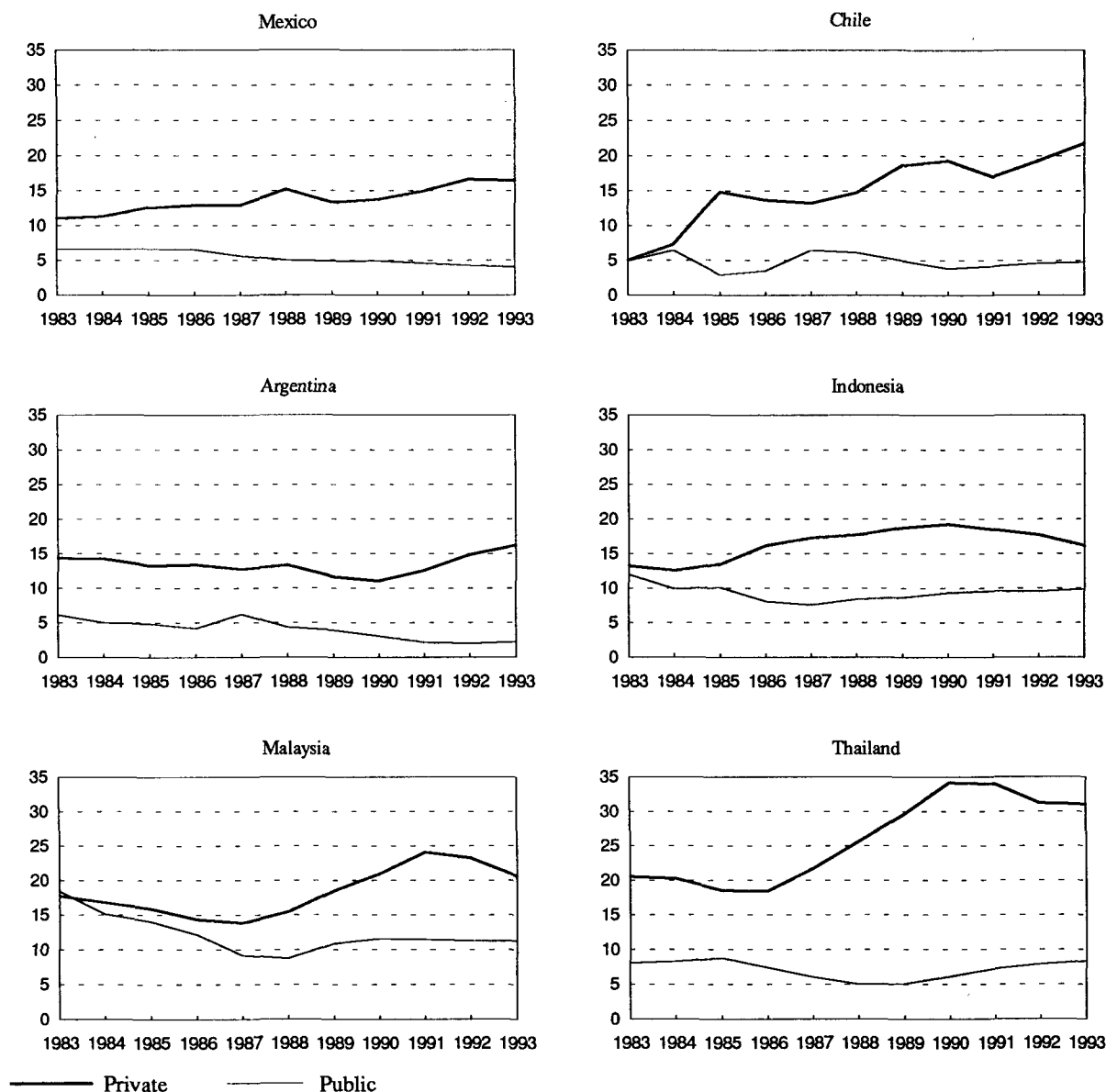
How much of the gross product is invested instead of consumed and how productive invested funds are, decides on economic growth. Both the public and the private sector invest and short-term effects of private investment on growth are often found to be higher than those of the public sector (Khan and Reinhart 1990). Yet, it is likewise evident that a minimum amount of public investment in infrastructure is needed to introduce productive private investment. Furthermore, distinction has to be made between investment in physical and human capital, and, as far as the contribution of human capital to

growth can be empirically isolated from the physical capital, the effects of human capital on economic growth in developing countries are found to be very significant (Gundlach 1995). In addition, the source of financing investment has to be taken into consideration.

Gross Domestic Capital Formation and Capital Productivity in Mexico

Mexico's investment record has not been impressive so far if it is compared with the Asian first and second generation of emerging countries. Even if top outliers like Singapore (average investment ratio 1970–1989: 39 per cent) and Korea (28 per cent) are refused as the relevant yardstick for Mexico, also other middle-income Asian countries invested more than Mexico (1970–1989: 20.4 per cent).⁵ One could assume that the liberalization period after 1985 encouraged economic agents to invest more but the development of investment ratios after 1983 does not support this assumption (Table 6). Private investment ratios in Mexico climbed by about three percentage points up to a peak level of 16 per cent in 1993, but this was partly offset by a decline of public investment ratios by 2 percentage points. The investment record of five other middle-income countries shows higher average levels (except for Argentina, which seems at par with Mexico) and more change over time. Apart from Malaysia and Thailand with their high investment levels, the upward changes in Chilean investment ratios appear most remarkable and mirror the appropriate reaction of investors to consistent adjustment efforts. Interestingly, public investment ratios in the rapidly growing Asian countries were always much higher than in Mexico. This supports the view that public investment that does not crowd out private agents plays an important role for productivity gains achieved by private investment and probably exerts a genuine influence on medium-term growth.

Table 6 – Private and Public Investment in Mexico and Selected Developing Countries, 1983–1993 (in per cent)



Source: Glen and Sumlinski (1995).

Besides investment volumes, the productivity of investment determines economic growth. Understandably, productivity is difficult to measure because data on capital stock and depreciation rates are required which are usually not available. A macroeconomic proxy is the reciprocal of the relation between cumulative investment in a period and increments of GDP, the so-called incremental capital/output ratio (ICOR). Similar to the investment ratios, productivity measures that are based on World Bank estimates do not

place Mexico in a top-score position compared with most Asian countries (except the Philippines) in the 1980–1991 period (Table 7). Given the shortcomings of the measure, one should be cautious to derive far-reaching conclusions concerning its absolute magnitude. Yet, as shortcomings are probably systematic, an inter-country comparison is still possible. Such a comparison suggests that in the past Mexico did not make full use of its invested funds. One reason may be that real appreciation made domestic

technologies obsolete and that the full replacement of these technologies by a new capital stock could not be achieved because Mexico lacked access to medium-term financial resources, both internally and externally.

Table 7 – Marginal Capital Productivity^a in Mexico and Reference Countries, 1980–1991

Mexico	0.078	Malaysia	0.200
Chile	0.200	Indonesia	0.213
Brazil	0.056	Philippines	0.057
Argentina	–0.042	Thailand	0.294
Colombia	0.172	Korea, Republic of	0.313

^aPeriod averages: Reciprocal of incremental capital output ratios defined as the sum of gross domestic investment over the period divided by the difference between the GDP at the end and the beginning of the period.

Source: World Bank (1992).

Financing Capital Formation through Domestic Savings

Until the mid-eighties, Mexico had a ratio of gross domestic savings to GDP that ranged above the Latin American average but fell short of ratios achieved by Asian countries; between 1973 and 1987, average Mexican gross domestic savings amounted to 21 per cent. Measured against the gross domestic investment of 23–24 per cent, financing by external savings amounted to 3.7 per cent of GDP in 1973–1980 and 1.3 per cent in 1980–1987 (World Bank 1989: 153). In comparison, other major Latin American countries financed the larger part of their investment by external savings.

One of the major differences between Asian countries and Mexico, which may explain higher savings mobilization in Asian countries is that they enjoyed positive real interest rates, while Mexico throughout the entire period had highly negative rates below –5 per cent (World Bank 1989: 39). Hence, savings mobilization was strongly discouraged in Mexico. After 1991, when real appreciation of the peso fuelled import demand in consumer durables, the need to finance domestic investment externally rose because private households saved less. Private domestic savings fell until 1993 when access to consumer credits was tightened. Under these conditions, foreign capital inflows contributed to

finance an increase in domestic consumption, particularly in durables. Such coincidence of growing current account deficit and declining private savings provoked fears that Mexico would face difficulties to generate foreign exchange to service debt (World Bank 1994: 331). Fears culminated in 1994 and exposed a particularly risky element in Mexico's external financing, due to the maturity structure of inflows.

b. Structure of Capital Inflows

During the 1980s, Mexico's current account deficit remained moderate in the range of 1 per cent of GDP. Compared with all low-income and middle-income countries (1.4 per cent), this was a very low level. Between 1991 and 1994, however, the current account deficit has virtually exploded from 6.5 per cent in 1991–1993 to 8.2 per cent in 1994 (World Bank 1995: 81). This rise was the result of an unprecedented change in the sectoral composition of inflows, a change from long-term financing through foreign investment to shorter-term financing through portfolio investment. In 1988, the portfolio investment amounted to only 6 per cent of FDI inflows in Mexico. Between 1988 and 1993, the ratio rose steadily from 11 per cent in 1989, 255 per cent in 1991, 436 per cent in 1992 and 568 per cent in 1993. The trend was broken in the first quarter of 1994, when portfolio inflows began to decline sharply. Second-quarter portfolio investment amounted to only 14 per cent of first-quarter inflows,⁶ and short-term dollar denominated debt became a very important factor in financing the current account deficit.

