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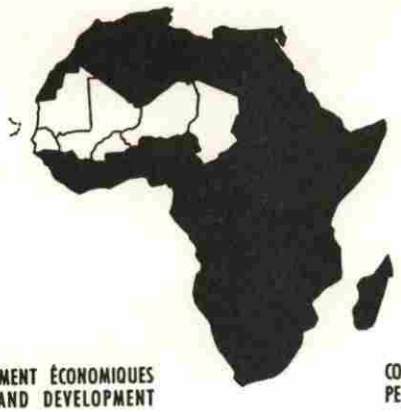

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I. INTRODUCTION

1. This country study focuses on one policy episode--the experience with grain marketing reform in Mali since 1980/81. This reform program is widely heralded as one of the few examples, in Africa or elsewhere, of successful collaboration among food aid donors leading to fruitful dialogue with a government on food policy reform.[1] The reform process has been supported by an innovative mechanism linking a multiyear program of food aid to changes in marketing and domestic price policies and to improvements in the operations of the government marketing board.

2. The paper suggests that, while some reform has occurred, it has been far less than expected, at least in terms of quantitative targets like higher prices and lower public sector deficits. Some observers point to benefits less easy to quantify, such as the improved environment for private traders resulting from liberalization, more cohesion and order among food aid donors (including management of counterpart funds), and better management of the government marketing board, especially its ability to supply deficit areas more regularly and to program food aid deliveries more effectively.[2]

II. ECONOMIC AND POLITICAL BACKGROUND

3. By any definition, Mali is poor. It has one of the lowest per capita incomes in the world (about US$140 in 1984 according to the World Bank Atlas estimates), one of the lowest literacy rates, and one of the shortest life expectancies. Development prospects appear bleak. Structural rigidities--physical, economic, and institutional--get in the way of efforts to promote growth. Agriculture, the major productive sector, is highly vulnerable to the uncertain climate of the semiarid tropics and is limited by poor soils, stagnant technology, and a limited range of production alternatives. The population is hard-working, but incomes are hardly enough to assure basic amenities, which limits the development of human capital. Other natural resources are limited, although the Niger River has a vast but almost totally undeveloped hydroelectric and irrigation potential. Infrastructure, already stretched thin by the country's vast expanse, has become increasingly fragile and unreliable because maintenance is not sufficient.

4. Mali's political evolution can be divided into two phases. The first launched the country on a radical socialist path, aimed at social equity, modernization, and independence from France. The first government (1960-68) attempted to establish an administered economy, adopting the philosophy that modern development had to be centrally planned and to be financed by surpluses extracted from agriculture. The government reduced nominal official crop prices for producers below levels that prevailed at independence. Farmers were in effect taxed by being compelled to sell a quota of their production at these prices. Antimarket views were dominant in the government. By suppressing the merchant class, the state hoped to appropriate commercial profits, with the aim of using them to lower consumer prices and to finance public expenditures for development. State trading monopolies proliferated--for cereals as well as most other goods. OPAM, the state grain

marketing board,[3] was formally established with monopoly powers in 1964, as successor to a similar colonial entity set up in 1958.

5. To deepen the rupture with Mali's colonial past, the government established an independent monetary authority in 1962 after the dissolution of the Senegal-Mali confederation. This newfound monetary freedom was followed by years of large deficits in the government budget as well as in newly-established public enterprises. Deficit financing eventually led to rapid inflation and growing foreign trade deficits. In the face of rapidly declining foreign reserves, a panoply of exchange and trade restrictions were instituted to defend the increasingly overvalued exchange rate.

6. The second phase of political evolution was one of halting, painful financial and economic reform. It began in 1967 with a 50 percent devaluation and an agreement with France for budgetary support and eventual reentry to the franc zone. The first stage of reentry occurred in 1968, under a special arrangement whereby France guaranteed convertibility for the Mali franc through an open line of credit to the newly established Mali central bank. In return, the government's power to increase the country's money supply and to borrow was restricted. Given the government's strong socialist orientation, there were severe internal disagreements over this dramatic remission to an almost colonial position. A coup d'etat occurred in late 1968. The new military government was less ideological and relatively pragmatic. It reversed some critical decisions of the earlier government, including some of those related to cereals policy. In early 1969, it abolished the monopoly of OPAM and substantially raised nominal official producer prices. It sought to limit OPAM's role to that of a market regulating agent, which would enter the market primarily to alleviate shortages.