It is important to note that neither the speed of the shift nor the shift itself was unique to Mexico. Despite wide differences in macroeconomic policies and economic performance between Latin American countries, most countries became subject to portfolio investment inflows. Yet, Mexico received almost three-quarters of the portfolio investment of all Latin American countries by 1991 and more than 80 per cent in 1993. Similarly to Mexico, capital inflows in the other countries of destination were accompanied by appreciation of the real exchange rate, booming markets for nontradables such as real

estate, bullish stock markets, an accumulation of foreign reserves and a more optimistic assessment of the debt overhang situation as shown by the increase in secondary market prices for foreign loans. Yet, from the very beginning, fears circulated that some of the inflows were of the hot money variety and would be reversed on short notice, thus sparking a domestic financial crisis. Such reversals were feared to become very strong — and they indeed materialized in late 1994 — in a situation in which internal inconsistencies and assessments of unsustainability of macroeconomic conditions in the host countries coincided with external pull factors, such as increases in real interest rates in international capital markets or liberalization of portfolio markets in other potential host countries.⁷

To delink from such validity, it is of utmost importance that Mexico attracts FDI which does not only reflect a change in ownership but finances additional capital formation in a sustainable way. This is why special attention is to be paid to Mexico's attractiveness for foreign investors in competition with other potential hosts.

c. Attractiveness for Foreign Direct Investment

In the last few years Mexico's current account deficit became increasingly financed by portfolio investment while the share covered by FDI declined. However, this is not to say that Mexico was unsuccessful in attracting more FDI in the early 1990s than before. A three years average of FDI annual inflows during 1991–1993 compared with 1988–1990 yields an almost doubling of FDI inflows. This rise continued until the first half of 1994.⁸ However, given that FDI flows to many Asian and also Latin American countries has risen to unprecedented level since 1990 (BIZ 1994: 102), Mexico's record must not necessarily be outstanding. To put absolute increases in FDI flows to Mexico into perspective, it is helpful to have a closer look at the regional distribution of major home countries' FDI in order to analyse whether or not Mexico improved its position as a host relative to other hosts. Therefore, in the following, three major home countries' investment stocks in Mexico are analysed rela-

tive to the development of these countries' FDI worldwide: the United States, Germany and Japan.⁹

Mexico's Position in US FDI

According to SECOFI, the Mexican Secretary of Commerce and Industrial Development, the United States accounted for almost 62 per cent of total cumulative FDI in Mexico in 1992, followed by the United Kingdom (6.5 per cent) and Germany (5.8 per cent). Switzerland, Japan, France and Spain ranged next (Deutsch-Mexikanische Industrie- und Handelskammer 1992). Therefore, the attractiveness of Mexico for US FDI is of outstanding importance for the general locational competitiveness of Mexico. Table 8 provides a breakdown of the Mexican share in US worldwide FDI by industries from 1980 (before the debt crisis) to 1993. The following findings emerge:

- For all industries, Mexico's share in US FDI is U-curve-shaped. It declined during the period of crisis and adjustment, had a turning point by 1988 and rose until 1993. Yet, there was no additional gain in share. Mexico regained what it had lost and stood exactly at the same level in 1993 as in 1980: it accounted for 2.8 per cent of US FDI.
- Sectorally, there were different shifts between manufacturing and nonmanufacturing, basically services. Mexico became slightly more attractive as a host in manufacturing (1980: 5.1 per cent, 1993: 5.4 per cent with the slump in 1987/88) but lost in service industries. Investment in the oil sector remained marginal due to access restrictions.
- The food industry, which showed the only double-digit share in 1993, and, to a lesser extent, the motor vehicle industry (transport equipment), were positive outliers because the upswing in their U-curve was greater than the decline.
- Industries in which Mexico lost in attractiveness regardless of the swing are primary and fabricated metals and also electric and electronic equipment. Losses in the primary and fabricated metals may be natural and less troublesome because this is a less skill-inten-

Table 8 – Share of Mexico in Total US FDI Stock by Sectors and Industries, 1980, 1985–1993 (in per cent)

	All industries	Petroleum	Manufacturing								Wholesale trade	Banking	Finance (except banking), insurance and real estate	Services	Other industries
			total	food and kindred products	chemical and allied products	primary and fabricated metals	machinery, except electrical	electric and electronic equipment	transport equipment	other manufacturing					
1980	2.8	0.3	5.1	4.5	5.5	8.1	2.4	5.8	6.0	5.1	2.8	n.a.	0.6	n.a.	n.a.
1985	2.2	0.1	4.3	4.8	3.7	6.4	1.0	5.2	7.0	5.1	2.4	0	0.8	0	2.1
1986	1.8	0.1	3.6	3.9	3.4	3.6	0.7	4.3	6.9	4.2	1.3	n.a.	0.5	2.7	n.a.
1987	1.6	0.1	3.0	1.7	3.4	3.4	0.3	3.6	5.4	3.9	0.8	n.a.	0.4	1.9	n.a.
1988	1.7	0.1	3.4	2.1	4.0	2.9	0.6	3.5	5.9	4.4	1.0	n.a.	0	2.0	n.a.
1989	2.2	0.1	4.3	5.2	4.5	3.7	1.8	n.a.	7.4	n.a.	1.3	n.a.	n.a.	2.4	3.1
1990	2.4	n.a.	4.6	7.2	4.5	3.2	1.7	4.4	8.4	4.3	1.3	n.a.	0.6	2.2	4.8
1991	2.7	n.a.	4.9	7.7	4.6	3.5	1.7	3.8	9.6	4.4	1.5	n.a.	0.6	2.1	7.4
1992	2.7	n.a.	5.0	7.3	4.4	n.a.	n.a.	3.6	9.9	4.7	1.5	n.a.	0.6	2.1	8.0
1993	2.8	n.a.	5.4	10.3	5.2	n.a.	n.a.	3.3	8.5	5.2	1.4	n.a.	0.6	1.7	7.9

Source: US Department of Commerce (various issues).

sive industry that is declining in US total manufacturing FDI. Countries with a lower income than Mexico have improved their locational competitiveness. The decline in electric and electronic equipment should give more rise to concern. This is an industry with a rising share in total US manufacturing FDI and with increasing amounts of funds invested in Asian countries. Some of them might focus on purely labour-intensive activities with few skill requirements but other parts might absorb more human capital and, hence, should be important for improving Mexico's "technological base".

Overall, until 1993, Mexico did not yet made outstanding progress in attracting much more US FDI in competition with other hosts than it lost before. However, completing NAFTA will still provide much scope for gains in attractiveness.

Mexico's Position in German FDI

As in the United States, Mexico's share in German total FDI declined from the peak level before the debt crisis until 1987, and has recovered partially since then. However, with 1.2 per cent of total FDI compared with 1.6 per cent in 1981, there was no full recovery as in the United States (Table 9). The Mexican motor vehicle industry proved to be the most important target for both German and US companies, but this industry failed to attract the same share of total German FDI that it had before the debt crisis, when Mexico accounted for almost 10 per cent

of total German foreign investment in this industry. Two other industries, chemicals and electrical machinery, did better in terms of exceeding the pre-debt crisis level. These industries reached a share of 2–3 per cent each but this share remained much lower than for investment in the motor vehicle industry. Investment in food industries, which proved to be the most attractive industry for US investment, did not play any significant role in German FDI.

To put the overall level of German investment in Mexico (little more than 1 per cent) in a right perspective, one has to bear in mind that German FDI in general mirrors a clear bias toward investment in OECD countries. Such bias can neither be observed in the United States nor in other OECD countries. In 1992, only 9.5 per cent of total German FDI stock accrued to investment in developing countries (including the OPEC countries and the emerging East and Southeast Asian countries but excluding China). US investment outside the OECD countries, for instance, amounted to more than 30 per cent. If Mexico's attractiveness is assessed only in comparison with FDI in other developing countries, Mexico's share in German FDI scores substantially better than in US investment (13 per cent compared with only 9 per cent).

Nevertheless, German investment in Mexico has lacked dynamism in recent years. Since 1989, when the post-adjustment period began, Mexico's share in German FDI has remained stagnant. Neither the NAFTA foundation nor the substantial efforts in domestic adjustment success could trigger more German investment in

Table 9 – Share of Mexico in Total German FDI Stock, by Sectors and Industries, 1981–1993

	All industries	Mining	Manufacturing						Trade	Banking	Other industries
			total	chemical industry	iron and steel	machinery	transport equipment	electrical machinery			
1981	1.6	n.a.	3.2	2.8	0.9	0.6	9.6	2.0	0.3	–	0.3
1982	0.6	n.a.	1.1	0.8	0.3	0.2	3.2	0.7	0.2	–	0.3
1985	0.7	n.a.	1.4	1.7	1.5	0.6	2.0	1.2	0.1	–	0.1
1986	0.6	–	1.2	1.5	1.2	0.5	1.6	1.1	0	–	0
1987	0.8	–	1.6	2.8	–	0.4	1.9	0.8	0	–	0
1988	1.3	–	2.8	3.3	–	0.5	7.0	1.3	0.2	–	0
1989	1.2	–	2.4	3.1	0	0.4	6.1	1.6	0.3	–	0
1990	1.2	–	2.7	3.2	–	0.4	7.0	1.8	0.3	–	0
1991	1.2	–	2.7	2.9	n.a.	0.4	6.9	1.9	0.3	0	0.2
1992	1.2	–	2.7	3.1	n.a.	0.4	5.6	2.4	0.3	0	0.2
1993	1.3	–	3.1	3.3	n.a.	0.5	7.4	2.9	0.4	0	0.2

Source: Deutsche Bundesbank *Die Kapitalverflechtung der Unternehmen mit dem Ausland nach Ländern und Wirtschaftszweigen* (April 1989–April 1992), Deutsche Bundesbank *Kapitalverflechtung mit dem Ausland* (May 1994, May 1995).

Mexico than in other host countries. Recent FDI flow figures for 1993 and 1994 do not display a more encouraging result. In 1993, net flows of German FDI to Mexico amounted to DM 2 million only (including an net outflow of reinvested profits from Mexico of DM 50 million), while in 1994 net flows to Mexico comprised DM 163 million or 10 per cent of net flows to all developing countries (0.6 per cent of total German net FDI flows abroad) (Deutsche Bundesbank 1995: 46). Given the rapid increase in German FDI flows in general and to individual countries in particular (for instance, European transformation countries and China), this disenchanting development in fact is a challenge to Mexico's locational competitiveness.

Mexico's Position in Japanese FDI

Mexico's position in Japanese FDI deviates strongly from its position in US and German FDI in a negative direction. Slight absolute increases cannot obscure the fact that only 0.5 per cent of the total stock of approved Japanese FDI accrued to Mexico at end March 1994 (accumulated fiscal years 1951–1993) (Japan, June issues).¹⁰ In addition to the very low level, it is the trend that causes concern. Since 1985, when Mexico achieved to attract a share of 1.6 per cent of the Japanese FDI stock, the trend has steadily been negative, in spite of the Mexican recovery in the second half of the eighties. Between 1985 and 1995, the trend in Japanese investment in the United States was rising (from 30.2 to 41.9 per cent). This signals that neither

Mexican GATT entry nor the foundation of NAFTA and the adjustment efforts could induce Japanese companies to invest at the low-income periphery of NAFTA.

As this trend runs against those observed for US and German investment showing either full or partial recovery from the shock of the debt crisis, there is reason to assume specific characteristics of Japanese investment pattern. One reason could be the relatively high share of investment in nonmanufacturing industries preferred by Japanese companies (primary sector plus real estate and other services). As long as these sectors were closed to nonresidents in Mexico, FDI was refrained from entering the Mexican market. The second aspect, likely to be more important, could be the relatively high skill requirements of Japanese investment in sophisticated industries, which could be more easily met in the United States than in Mexico. Whatever reasons a detailed analysis of motives of Japanese investors would display, it remains a challenging experience for Mexico to see rising parts of Japanese investment bypassing the country, while the amount of Japanese worldwide investment has risen by more than 20 per cent annually since 1985.

3. Policy Recommendations

The investigations into trade and investment perspectives suggest the following recommendations:

(1) In future, unilateral trade policy reforms in Mexico should be targeted to reduce still existing discrimination between sectors and, within the manufacturing sector, between industries. Given past achievements in trade liberalization, neutrality in incentives through a uniform protection level now appears more important than further liberalization across the board. This would also help to diversify the existing pattern of exports.

(2) Developing the potential of the rural sector should receive more attention. The rise in world market agricultural prices that will follow the implementation of the Uruguay round will provide additional incentives. It is known from many countries that the productivity potential in the rural sector is vast and can be mobilized without large amounts of capital inflows.

(3) Mexican exports outside the primary sector are strongly concentrated on US demand for consumer durables. To lower the dependence on US business cycles in general and on interest rates for consumer loans in the United States in particular, regional and sectoral diversification of exports should be envisaged. Asian and European markets are prime candidates for both sourcing and export outlays. Sectorally, agricultural products and products from capital and intermediate goods industries would be conducive to broadening the export base.

(4) Relatively low investment productivity in the past has been one of the weaknesses of Mexico's growth path. To shape this unsatisfactory result, it is necessary to channel future investment funds more into sectors that generate or save foreign exchange earnings. It cannot be excluded that the boom period fuelled investment in inward-oriented activities, which absorbed foreign exchange on a net basis rather than generating it.

(5) Past FDI inflows from the United States, Germany, Japan, and the United Kingdom do not reveal that investors could be convinced to prefinance a medium-term improvement of Mexico's locational competitiveness due to NAFTA and other institutional commitments. To anchor Mexico as an attractive host in locational decisions of investors, concerted actions

of established companies, trading houses, banks and institutional investors seem appropriate. Preferably, such actions should concentrate on potential investors in Asia and Europe. In this respect, perspectives of a new EU concept for economic relations with Latin America (including plans of a bilateral free trade agreement between the EU and Mexico) may stimulate trade and investment flows, provided that the effects of easier access to EU markets are not jeopardized by adverse supply-side conditions in Mexico.

(6) Mexico has proven to be a relatively successful exporter of nonfactor services. As such services are one of the most rapidly growing segments of world trade, it is important to further improve Mexico's competitiveness in services. For this purpose, it is helpful to identify broad categories of Mexico's exports of services (for instance, consumer services (travel, passenger transport), trade-related services (merchandise transport), financial services and other business services) and their determinants in order to strengthen the export base.

(7) The experiences of Asian NICs suggest that early outward orientation of domestic capital helps to secure access to export markets. In this respect, Mexican investment abroad (outside the United States) is still relatively small¹¹ and offers scope for extension.

Finally, macroeconomic stability is necessary but not sufficient if Mexico is to exploit its long-term potential. It is the competitiveness of Mexico's immobile factors of production (its unskilled labour, its regulatory system, its infrastructure) that will decide whether or not Mexico can successfully compete for mobile resources in the world economy. In addition to domestic policies, assistance can be provided through OECD membership, which contributes to macroeconomic and institutional guidance. Furthermore, important trading partners as the EU will contribute to Mexico's welfare if they recognize that more institutionalized relations with Mexico are helpful to lower costs of information and uncertainty and thus to stabilize expectations on Mexico's future development.

III. Short-Run Distortions: The Monetary Side

1. The Failure of Exchange-Rate-Based Stabilization

From 1988 to December 1994, the Mexican exchange rate policy went through three main phases.¹² First, after an initial devaluation of 38.9 per cent, the peso/dollar rate was fixed. Second, the authorities shifted toward increased flexibility by adopting a pre-announced crawling peg after January 1989: the peso/dollar rate was allowed to depreciate by 1 (old) peso¹³ per day in 1989, 80 cents per day in 1990, 40 cents per day in 1991, and 20 cents per day in 1992 until October, when the speed of the crawl was increased again to 40 cents per day. Third, an exchange rate band was adopted in November 1991. This band differed from those of other countries like Israel and Chile¹⁴ in several respects:

- While the band's ceiling was subject to a daily pre-announced depreciation by a fixed amount, the band's floor remained fixed. Consequently, the width of the band was increasing with time.
- The rate of crawl of the band's upper limit was specified in nominal terms, a fixed amount of cents per day, rather than in per cents.
- There was no official announcement of a central parity. Only the band's upper and lower limits were officially announced. The authorities also announced every day before trading began their narrow band target range for that day. In practice, interventions inside the band were the rule rather than the exception, and the exchange rate stayed near the middle of the band most of the time.

Notwithstanding these special features, the Mexican exchange rate policy and the related macroeconomic reforms laid down in the Pacto agreements¹⁵ fall in the category of exchange-rate-based stabilization attempts. The basic argument for such a stabilization policy is that a nominal anchor in the form of a fixed exchange rate or a pre-announced rate of depreciation,

lower than the difference of inflation at home and abroad (active crawl), imports the anti-inflationary reputation of a foreign currency by tying the hands of the own monetary authorities. If discretionary policy is ruled out and monetary policy is determined by the foreign central bank, the credibility of the reform will improve, private agents will adjust at once, and inflation will decrease to the level of the stable currency (Schweickert 1994a). However, the experience that developing countries made with exchange-rate-based stabilization is in sharp contrast with the appealing features of the theoretical concept: an expansionary first phase was typically ended by a balance-of-payments crisis (Schweickert et al. 1992).¹⁶

The question is whether the concept or an inconsistent implementation is to be blamed for the failure of exchange-rate-based stabilization in Mexico. This question is not only relevant for academic but especially for practical reasons. The trade and investment perspectives outlined in Chapter II crucially depend on a stable macroeconomic framework, i.e., a macroeconomic policy that provides a noninflationary environment (stabilization) and a stable development of the real exchange rate close to its equilibrium (structural adjustment). These two targets are presently at risk and the role that the past exchange rate policy played in this development is to be identified in order to determine solutions for the future that allow the trade and investment potential to be realized.

a. Stabilization versus Structural Adjustment

A look at the development of macroeconomic indicators summarized in Table 10 reveals that Mexico repeated the "traditional" pattern of exchange-rate-based stabilization programmes. The real exchange rate appreciated because the nominal devaluation was kept low, while inflation inertia was quite substantial. Two explanations can be offered. First, wage increases were — with the exception of 1988 — significantly

Table 10 – Exchange-Rate-Based Stabilization in Mexico: Macroeconomic Indicators, 1988–1994