7. In a significant departure from the past, OPAM decided to use private traders as buying agents and, accordingly, opened lines of credit for them to finance future grain deliveries. The experiment of using private merchants as buying agents failed to give results expected. Merchants allegedly used the credit for their own grain purchases and for other commerce. OPAM did not receive the quantity of grain it had financed, and, in some cases, the credit was not reimbursed. The failure to reimburse the credit is difficult to explain, unless OPAM had no effective legal recourse to compel repayment; but the marketing action of the merchants is not surprising. They put the money to more productive use. OPAM buying prices were lower than market prices, which rose on account of the poor harvest in 1968, and there was little incentive for traders to deliver grain to OPAM. This experience convinced the new government that traders could not be expected to operate in accord with social objectives. In 1969, the state grains monopoly was reinstated, less than a year after it had been abolished.

8. Securing financial and economic liberalization and reform on a broader front turned out to be a protracted process. Because of the severe 1971-73 drought followed by substantial increases in the world prices of grains and petroleum, the country's budgetary and trade deficits could not be reduced significantly. As a result, Mali's planned reintegration with the CFA franc zone in 1977 was postponed. However, the late 1970s brought a new wave of reform efforts, which were related to several political events. The military government created a new political party (the Malian People's Democratic Union, or Union Democratique Populaire du Mali--UDPM), which became a

mechanism to garner political support. A national assembly was elected in 1979. The following year the government installed a new cabinet, with technocrats as key ministers. In 1981, the terms of Mali's reentry into West African Monetary Union were finalized, as were the broad lines of a new IMF Stand-by program. This stand-by was approved in 1982, followed by a second in 1983 and a third in 1985. In 1984, monetary reintegration with the CFA franc zone was completed.

9. Although reforms covered the entire economy, grains trade and pricing were clearly at center stage through the early 1980s. They became highly visible symbols of both the government's effort to liberalize the economy and donors' willingness to provide joint, long-term support for these reforms.

III. GRAIN PRICING AND MARKETING POLICY

10. Grains pricing and marketing policies are part of the larger macroeconomic policy framework; they are designed to help achieve broader socioeconomic objectives defined by the government. In Mali, two broad objectives have played a major role in shaping specific grains policies: increasing or protecting the income of certain groups and raising grain production to achieve food self-sufficiency. These objectives were continually reassessed by the government and adjusted in light of problems facing the country and what was feasible to accomplish. As noted previously, the income objective has its antecedents in the development strategy and social concerns of the first government. The production objective gained considerable importance following the 1972/73 drought, which elevated "food self-sufficiency" to the status of an urgent national priority. Although the government had to scale down its income objective, it nonetheless has remained a high priority since independence. It is the government's concern with incomes of certain groups, more than its concern with production per se, that helps explain the pattern and pace of reform of grains pricing and marketing policies.

11. The income objective aimed in principle to benefit both consumers and producers: (a) consumer incomes would be protected by OPAM grain sales at affordable and stable prices; and (b) producer incomes would be supported by guaranteed purchases by OPAM at remunerative producer prices. Measures to benefit both producers and consumers are, however, not always compatible. Faced with tradeoffs, the government has tended to sustain actions that benefit urban consumers. Cereals are viewed as a wage good, especially for military personnel, civil servants, public enterprise employees, and other workers in the larger establishments in the industrial, commercial, and service sectors. Cheap grain prices are seen as an attractive substitute for higher wages requiring additional budgetary outlays and leading to cost-push inflation. An important subsidiary goal of the incomes policy was to improve regional equity, which the government has viewed as a means both to enhance political unification by not showing favoritism, and to improve administrative functioning by helping convince officials to accept posts in grain-deficit districts far from Bamako (such as Kayes, Timbuktu, and Gao). Giving everyone access to grain at the same price was considered to be the best instrument to achieve this equity objective.