	1988	1989	1990	1991	1992	1993	1994
	percentage change during the period						
Nominal exchange rate (NEX) ^a peso:dollar	3.2	15.8	11.5	4.3	1.4	-0.3	71.4
Consumer prices in Mexico (CPMEX)	114.3	20.1	26.5	22.7	15.5	10.0	7.0
Consumer prices in the United States (CPUS)	4.0	4.9	5.4	4.2	3.1	2.8	2.5
Real exchange rate (CPMEX– CPUS–NEX) ^b	107.1	-0.6	9.6	14.2	11.0	7.5	-66.9
Wages in Mexico (WAMEX)	112.2	33.7	30.5	29.1	17.5	8.6	8.6
Wages in the United States (WAUS)	2.8	2.9	3.3	3.3	2.4	2.6	2.7
Relative wages (WAMEX– WAUS– NEX)	106.2	15.0	15.7	21.5	13.7	6.3	-65.5
GDP, real	1.2	3.3	4.5	3.6	2.8	0.6	3.1 ^c
	millions of dollars						
Trade balance	1,668	-645	-4,433	-11,329	-20,677	-18,891	-11,477 ^d
Capital account	-5,871	973	8,440	25,139	27,008	32,059	13,207 ^d
Direct investment	635	2,648	2,548	4,742	4,393	4,901	3,321 ^d
Portfolio investment	121	298	-3,985	12,138	19,175	27,867	8,811 ^d
Other capital	-6,627	-1,973	9,877	8,259	3,440	-709	1,075 ^d
	percentage change during the period						
Net foreign assets	-72.2	13.8	33.6	142.8	30.4	56.3	-36.0 ^e
Money (M1)	67.8	37.3	63.1	123.9	15.1	17.7	-8.9
	per cent of GDP						
Overall fiscal balance	-10.7	-4.9	-2.8	-0.5	1.6	0.7	0.0
Primary fiscal balance	8.0	7.9	7.3	5.0	5.8	3.9	2.6

^a–: appreciation. — ^b–: depreciation. — ^cEIU estimate. — ^dFirst half. — ^eFirst three quarters.

Source: IMF *International Financial Statistics* (various issues), IMF *IMF Survey* (6 February 1995), EIU *Country Profile Mexico* (1993/94), EIU *Country Report Mexico* (1st quarter 1995), own calculations.

higher than consumer price increases, allowing costs to push. Second, monetary expansion was driven by the inflow of foreign exchange due to the dramatic increase in capital inflows, allowing demand to pull. The expansionary effect of capital inflows translated into positive real growth rates and, together with the real appreciation, produced a large trade deficit, which reached 5.2 per cent of GDP in 1994 (current account deficit: 8.2 per cent).¹⁷

Generally, the internal and external equilibrium of the Mexican economy became more and more dependent on the sustainability of capital inflows and — as Table 10 shows — especially on the sustainability of foreign portfolio investment. Portfolio investment, however, is a mixed bag with respect to its stability (Reisen 1995). Investment by pension funds and life insurance

companies can be taken as long-term investment, since these funds follow a buy-and-hold strategy rather than a trading strategy in the emerging stock markets. Unlike banks and most other investors, pension funds and life insurance companies benefit from regular inflows of funds on a contractual basis and from long-term liabilities (with no premature withdrawals of funds). To the contrary, equity-related investment by domestic residents with overseas holdings, by private foreign investors and from managed funds (country funds and mutual funds) are largely governed by cyclical determinants and oriented at short-term returns. In the course of the early 1990s, the decline in returns on riskless assets in the United States and the OECD countries brought much speculative money to the emerging stock markets. What is more, with the need

to have sufficient cash to pay off clients redeeming their holdings, a widespread crisis forces fund managers to sell in markets totally unrelated to the origin of the crisis.

Limiting the flexibility of the nominal exchange rate also intensifies the risk related to other capital flows. If the exchange rate system is credible, foreign investors can earn significantly higher interest rates than at home, while their risk is limited by interventions of the domestic monetary authorities in order to contain the nominal exchange rate within its band. In Mexico, this has led to an ex-post interest rate to be earned on Mexican deposits by American investors that was about 12.5 percentage points higher than the interest rate on American deposits. This helped to pull speculative, short-term capital into Mexico.

The riskiness of Mexico's external position materialized during 1994. The regional upheavals and the elections, together with some uncertainty about the possibility to refinance short-term government debt, created sufficient uncertainty for portfolio and other capital flows to change their direction, and the real exchange rate became overvalued.¹⁸ This demonstrates that the risk related to an exchange-rate-based stabilization programme is rather due to the concept. If capital flows out, as was the case in 1988, when the peso/dollar rate was fixed, the programme is ended because a monetary contraction should be avoided. If capital flows in, as has been the case since 1989, monetary expansion slows down inflation convergence and, hence, speeds up real appreciation leading to a large trade gap, which makes a "soft landing" increasingly difficult.

This is not to say, that there have been no components of the Mexican economic policy that can be criticized because alternative policies may have helped to speed up inflation convergence. Before proceeding to this discussion, a general statement is in order. It is relatively easy to identify such inconsistencies ex post, and it is very likely that without the political disturbances of 1994 foreign investors and economists would still live very comfortably with the Mexican reform model. The following discussion is nevertheless important for identifying optimal future exchange rate strategies.

b. Complementary Policy Measures

Monetary and Exchange Rate Policy

The type of exchange-rate-based stabilization implemented in Mexico allowed two degrees of freedom with respect to the conduct of macroeconomic policy: (i) the rate of the crawl of the nominal exchange rate could be adjusted, and (ii) money supply could be manipulated via the domestic component of the money base. Over the period 1988–1994 the use of both instruments shows considerable volatility.

Most of the real appreciation during the period took place in 1988, when the rate of the crawl was zero and monetary policy was expansionary although net losses of foreign assets were significant (Table 10). This was clearly an inconsistent policy given the priority of the stabilization target. The concept of exchange-rate-based stabilization would have required that monetary contraction forces inflation down as quickly as possible in order to meet the stabilization target and in order not to let a dramatic real appreciation disturb structural adjustment.

The correction of this policy, which took place in 1989, went into the right direction: the rate of the crawl was increased to 1 peso per day and monetary policy was tightened. This policy resulted in a passive crawling peg, i.e., the differential between Mexican and US inflation was compensated by the nominal devaluation and the real exchange rate was kept constant with a trade deficit of negligible amount and a real growth rate of 3.3 per cent (Table 10). Hence, the Mexican economy had been in internal and external equilibrium at that time, and it is reasonable to argue — by hindsight — that this policy mix would have provided a stable macroeconomic framework. However, Mexican macroeconomic policy changed course again in 1990, leading to its central flaw, i.e., the excessive use of the exchange rate as a nominal anchor (Bergsten and Cline 1995): while the rate of crawl was lowered, monetary policy became more expansionist again, starting a new round of increasing inflation and real appreciation.

With respect to monetary policy, there was at least a chance to be more restrictive (Brand and Röhm 1995). With the exception of the years

1992 and 1993 and to some extent also of 1991, monetary policy tried to sterilize reserve outflows but not reserve inflows, thus increasing inflation pressures. This can be seen when comparing the development of net foreign assets and of money supply M1 (Table 10). It implies that the fluctuations of money supply were not completely unavoidable as would have been the case in a currency board regime (see the discussion of the Argentine case below) but were to some extent produced by an active monetary policy that changed course several times and was not strictly oriented at keeping monetary expansion as low as possible in order to force inflation down as fast as possible.¹⁹

Fiscal Consolidation

Fiscal consolidation is a cornerstone for establishing the credibility of an exchange-rate-based stabilization programme. It is necessary to allow the monetary policy to be determined by the exchange rate target, and it convinces foreign investors that their funds are not allocated — either directly or indirectly — into the public pockets. The Mexican reform efforts in this respect were clearly outstanding (OECD 1992). From 1988 onwards, the financial deficit declined rapidly until the gap was closed in 1991, largely on account of a steady decline in the expenditure to GDP ratio, which in 1991 was 15 percentage points below that of 1982, while the revenue ratio even declined.

Between 1988 and 1993, the revenue ratio continued its downward trend, which was the result of a tax reform that rather focused on the simplification of the tax system and on lower tax rates than on increasing fiscal revenue:

(1) The corporate tax base has been rationalized through full inflation indexation, the system of multiple corporate tax rates, ranging from 5 to 42 per cent, has been replaced by a uniform rate of 35 per cent, the same rate as that charged on capital gains. Only the real portion of interest payments (receipts) has been made deductible (taxable). The inflation adjustment of depreciation and inventories variations has also been simplified and made automatic. Additionally, the exemption of agricultural and transport sectors

from corporate taxation has been ended and a minimum corporate income tax established.

(2) The number of personal income tax brackets has been reduced from twelve to eight, and the top rate has been lowered to 35 per cent, thus equalizing marginal corporate and top personal income tax rates and consequently reducing the scope for tax arbitrage. The brackets have been indexed to inflation. Interest income of individual residents has been made subject to a withholding tax of 1.4 per cent of the underlying principal. However, the extensive list of tax-exempt income components has remained one key feature of the personal income tax system.

(3) Efforts have also been made to increase the efficiency of VAT taxation. The standard rate was reduced to 10 per cent in 1991 as part of the government's anti-inflationary incomes policy. The special rate in border regions has been replaced by the standard rate, leaving foodstuffs as the only exemption favoured by a zero rate. VAT collection has been improved by transferring its administration from states to the federal government, which uses banks to collect the tax.

Although this surely constitutes a straightforward fiscal reform programme, the development of the structure of government revenue and expenditure reveals two unfavourable trends between 1988 and 1993 that are worth to mention:

(1) Revenue from VAT showed a negative trend. Contrary to other Latin American reform countries like Argentina and Chile (Burgess and Stern 1993: Table 3.1, Schweickert 1994a), indirect taxation obviously did not enjoy a high priority in Mexican tax policy. The advantage of the VAT is that it discriminates against consumption expenditure, an effect that can dampen the typical consumption boom to be observed in all exchange-rate-based stabilization programmes and, hence, to foster domestic savings and investment. Additionally, ample evidence with tax reforms in developing countries shows that the short-term revenue effect of a tax reform can be maximized by focusing on indirect taxation (Schweickert 1995a).

(2) While current expenditure increased from 5.6 to 9.8 per cent of GDP, capital expenditure

declined from 3.6 to 2.7 per cent of GDP. On the one hand, this reflects the ongoing privatization process, which shifts public investment into the private sector. On the other hand, it can at least be questioned whether it is appropriate for a country like Mexico to reduce public investment to OECD levels (OECD 1992) rather than financing meaningful investment in infrastructure and public services in order to improve the prospects for catching up.²⁰

Financial Market Policies

A well-developed and efficient financial system helps to ease structural adjustment problems because it provides the financial resources to restructure domestic supply when relative prices change. This is of special importance if exchange rate flexibility is limited. If the real exchange rate appreciates, as is typically the case in the first phase of exchange-rate-based stabilization, efficiency-enhancing investment in exportable or import substitutes provides a stable source of foreign exchange inflows substituting for temporary capital inflows in a later phase of the programme, i.e., the supply response substitutes for a real devaluation.

The past few years have brought fundamental change to the Mexican financial sector (EIU, a 1994/95). Apart from liberalizing interest rates and credit terms and eliminating obligatory lending to the public sector, new financial instruments and new financial institutions have been created. It has been estimated that at the end of 1994 there were around 50 commercial banks in operation compared with just 19 two years earlier. In 1993, after authorization was given for the establishment of new domestic banks the total number went up to 30 and in 1994 the government granted licenses to subsidiaries of banks operating in the United States and Canada. There has also been a significant increase in the number of other financial entities since 1988.

Thus, Mexico's financial system has been strengthened by its liberalization and deepening. Major contributing factors of this strengthening were the privatization of much of the financial system and the establishment of a more inde-

pendent central bank.²¹ Yet, there is still room for improvement:²²

(1) Mexico's financial sector is still small compared with East Asian countries (Korea, Malaysia, Singapore, and Thailand) and other NAFTA countries. While market capitalization of Mexican financial institutions is about 60 per cent of these countries, the assets as per cent of GDP are only 44 per cent (26 per cent) for deposit money institutions and 23 per cent (11 per cent) for private nonbank finance companies of the asset ratio of the corresponding Asian (American) institutions.

(2) The costs of debt and equity finance are very high for most firms. Bank's prime borrowers paid real interest rates of almost 18 per cent, while small and medium-size firms paid over 25 per cent at the end of 1993. Among the reasons for such high rates are high bank operating costs and insufficient competitive pressure on financial intermediation margins.

(3) Although the newly privatized commercial banks have managed to build up their capital bases to meet Basle requirements, they have been similarly plagued by bad debts (additionally contributing to the high lending rates). By mid-1994, bad debts on their books were equivalent to no less than 96 per cent of paid-up capital and were proving to be an obstacle to new lending.

(4) The government has greatly strengthened the system of prudential supervision. This is important because in the past no bank failure was allowed. But the complex structure of the financial conglomerates that predominantly provide the financial services in Mexico makes oversight and monitoring a difficult task. Efficient supervision also suffers from the existence of five financial regulatory bodies with overlapping jurisdictions and a lack of centralized and standardized information.

The Mexican stock market had been reformed even before the banking sector was privatized and deregulated (EIU *Country Profile Mexico* (1994/95)). There has been the development of new products and the opening up of the market to foreigners. Under new rules, which came into force in November 1989, foreigners are allowed

to purchase almost any stock through a "neutral" trust, although they still do not have voting rights. In 1990, further reforms allowed foreigners to take a stake of up to 30 per cent in stock market intermediaries. It is, therefore, not surprising that the stock market index changed from boom in early 1994, when capital inflows were still positive, to bust in late 1994, when foreign investors withdrew their funds.

The problem is not the mere size of inflowing funds but their source (Reisen 1995). In Asia, the equity-related share of portfolio flows is higher than in Latin America, but it is at the same time likely to come from more stable sources. Pensions funds and insurance companies often limit their investment towards those countries that have been assigned investment-grade credit ratings by rating agencies such as Moody's and Standard & Poor's. Currently, only Chile and Colombia in Latin America carry the investment grade stipulated by the portfolio allocation guidelines of pension funds, while in Asia the grade is enjoyed by China, Indonesia, Korea, Malaysia, Taiwan and Thailand. This explains why by 1993 UK pension funds (for which such a breakdown is available) had invested 4.6 per cent of their assets in Asia, compared with only 0.6 per cent in Latin America. Although Chile and Colombia and the Asian countries are likely to benefit from this more stable type of equity-related investment, they still restrict short-term capital inflows. The opening of equity portfolio investment to foreigners in a situation where the country still has a minor credit rating — as was the case in Mexico — is at least a high risk strategy.

Labour Market Policies

Labour market and wage flexibility are of crucial importance for the monetary and exchange rate policy to achieve the macroeconomic targets. Real wage flexibility is necessary in both fixed and flexible exchange rate regimes to achieve real exchange rate adjustment. But the pressure on nominal wage flexibility is higher in a fixed exchange rate regime, where the real exchange rate can only be adjusted via adjustment of nontraded goods prices, i.e., the price of labour in the first place. The same holds for a

liberal trade regime and a liberal institutional framework for foreign direct investment.²³ While a liberal trade system helps to bring domestic prices down as fast as possible in order to stop the real appreciation effect of fixing the exchange rate, a liberal institutional framework is necessary to provide stable finance for covering emerging trade deficits. Some of these issues have already been analysed in Chapter II. Hence, the following concentrates on labour-related policies.

In Mexico, wage negotiations have been part of the macroeconomic reform programme because guidelines for wage adjustment have been included in the Pacto agreements. This would lead one to expect that wages would be adjusted consistent with the rate of crawl of the nominal anchor, i.e., the exchange rate. If, e.g., the rate of crawl is 0.0004 pesos per day this would result in an annual depreciation of 4 per cent. Given a US inflation rate of 5 per cent, this would result in a target for the domestic inflation rate of 9 per cent. Wage inflation could be higher to the extent

- that an additional devaluation could occur because the present exchange rate has some room to move within the band,
- that inflation of nontraded goods prices is higher than average inflation, and
- that the equilibrium real exchange rate appreciates.

Especially in 1990 and 1991, the realized wage increases exceeded appropriate levels (Table 10). As a consequence, the wage spread between Mexican wages and US wages in US dollar became even larger than the real exchange rate appreciation measured by purchasing power parity. Taking 1987 as the base year, this led to the result that at the end of 1994 the nominal devaluation and the low inflation rate wiped out the foregoing real appreciation completely, while Mexican wages still had increased by 39.0 per cent relative to US wages.

This observation fits into the picture that — despite Mexico's comprehensive programme of liberalization and structural reform — the labour market has remained relatively regulated (World Bank unpublished material). The exist-

ing framework of labour legislation has resulted in significant inefficiencies:

- High explicit and implicit labour costs have presented both a barrier to the growth of formal sector employment, and a burden for international competitiveness. Total nonwage labour costs would add 31 or 50 per cent if current programmes were adequately financed by contributions. The comparable costs in Chile are 21 per cent and even in OECD countries only Spain, France, and Italy are above the 31 per cent level but not above the 50 per cent level.
- Excessive restrictions against internal and external labour mobility have hampered productivity growth. Large mandated severance payments have substituted for a well-designed pension system and an adequate unemployment insurance. Within the OECD, only Spain and Italy, both equipped with highly rigid labour markets, mandate equally large severance payments.

The outcome of the system is not only inefficient but also inequitable. It discriminates in favour of middle- and upper-middle-income classes employed in the formal sector and against labour in informal and rural sectors, i.e., the poorest and the worst equipped for the structural changes inevitably accompanying Mexico's further integration into the world market. Therefore, labour market reforms comprising lower mandatory nonwage costs and the introduction of a pension system and an unemployment insurance, e.g., like in Chile and Argentina, are urgently required to ease real integration and macroeconomic adjustment. Additional measures should comprise human capital development and the modernization of the collective bargaining framework allowing more flexibility at sectoral and firm levels.

Evaluation of the 1995 Reforms

The run down of foreign exchange reserves in December 1994 forced the Mexican authorities to switch to a floating exchange rate regime with limited interventions. The macroeconomic reforms during the first quarter of 1995 had four basic components:²⁴

Restrictive fiscal policy. Budget targets have been modified from a balanced budget to a surplus of 0.5 per cent of GDP. To achieve this, fiscal policies followed the traditional lines, i.e., expenditures were to be reduced with greater spending cuts in investment than in current expenditure. The devaluation effect is expected to be neutral with respect to revenue, since the higher cost of external debt service will be offset by greater revenues from petroleum sales. This fiscal package had to be adjusted in March by raising the VAT rate from 10 to 15 per cent, additional price increases of publicly provided goods, and additional spending cuts.