12. Related to the income objective was the government's distrust of merchants, who were believed to make excessive profits at the expense of both farmers and consumers. Ironically, the specific policies that fixed prices irrespective of quality, held them constant in time and space, and severely squeezed marketing margins, served to deepen this distrust. It was virtually impossible for merchants to respond to market signals and still respect official prices and margins, especially for consumer prices. Market producer prices were usually above the official prices, and thus more favorable to farmers than government's fixed prices. But market consumer prices also exceeded official prices. Merchants were accused of violating legal consumer prices, which eroded the value of grain as a wage good and undermined the government's incomes policy.

13. The production objective sought to reduce reliance on food aid, which was seen as an uncertain source, and imported grain, which was seen as both expensive and subject to interruptions. In both cases, the objective reflected a concern with both the adequacy and reliability of grain supplies needed to achieve the government's incomes objectives. Grains pricing and marketing policies were not seen as the primary levers to raise production; agricultural modernization (extension services, improved seeds, fertilizers, animal-drawn equipment) and irrigation investments were considered more important. Pricing policy was more rhetorical than operational; the official producer prices fixed by the government were usually below market prices. Marketing policy was designed both to meet purchasing targets through compulsory procurement and to assure better cost recovery for government agricultural services. In fact, these policies, by limiting farm revenue, probably discouraged domestic production and undercut efforts to achieve the government's objective of food self-sufficiency.

14. These concerns have led to specific grain pricing and marketing policies. In the interest of equity and stability, official prices, for both consumers and producers, are panterritorial and not adjusted seasonally. In the interest of lowering consumer costs but maintaining producer incentives, there has been a tendency to set official consumer prices below the procurement and distribution costs of OPAM and rural development authorities involved in primary marketing. To make farmers sell through official channels at below-market prices (both to increase government supplies and to facilitate cost recovery in agricultural projects) and to enable OPAM to cross-subsidize regional shipments and maintain panterritorial prices, private grain trade was outlawed. Commercial shipments were blocked. Import and export trade by merchants was prohibited. Marketing functions were given exclusively to OPAM, operating in conjuction with rural development authorities and consumer cooperatives within prices and margins set by the government. An administrative structure of authorizations and sanctions, supported by an economic police force to punish violators, was established to make the system work. These tight controls are not surprising as the major social objective desired by the government--maintaining low prices for selected consumers--was not consistent with commercial behavior based on market prices. The government adopted policies designed to replace rather than influence the market as the means to achieve its primary income objective.

15. To meet its income objective, the government needed to control a sufficiently large supply of grain to sell at low, fixed prices. In the shortrun, the government could obtain these supplies in only three ways.[4] First, it could pay competitive producer prices to increase its share of the market and to procure enough grain to satisfy demand generated by low consumer prices. This would require subsidies financed by budgetary outlays or credit. Alternatively, it could, through more administrative coercion, force farmers to sell at a price low enough to eliminate the subsidy. This was what OPAM's monopsony was intended to do. Finally, it could supplement domestic purchases with commercial imports of grains or food aid to meet the demand at the official domestic consumer price. If the import price were above the official domestic price, the government would again have to subsidize the difference. If none of these methods were effective, the government would by necessity have to target its incomes policy to benefit only selected consumers.

16. Neither producer price policy nor forced sales has been successful in obtaining adequate supplies. At the official consumer prices, demand exceeded supplies available through purchases at official producer prices. The unmet demand naturally spilled over into a parallel market with higher, equilibrium prices. Market prices have been 25 to 100 percent higher than official consumer prices. These higher, open market consumer prices allowed grain traders to pay more than the official producer prices. As a result, it was difficult for OPAM or rural development agencies to purchase domestic grain without some arrangement to force farmers to sell at official prices below market prices. Access to merchants willing to pay a higher price had to be restricted.

17. OPAM was accorded monopsony rights enforced through police roadblocks. Yet, coercive purchases have not been effective. OPAM has purchased only an estimated 20 to 40 percent of marketed domestic production of all grains. The official share of marketings has been higher for rice, where physical control is facilitated by the existence of large, well-defined irrigation polders. The government also sought to restrict foreign grain trade. Private imports and exports were prohibited. But the openness of the borders makes it difficult for the government to control such movements. Although for much of the period since independence the country was neither a major importer nor exporter of grain, foreign trade does affect domestic market prices, which have usually fluctuated between import and export parity prices depending on the quantity harvested and relative prices in neighboring countries.

18. The government has not relied extensively on grain imports (excluding food aid) as a way of achieving its incomes policy objectives. The government contracted large commercial imports during the 1972/73 drought; these had to be subsidized to sell at official prices, which led to large financial losses by OPAM. More recently, there has been a growing reliance on food aid grants, which have the advantage of actually providing net revenue rather than requiring further borrowing or budgetary subsidies.

19. Even at low official producer prices, there is still the need to subsidize sales of the domestic grain that was purchased. The government had to establish numerous arrangements to finance the losses incurred by OPAM and other agencies on the difference between purchase and selling prices. These

losses were usually financed by transfers from the price stabilization board (OSRP),[5] by domestic borrowing by OPAM (which was facilitated by liberal rediscounting by the French-supported central bank), by foreign assistance (mainly technical assistance, food aid, and some storage facilities and transport equipment), by the accumulation of arrears, and by deterioration of its capital stock.

20. The amount of subsidized grain sold to selected consumers was insufficient to bring open market consumer prices in line with official prices. Government lacked sufficient resources, or preferred not to reallocate resources, to supply all consumers at official prices. This meant that OPAM had to ration its limited supplies to targeted consumers. This was accomplished by selling through consumer cooperatives and granting rights for direct purchases, usually to the military and civil servants. Other consumers were forced to buy on the commercial market at higher prices. In such a situation, it is likely that the richer and more powerful have been best able to protect their interests, possibly to the detriment of the equity objectives espoused as the rationale for the price and marketing policies in the first place.

21. The attempt to reach the incomes objective via grain pricing and marketing policies also had costs other than outlays of public revenue. The administrative restrictions have probably reduced the efficiency of marketing and increased marketing costs, for example the higher cost of transporting and marketing grain in small lots. Risk of government confiscation, as well as corruption and other rent-seeking behavior, have probably inflated marketing margins on the open market, resulting in either lower prices to farmers or higher prices to consumers than would prevail in the absence of official market restrictions.

22. Low official prices coupled with strict marketing controls may have depressed domestic grain production. Attempts to meet the income objective was moving the country farther from its production objective. Food production per capita has been stagnant and possibly declining. Despite a few good years in the mid-1970s and the bumper harvest of 1978, production per capita by 1980-82 was 17 percent below the base years of 1969-71, before the 1971-73 drought.[6] By 1983/84, total production was lower than during the extremely severe drought a decade earlier, although population had grown by one-third. Food aid and imports, which had fallen virtually to zero in the mid-1970s, were increasing. Although weather, stagnant technology, and poor resources constrain food production, many foreign donors and local technicians had come to believe that low official producer prices coupled with strict marketing controls were in part responsible for this depressed domestic grain production. Some observers also believed these factors had led to significant--but illegal and unrecorded--exports to neighboring countries, which further reduced domestic availabilities.

23. Furthermore, the public financial disequilibrium was beginning to pinch across all sectors. Despite numerous efforts since 1967 to contain public sector deficits, government expenditures and the financial losses of major public enterprises had continued to increase. The financial crunch was put in sharp relief as the government negotiated with France for entry into the West African Monetary Union (WAMU) and reached agreement with the IMF for a Trust Fund loan under a program aiming to reduce the use of budgetary

revenues and bank credit to subsidize consumers and to finance public enterprise inefficiencies. Despite the rationing of limited supplies of subsidized grain, reform of sector policies had become inevitable because fewer public resources were available to finance OPAM losses.

24. In the face of persistently large market distortions, growing difficulties to finance OPAM's financial deficits, and poor production performance and growing dependence on imports, the government of Mali decided to launch a reform program to change grain pricing and marketing policies.

IV. THE REFORM PROGRAM

25. The reform program as it was eventually worked out can be better understood by looking at its antecedents in the preceeding decade and a half. The Sahelian drought, which dramatically reduced production in the three years 1971-73, led to massive inflows of food aid and commercial imports by OPAM. OPAM became saddled with the financial losses arising from the sale of these commercial imports at low official prices. Over the three years, 1972/73 to 1974/75, these losses amounted to almost CFAF 10 billion on 269,000 tons of grain. In an effort to stimulate production after the drought, official producer prices were raised significantly, but without timely, commensurate increases in official consumer selling prices. OPAM was expected to bear the cost of this pricing policy. As a result, it was left financially weakened, with a bank overdraft in 1976/77 amounting to almost CFAF 20 billion, or three times its annual grain sales.[7] There was no complementary effort to correct prices or to improve management. Good harvests in the mid-1970s, as well as strong production on tightly controlled irrigated rice polders from which merchants could be effectively excluded, enabled OPAM to acquire enough grain to satisfy the most important beneficiaries of the government incomes policy. Lax financial discipline allowed it to accumulate arrears and overdrafts and to continue operation despite losses.