Restrictive monetary policy. After exchange rate targeting broke down, monetary policy goals became the only nominal anchor. Therefore, the monetary programme establishes a limit on the growth of net domestic assets of new pesos 10 billion, which is equivalent to 17 per cent of the monetary base at the end of 1994.

Wage restraint. Initially, the wage accords included in the Pacto signed in September 1994, which targeted a total rise in wages of about 10 per cent (including productivity bonus and tax credits), were upheld. However, the modification of the macroeconomic programme in March 1995 appeared without the traditional consensus of the signatories of the Pacto and stressed the need for an agreement on collective bargaining contracts through free negotiation between the respective parties at the company level.

Structural measures. To complete the adjustment, the programme also includes new privatizations, a further opening of the financial system to foreign investment and increased deregulation. To prevent inefficiencies of financial contracts stemming from uncertainties about the future inflation rate, units of investment (unidades de inversión; UDIs) were introduced. This is basically an instrument to index financial instruments because it provides a unit of account that is adjusted daily to the actual inflation rate.

If properly implemented, the 1995 programme corrects much that has been criticized above. It maintains fiscal consolidation, while increasing the tax burden on private consumption, it stabilizes money supply, while allowing a monetary

contraction to put a limit on price increases, it plans a significant wage restraint, while strengthening a trend towards further deregulation, liberalization and privatization. Hence, internal reform can be expected to improve the economic fundamentals that determine Mexico's solvency. At the same time, international financial assistance of \$51.8 billion targeted at increasing the maturity and the peso-denomination of public debt should be sufficient to guarantee Mexico's liquidity.

This means that economic policy has been adjusted in a meaningful way and that the short-run economic development in Mexico now depends on the market reactions, i.e.:

- How long will it take to convince private agents that the new nominal anchor will be actually sustained and will provide an effective constraint for price increases?
- How long will it take for foreign investors to regain confidence in Mexico's economic policy and on which level will foreign capital flows stabilize?

The modifications not only of the reform programme but also of the economic targets that took place in March 1995 indicate that a return to a stable macroeconomic situation will still take time. The target for the current account deficit that could be financed was adjusted from \$14 billion to \$2 billion, inflation is projected to reach 42 instead of 19 per cent, the exchange rate target had to be increased from 4.5 to 6.0 new pesos per dollar, and a real contraction of GDP of 2 per cent is expected now, while only a reduction in real growth to 1.5 per cent was expected before. While external balance is now secured by the floating exchange rate, which can adjust to whatever domestic inflation and external capital flows require, regaining the internal balance seems to be at risk. An inflation rate that is more than 100 per cent above the target consistent with the tight monetary policy is bound either to be reversed soon or to produce additional real contraction and unemployment. Obviously, the market tests the credibility of the new nominal anchor, i.e., a money supply target, which has now to be sustained to gain credibility.

2. Alternative Strategies for Macroeconomic Management

Although it is too early to judge on the effectiveness of the monetary anchor, the higher than expected inflation rates in the first quarter of 1995 support arguments that the peso/dollar exchange rate is a more adequate nominal anchor for the Mexican economy: "Market forces in Mexico are accustomed to using the dollar-rate as a point of reference. This attitude is very much based on history, where monetary stability has been the exception. As such, although the free float of the peso on the foreign-exchange market is an indispensable measure in the short term, it seems premature to implement it as a permanent policy. In consequence, there must be a rapid return to an exchange-rate regime most appropriate for a small country which is open to trade" (GFB *Informe Económico* (January 1995)). To judge on this hypothesis it is necessary to know the alternatives. Hence, the following discussion will not be in theoretical terms but will provide examples of a strictly fixed exchange rate (Argentina) and of rule-based exchange rate management (Chile and Israel), which has been recently implemented, for the time being, with success.

a. Implementing a Sustainable Fixed Exchange Rate

With the exception of a monetary union, the currency board is the most radical way to implement a fixed exchange rate system. Its basic feature is the full coverage of the monetary base by foreign exchange, which is guaranteed by a monetary policy that satisfies each excess supply and demand for the domestic currency in exchange for an anchor currency at a given exchange rate.²⁵ Such a currency board — although in a modified version — has been at the heart of the Argentine stabilization policy since April 1991, when the Convertibility Plan came into force (Schweickert 1994a). In addition to the almost complete elimination of an autonomous monetary policy by the currency board, the Convertibility Plan has several components

that should speed up the convergence of Argentine inflation towards an industrial country level:

- The financing of fiscal deficits by the central bank is prohibited. This is a necessary condition for the implementation of the currency board. A radical privatization process and fiscal reforms have eliminated the fiscal deficits and have established the credibility of the currency board.
- The peso has become fully convertible and fixed to the US dollar, which could have been used as a legal tender. This includes the use of dollar-denominated deposits and should strengthen substitution possibilities between the two currencies and, hence, the credibility of the fixed exchange rate.
- A substantial trade liberalization has been complemented by numerous decrees on changing regulations to maximize competition and the pressure on domestic inflation to converge.

Exchange-rate-based stabilization via the Convertibility Plan was quite successful. Starting with hyperinflation in 1990, annual consumer price inflation came down to 4 per cent at the end of 1994, implying that the initial real appreciation to be observed in exchange-rate-based stabilization programmes had been stopped and even reverted. This success was achieved notwithstanding substantial expansionary pressures from capital inflows. Capital flows have changed their direction, and Argentina has received substantial net inflows since 1992. The nominal peso/dollar exchange rate has been below the 1:1 parity since April 1991. This means that there has been an excess supply of dollars at this parity, which has been absorbed by the central bank. As implied by the convertibility law, this has been directly translated into an increase in money supply, and the monetary base more than tripled in real terms from 1990 to 1993. Market-driven expansion led to real economic growth after years of stagnation or decline.

However, the external balance situation in 1994 signalled that the expansionary first phase of stabilization had possibly come to an end. The net inflow of foreign exchange was becoming

increasingly dependent on capital inflows other than foreign direct investment because the real appreciation steadily increased the trade deficit. This had two consequences: the expansion of the foreign exchange reserves was unlikely to be sustainable, and the reserve position was becoming riskier. Indeed, the net reserves inflows became flat in 1994, a moderate loss of foreign exchange and, hence, a reduced monetary expansion had to be expected for 1995. The speculative wave that hit Argentina after the failure of exchange-rate-based stabilization in Mexico led to a sharp deterioration of capital inflows and losses of foreign exchange. Because of this external shock, the risks of the stabilization concept materialized and the peso-denominated money supply contracted sharply.

Nevertheless, Argentina sustained the fixed exchange rate. This was possible because of two significant differences compared with the Mexican implementation of exchange-rate-based stabilization.

- The full coverage of the peso monetary base by foreign exchange allows even for a full dollarization at the given exchange rate. The central bank voluntarily exchanges the peso reserves of the commercial banks into foreign exchange reserves to reduce the excess demand for US dollars and to limit exchange risk exposure. Additionally, the parallel monetary system denominated in US dollars dampens reserve losses because these aggregates are much more stable than the aggregates denominated in pesos.
- The exchange rate is fixed by law. Authorities have not changed the rules of the game during some smaller speculative attacks on the peso since its fixing in 1991. Additionally, the reliance on price signals rather than negotiations in Argentina since that time has helped private agents to understand that there is no alternative to a quick adjustment.

As a consequence,²⁶ domestic inflation was further reduced by constant consumer prices in February and by a monthly deflation of 0.4 per cent in March which helped the real depreciation process that had already begun in 1994. Banking deposits also stabilized in March, and the con-

traction of the monetary base (determined by reserve flows) was nearly stopped. It has to be acknowledged, however, that — similar to Mexico — this result required additional fiscal reforms and was supported by some money from the IMF.

Generally, the Argentine monetary system provides a blueprint for a sustainable and, hence, credible fixing of the exchange rate. If the preference for the US dollar in Mexico is strong enough to justify the use of the peso/dollar exchange rate as a nominal anchor, a renewed fixing or quasi-fixing of the parity should be implemented close to the Argentine blueprint. But the Argentine experience has also demonstrated the significant risks associated with the concept even if radically implemented. Ultimately, the risk of speculative or at least of unstable capital flows that translate into instabilities of the money supply can only be ruled out in a monetary union.²⁷

b. Rule-Based Management of a Flexible Exchange Rate

Rule-based management constitutes a compromise between a currency board and a floating exchange rate. It is characterized by the definition of a central parity and the width of a band which allows the nominal exchange rate to fluctuate around the central parity. There are two examples for such regimes — Israel and Chile — which may be telling for Mexico for two reasons. First, they have been adopted following failed exchange-rate-based stabilization experiments and a subsequent period of maxi-devaluations. Second, for the time being they have been successful.²⁸ Inflation approached one-digit levels while internal and external equilibrium was maintained. During the period 1988–1993, real GDP grew by 7.2 per cent and 4.4 per cent in Chile and Israel, respectively. The current account deficits peaked in 1993 (Chile: 5.1 per cent, Israel: 2.1 per cent) due to large capital inflows, but generally remained significantly below these levels. The two countries adopted the following exchange rate policies (Helpman et al. 1994):

The *Israeli government* adopted an exchange rate band in January 1989. The band consisted of a fixed new Israeli shekel/basket central parity with a 3 per cent fluctuation zone around this parity. The band's width was enlarged to 5 per cent in March 1990. In December 1991, after an upward adjustment of the central parity, the authorities relaxed the fixity of the central parity and announced an upward crawl of the exchange rate band. In addition, an official inflation target was announced for the first time. The rate of crawl of the central parity was set at 9 per cent per year, to reflect the difference between Israel's inflation target and a forecast of foreign inflation for 1992. The announced rate of crawl for the central parity was reduced to an annual rate of 8 per cent per year starting from November 1992 and to 6 per cent per year starting from July 1993, and the announced inflation targets for 1993 and 1994 were 10 and 8 per cent respectively.

The *Chilean authorities* adopted a policy of daily adjustments in the peso/dollar reference exchange rate in 1985. At the start of each month, the authorities announce the size of the daily exchange rate adjustments for that month, based on the difference between domestic inflation in the previous month and a forecast of foreign inflation. The width of the band was 2 per cent around the central parity in the initial phase, increased to 3 per cent in January 1988, and further widened to 5 per cent in June 1989. In January 1992, there was a discrete revaluation of 5 per cent in the central parity, and the band's width was increased to 10 per cent around the reference rate. Since July 1992, the band policy has been defined in terms of a basket of foreign currencies and not in relation to the US dollar, as in the earlier periods.

Both countries — contrary to Mexico — increased the flexibility of their exchange rate regimes over time by moving to a passive crawling peg as central parity and by increasing the width of the exchange bands. This shows a clear preference for maintaining external equilibrium. If the actual exchange rate remains at the central parity, this implies a constant real exchange rate. Hence, the exchange rate system is

neutral with respect to the real exchange rate. If the actual exchange rate moves to the upper (lower) limit, the real exchange rate depreciates (appreciates). Hence, the exchange rate system allows real exchange rate adjustment.

While the two countries have shared common features of the exchange rate policy, the implications for monetary policy are different to some extent. Since in Israel the passive crawl is adjusted only annually and calculated on the basis of an inflation target, the autonomy of monetary policy is restricted to deliver this target. Likewise, since in Chile the passive crawl is adjusted each month and calculated on the basis of past inflation, monetary policy has a significant discretionary power. This power is further strengthened by Chile's treatment of capital flows. While long-term-oriented foreign direct investment is encouraged by extremely liberal regulations, short-term external borrowing is discriminated by a 30 per cent tax on loans with maturity of less than one year.

From the Mexican perspective it is worth to note that a passive crawl with a band may guide exchange rate expectations but gives up the exchange rate as a nominal anchor. The outcome for domestic inflation depends on the monetary policy. The credibility of monetary policy, i.e., of the central bank, has to be higher in the Israeli case because the inflation target has to be achieved.

The revision of the inflation target in Mexico demonstrates that it is still a long way to go for the Mexican central bank to establish the credibility of its monetary targets. Hence, using the Chilean model could be characterized as being a low-risk strategy for returning to exchange rate management in Mexico that gives priority to the maintenance of external equilibrium in order to stabilize trade and investment perspectives.²⁹ But even this low-risk strategy would need to strengthen the relation between the money supply and domestic prices via further liberalization and a strong commitment to pre-announced monetary targets. Establishing a nominal anchor for the Mexican economy in this way could be used to bring inflation down gradually to the US level. In a medium-term perspective, if the credibility of monetary policy is fully estab-

lished, the exchange rate system could be modified to approach the Israel model including an explicit inflation target. Such a strategy appears to be the most adequate one to provide the "soft landing", which is so difficult to achieve by exchange-rate-based stabilization.

3. Policy Recommendations

The failure of exchange-rate-based stabilization in Mexico exemplifies the systematic risks of the concept:

- Stabilization is achieved by risking strong impediments to exports and adjustment pressure to import-competing industries;
- monetary stability strongly depends to a large extent on the stability of trade and capital flows, i.e., on external factors that are exogenous for the host country;
- even if external shocks are ruled out, the smooth functioning of an exchange rate anchor requires a more or less perfect functioning of market mechanisms, i.e., flexible prices and quick supply response;
- the adequate reform effort is unknown *ex ante* and also difficult to manage because of a constrained reform capacity or a reduced willingness to reform when capital inflows allow to expand absorption.

Generally, capital inflows provide a breathing space for domestic policy to be successful on the reform front. The Mexican case demonstrates, however, that even 5 years time and far-reaching reforms have been insufficient to provide a "soft landing". It seems, therefore, advisable to substitute the high risk by a low-risk strategy for macroeconomic management if floating exchange rates are politically not acceptable. Rule-based exchange rate management is such a low-risk strategy. It implies

- to continue stabilizing the exchange rate via a restrictive monetary policy;
- to start limiting exchange rate flexibility with a passive crawl as central parity and wide bands;

- to limit exchange rate flexibility further to the extent that monetary policy becomes credible and efficient goods and factor markets are established;
- to improve these preconditions by giving fiscal priority to taxing consumption and to spending on infrastructure and human capital development, by strengthening the financial system, especially for the banking system, to make it a sound system for collecting and efficiently distributing loanable funds, by strengthening the official labour market via reducing nonwage labour costs and impediments to mobility, and by diversifying and

expanding exports as well as attracting FDI (see Section II.c).

The present involuntary floating of the peso gives monetary authorities a chance to improve policies in these respects without unnecessarily tying their hands with an overly restrictive exchange rate regime. In addition to the fact that there is no alternative to this policy in the short run, it may also provide a test whether the Mexican economy actually needs a nominal anchor in the form of a fixed or quasi-fixed exchange rate.

IV. Perspectives and Policy Recommendations

Short-run economic turbulences cannot obscure the perception that Mexico's attractiveness as a host for both domestic and foreign investment is very likely to benefit from two positive developments that were initiated before the crisis broke out: *First*, economically, Mexico's real capital stock has undergone substantial modernization during the last few years and can be expected to materialize in much higher productivity increases than before. *Second*, institutionally, unilateral reforms of the trading regime, the implementation of NAFTA and the multilateral trade liberalization in the GATT/WTO framework will not only contribute to open the Mexican market further, but will also increase the degree of stability and predictability in Mexican policy making. Membership in the OECD is conducive to more stability, too.

To make these developments fully effective, however, requires a number of steps to be taken. They are necessary in the sense that without them the two developments — even if pursued further — cannot bear fruits:

First, it is of utmost importance to restore both a noninflationary environment and stability of the real exchange rate. Bearing in mind, that in principle, Mexico prefers exchange-rate-based monetary policies, the study proposes a more flexible policy than the quasi-fixing until

December 1994 to be introduced after the transitory period of floating. Yet, even this more flexible scheme requires substantial discipline and consistency in wage policies, fiscal policies and monetary policies. If successful, such package will trigger higher domestic savings and more efficient allocation of funds. Nevertheless, choosing a nominal external anchor through exchange rate targeting will remain an approach that is exposed to risks beyond the responsibility and influence of the Mexican authorities.

Second, bottleneck factors such as in human capital formation and infrastructure must be removed provided that the net profitability of related projects can be assessed a priori with sufficient probability.

Third, regional diversification of domestic activities can be achieved through abandoning all measures that discriminate against the agricultural sector. This would not only help to meet the crucially important targets of more equity and alleviation of poverty. It would also support stimulating factors coming from the international arena in terms of higher world market prices for many agricultural products after the implementation of the Uruguay round.

Fourth, Mexico should launch initiatives to link themselves more to non-NAFTA sourcing and export markets — in particular, to the Asian part of APEC and to Europe, but less so to

Latin America, as these markets are less absorptive. The relatively low attractiveness of Mexico for Japanese investors, for instance, is a disturbing phenomenon if it is viewed in the light of the ubiquitous nature of Japanese foreign investment.

In spite of its richness in oil resources, Mexico is one of the few countries that can be expected to overcome the Latin American syn-

drome of commodity-based development, social segmentation and monetary volatility. There is a middle class strongly interested in monetary stability and economic growth and prepared to contribute net savings to the financial sector. Finally, it is increasingly understood in Mexico that abundance in fossil energy has more often been a source of temporary windfalls than the base for a sustainable catching-up process.

Appendix: Stylized Facts about Exchange-Rate-Based Stabilization

To see how a fixed exchange rate *can* stabilize an economy,³⁰ we assume that the economy is in macroeconomic equilibrium and net capital flows are zero. The difference between domestic and foreign inflation is compensated for by nominal devaluation, so that the real exchange rate is constant, i.e., the real exchange rate is in equilibrium but inflation is significantly higher than abroad. If the exchange rate is fixed in such a situation, inflation decreases immediately because the price increases for traded goods are curbed by world market conditions. But ongoing inflation for nontraded goods will lead to an immediate real appreciation.

Real appreciation creates an excess demand for traded goods and an excess supply of nontraded goods. This is because traded goods become relatively cheaper and demand shifts from nontraded to traded goods. Excess demand for traded goods implies a trade deficit, an outflow of foreign reserves, and — with a passive monetary policy — a monetary contraction.³¹ As a consequence, absorption decreases, the demand for traded goods declines and the trade imbalance is reduced. But the decrease in absorption further increases the excess supply of nontraded goods. This exerts a pressure to reduce the prices of nontraded goods. Domestic inflation must be even lower than abroad in order to remove the real overvaluation and the excess supply of nontraded goods caused by the initial real appreciation.³²

A necessary precondition for private agents to adjust prices is that they expect the monetary

contraction to occur. If this is not the case, ongoing inflation, growing real overvaluation, and increasing internal and external imbalances will end the stabilization programme soon. Therefore, the credibility of the monetary contraction becomes a basic precondition for the flexibility of prices and for the success of the exchange-rate-based stabilization.³³ Problems with its credibility result from three macroeconomic constraints: the government budget, the foreign exchange reserves and the unemployment.