26. Pressures for grain pricing and marketing policy reform were increased in the period around 1977, the initial deadline for Mali's full membership in WAMU. Both France and the IMF pushed for reform in this area, especially in the context of the May 1977 monetary agreement with France through which CFAF 15 billion of bank credit owed by OPAM (representing 75 percent of OPAM's overdraft) were assumed by the government or consolidated into a low-interest long-term debt. Official producer prices were increased faster than inflation during 1977-80, but OPAM financial losses mounted because official consumer prices were increased more slowly. Numerous studies and proposals for marketing reform appeared.[8] The last of these, the de Meel report, prepared under the auspices of the FAO and major food aid donors in 1978, outlined the essential features of a reform program by building on the earlier work.[9]

27. This report sketched out the elements of a more viable grain pricing and marketing policy. The key objectives were to reduce government financial losses and to stop illegal exports; increased production appeared to be a secondary consideration. The report chose a middle ground between total government monopoly and complete liberalization of domestic grain trade. It proposed a return to a single, unified grain market, where most transactions would be effected at prevaling market prices by licensed private merchants and, where feasible, cooperatives. However, market prices would be constrained to fluctuate within a band determined in advance on a national basis and reviewed annually by the government. This price band would replace the specific panterritorial official buying and selling prices that had been key elements of government policy. OPAM's role would to be reduced from a major market agent to a price regulator and manager of security grain stocks. Thus, it would enter the market only to keep market prices within the band by selling when consumer prices exceeded the upper limit and by buying when producer prices fell below the lower limit. By limiting OPAM's purchases and sales in this way, the reform would reduce its financial and commercial exposure and the risk of incurring large operating losses. But to be effective, OPAM would have to own a sufficiently large stock of grain and have access to ample financial means and storage capacity. It would also have to operate within realistic marketing margins. As a corollary to its role of regulating the domestic market, OPAM would retain the monopoly on grain imports and exports.

28. By focusing clearly on the problems of the existing grains policy, the report helped generate intensive reflection and dialogue. In 1979, major food aid donors began to make overtures by offering additional food aid on a multiyear basis in return for policy reform. Several donors met in January 1980 to discuss the creation of a counterpart fund in exchange for government commitment to enact specific reform measures. A subgroup of donor experts began to design a proposal. The Head of State reportedly had also become convinced that the time for action had finally come.[10] Meanwhile, on the government side, the problems of the OPAM were also widely aired during an official seminar designed to focus attention on managerial, financial, and pricing policies that had bankrupted the board, and, following a cabinet reshuffle in mid-1980, instructed the government to begin discussions on possible implementation. Seven donor agencies jointly presented the proposal formally to the government in November 1980.[11]

29. The reform program that was official agreed to by the government in March 1981 proposed three actions: (a) increase in official prices, both consumer and producer; (b) liberalization of grain trade to include private traders; and (c) improvement in OPAM's operating efficiency. The reasons for these recommendations are obvious. On all accounts, official prices were considered too low. By increasing official producer prices, the program hoped both to reduce suspected illegal exports and to encourage greater domestic production. Both would reduce the food deficit. Furthermore, higher official consumer prices would increase monetary revenues to OPAM and reduce its need for public subsidies. Legalizing private trade was tacit recognition of its de facto existence. It also reflected growing acceptance of the limits to government intervention and the validity of the market-determined prices. Improving OPAM's operating efficiency was intended both to increase its ability to implement government policies and to reduce its financial deficits.