The need to finance the government budget may constrain the possibility of a monetary contraction in low-income countries because collecting the inflation tax and borrowing on narrow domestic capital markets play a significant role in financing government expenditure. Therefore, an exchange-rate-based stabilization needs fiscal discipline, i.e., expenditure has to be reduced and/or alternative taxes have to be raised. Otherwise growing pressure on the central bank to increase the money supply would be expected by rational private agents. Hence, prices would not be adjusted.

The outflow of foreign exchange reserves could run down the stock of reserves before trade is balanced. In this case, a nominal devaluation will be expected, and this expectation will lead to a devaluation even before the reserves are actually depleted.³⁴ Such a devaluation is typically avoided in the short run by increasing protectionism to stop reserve losses

(Williamson 1987). Both reactions diminish the pressure on private agents to adjust prices.

If the monetary contraction is possible, the question arises, if it actually occurs. The temporary fall in demand provides strong incentives for the authorities to change the programme and to avoid temporary unemployment via a monetary expansion. This means that the announcement of a fixed exchange rate is time-inconsistent and private agents have an incentive not to adjust prices but to wait for the policy switch.

In the case that private agents judge macroeconomic constraints not to be relevant, monetary contraction is credible and guarantees a pressure to reduce the prices of nontraded goods. Whether these prices are actually adjusted depends on the price setting behaviour in the real sphere of the economy. The fall of nontraded goods prices will not occur in the presence of indexation and inflationary inertia (Edwards 1993: 5–10) and a low level of competition. In this case, the monetary contraction will lead to higher unemployment rather than to a real exchange rate adjustment.

The adjustment towards a new equilibrium becomes easier if the country is able to attract capital inflows. There are basically three reasons for an increase in capital inflows:

(1) Commercial banks and official lenders honouring the macroeconomic reform efforts may grant access to new credit lines and increase foreign direct investment. Such capital inflows are of a permanent nature as long as the reform is sustained.

(2) Private agents shift their portfolio towards domestic assets if they expect an undistorted macroeconomic environment and a higher profitability of investment in the country undergoing a stabilization programme. This capital inflow contains not only permanent but also temporary components such as repatriated capital flight.

(3) Private agents shift their portfolio further towards domestic assets because speculative windfall gains can be earned in the short run due to high nominal interest rates and a guaranteed exchange rate. This type of capital inflow is of temporary nature.

Large capital inflows finance emerging trade deficits and increase foreign exchange reserves. Hence, the money supply grows and the prices for nontraded goods do not have to be adjusted downwards, i.e., domestic inflation has not to be lower than inflation in the anchor currency. However, such an equilibrium may not be sustainable. First, capital inflows may decrease because they are of a temporary nature at least to some extent. Second, the country may experience a negative terms-of-trade shock. Third, if the exchange rate is fixed against a single currency, e.g., the US dollar, an appreciation of the US dollar against other relevant currencies implies decreasing world market prices.

All these shocks have qualitatively the same implication for the economy. The real exchange rate becomes overvalued, the trade deficit has to be financed by an outflow of foreign exchange reserves, and the demand for nontraded goods falls short of supply. This means that all the problems described above for the case of stabilization without capital inflows emerge. Moreover, the problems are even more pronounced because of the initial expansion. This is why the reversal of capital flows typically marks the end of fixed exchange rate regimes. Monetary contraction is not sustained and a devaluation crisis emerges: the “stabilization blues” (Guidotti and Végh 1992).

Endnotes

- 1 A comparison of Mexican and US trade figures suggests that exports from maquiladora industries account for 60–70 per cent of US imports from Mexico, and, hence, up to 50 per cent of Mexico's merchandise exports to all destinations (GATT 1993: 3).
- 2 See Section II.1.c in which the effects of agricultural liberalization are discussed for Mexico.
- 3 A second-best approach: not to impose antidumping margins but to accept price undertakings as the EU does against the CEECs.
- 4 Assumptions on the change in oil prices are essential for Mexico's income position. In the model, oil prices are linked to the price of OECD manufacturing exports. It is assumed that OPEC countries aim at maintaining a stable relationship between the price of their manufactured imports from the OECD area and the price of their oil exports. Hence, a fall in the price of OECD manufactured exports due to liberalization and increased competition induces a fall in oil prices.
- 5 According to regular surveys of the International Finance Corporation (Pfeffermann and Madarassy 1991; Glen and Sumlinski 1995) Malaysia had an investment ratio of 27 per cent, Thailand 24 per cent and Indonesia 22 per cent.
- 6 IMF *International Financial Statistics* (March 1995).
- 7 Early enough, fears were nourished by empirical estimates supporting the view that in fact external factors, in particular in the United States, played an important role in encouraging short-term capital to leave the United States and to enter Mexico. Among such factors, the decline in US interest rates, continuing recession and capital account developments in the United States figured prominently (Calvo et al. 1992).
- 8 IMF *International Financial Statistics* (March 1995).
- 9 These three countries are the leading investors in Mexico together with the United Kingdom. FDI statistics for the United Kingdom are not available after 1991. In this year, Mexico held a share in UK total FDI (at book value) of only 0.3 per cent in all industries and 0.4 per cent in manufacturing. These shares were the same as in 1987 (UK, CSO 1993).
- 10 A breakdown of Japanese investment by industries is only available for host countries with a relatively large amount of Japanese FDI. Mexico does not belong to this group.
- 11 Bundesbank data on the stock of foreign investment in Germany in 1992, for instance, record an amount of only DM 8 million of investment from Mexico, compared with DM 310 million from Argentina and DM 125 million from Brazil.
- 12 Helpman et al. (1994), EIU *Country Profile Mexico* (various issues).
- 13 On 1 January 1993, the peso was trimmed by three zeros, one peso being worth 1,000 of the old pesos.
- 14 Israel's and Chile's exchange rate policies are discussed in Section III.2.b as possible blueprints for the future Mexican exchange rate regime.
- 15 These arguments between the government, employees and trade unions include targets for prices and wages. For an overview, see, e.g., Dornbusch and Werner (1994). For the comprehensiveness of reforms in Mexico, see Aspe (1993) and Cline (1991).
- 16 See Appendix for the theoretical concept.
- 17 On the Mexican "tradition" to produce periods of real appreciation followed by devaluations of the currency, see Fürstenberg and Teolis (1993b).
- 18 Whether it was overvalued even before foreign exchange reserves started to decline, as argued by Dornbusch and Werner (1994) and Fischer and Schnatz (1995), is as difficult to answer as to determine the equilibrium real exchange rate.
- 19 It could, of course, be argued that sterilizing capital inflows would have increased the size of inflows further making sterilization noneffective (Brand and Röhm 1995). However, such a policy would have improved the coverage of the monetary base by foreign exchange.
- 20 It has, of course, to be acknowledged that there has been a lot of improvement in this area since the 1980s. For an overview, see, e.g., EIU *Country Profile Mexico* (1994/95).
- 21 For an overview over reform measures, see G.O. Martínez (1994), Aspe (1994), and Welch (1993). The new regulatory framework for the central bank is discussed in F.B. Martínez (1995).
- 22 World Bank (unpublished material), EIU *Country Report Mexico* (various issues), OECD (1992).
- 23 While these measures tended to increase external competition (Ize 1990), domestic competition was increased by a general deregulation of the economy. For an overview, see Martínez and Färber (1994).
- 24 GFB *Informe Económico* (various issues), IMF *IMF Survey* (6 February 1995).
- 25 On currency boards and the different forms of implementation, see Hanke and Schuler (1993, 1994).
- 26 Recent information is derived from FM (1995) and IMF *IMF Survey* (17 April 1995).

- 27 For the benefits of such a North American Monetary Union (NAMU) from the Mexican perspective, see Fürstenberg and Teolis (1993a). For a discussion of monetary unification from the perspective of low income countries in the European case, see Schweickert (1995b).
- 28 For the data, see EIU (1995a, 1995b) and IMF *International Financial Statistics* (various issues).
- 29 For a more theoretical discussion of the passive crawling-peg as an exchange rate strategy for developing countries, see Schweickert (1993: Chapter D).
- 30 For a more detailed discussion of the theoretical implications including a graphical presentation, see Schweickert (1993: Chapter C; 1994b).
- 31 In the following, monetary contraction means a decreasing real money supply. Correspondingly, decreasing domestic prices mean a lower difference between inflation at home and abroad.
- 32 In the absence of real shocks, the equilibrium of the real exchange rate remains constant and the actual real exchange rate has to return to its initial level.
- 33 Contrary to a stabilization programme with flexible exchange rates, the extent of the monetary contraction is unknown at the beginning of the programme. This makes the credibility of the monetary contraction a challenging precondition in a fixed exchange rate regime. On the advantages of stabilization with flexible exchange rates, see Schweickert (1993).
- 34 See the literature on balance-of-payments crises summarized by Aghevli and Montiel (1991).

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