30. The need for OPAM was never disputed. Its improved operation was considered an essential element in regulating the open market. In particular it was to maintain price stability, assure regional price equality for consumers, and act as a buyer of last resort for farmers when market producer prices were low. In this context, it was given responsibility to manage the national grain stocks. It was also charged with supplying various public agencies, including the military, public enterprises and certain government services. The design of the reform program reflected the fact that without external financing, OPAM would be unable to continue to operate in the shortrun, let alone become more effective. It also reflected the assumption that price adjustments and operating reforms to eliminate the need for external support could only be implemented gradually. In particular, it was considered politically risky to raise official consumer prices by large increments; a phased approach was to be preferred. Thus, sustained donor support for gradual policy adjustment would be necessary. For the government, the reform program represented an extremely attractive second-best alternative to the status quo. The resources that were promised to support the reforms would allow OPAM to continue its operations. This would allow the government to maintain, at least for the next few years, some consumer subsidies with the explicit approval of foreign donors that were otherwise increasingly dissatisfied with government grains policy.

31. The primary mechanism to support this reform program was a loose consortium of the major food aid donors. This group agreed to provide a minimum amount of food aid over a five-year period while the government implemented pricing, marketing, and managerial reforms. This aid would be additional to any emergency assistance that might also be required. The ten participating donors were the World Food Programme, which also acted as the secretariat, Belgium, Canada, the European Economic Community, France, Great Britain, the Netherlands, the United States, and West Germany; Austria joined the group later. In all cases, the food aid would be delivered free to Mali and sold at official consumer prices. The revenues so earned, net of local distribution costs, would be earmarked to finance the financial losses of OPAM during the transitional period. The effort has come to be formally called the PRMC, the French acronym for the Cereals Marketing Restructuring Project.[12]

32. The plan of action included reforms to be carried out over a five-year period. Food aid would be used during this transition both to guarantee a minimum supply of grain to OPAM to supplement local purchases for sale to preferred consumers (especially the military, civil servants, and some other urbanites in food short districts) and to generate supplemental revenues to finance OPAM's operating deficit on local grain. Private grain trade was to be legalized immediately. OPAM's unit operating costs were to be reduced as rapidly as possible through tighter management, stricter control over stocks and staff reduction. Official producer prices were to be increased significantly at the outset. Official consumer prices were, however, to be aligned with both official producer prices and market prices over the five-year period. At the end of this transition, OPAM's financial deficit arising from consumer subsidies was to be eliminated.

33. This approach was innovative because it established a contractual basis between a consortium of food aid donors on one side and government on the other, although there was no specific contract that had the force of

law. It was agreed to have periodic consultations between government and donors on price and marketing policies and to deposit receipts from the sale of food aid into a special account controlled by the donors. The targets and timetable for the policy reforms were indicative rather than binding. The proposed price increases were considered to be only illustrative, although they gradually took on a more formal status in the eyes of donors and the government. However, the reforms were given additional moment by their inclusion in the stand-by programs of the IMF and agricultural projects funded by IDA and other donors. Formal bilateral agreements or conventions for food aid were signed between individual donors and the government with reference to the general objectives and elements of the reform program.

V. ACHIEVEMENTS UNDER THE PRMC

A. Dialogue, donor coordination, and aid effectiveness

34. The PRMC program focused government and donor attention on the need for reform in the sector. It appears to have strengthened the position of Malian authorities who support reform, because they are seen as successfully obtaining large deliveries of food aid.[13] It helped create a forum for regular discussions on these reforms between the government and the donors as a group. It established the notion of targets to structure actions and against which progress could be judged. It provided the impetus and framework for donors to coordinate their own views on policy issues and to supply food aid in a manner designed to maximize its development impact. Establishing such a structure for dialogue, including better collaboration among major donors, is clearly one of the major positive features of the PRMC.

35. There has also been improved management of food aid, including joint mechanisms and regular consultation among donors. Imports of food aid, which had dropped to zero following the 1972/73 drought, had begun to grow again by the late 1970s. The PRMC framework enabled donors to set conditions for the sale of this food aid. It also enabled donors to control the use of the counterpart funds generated by food aid sales, which had previously simply entered the coffers of the Ministry of Interior. By the end of 1984, the PRMC had accumulated substantial counterpart funds (as much as CFAF 6.6 billion or about US$15 million at 1985 exchange rates), which can now be drawn on to facilitate further changes. The promise of a steady flow of food aid that would provide grain to sell on the official market and generate financial resources that could support OPAM operations helped convince the government to take steps needed to improve the management of OPAM. For the donors, this in turn assured that future food aid would be handled relatively efficiently, which has been demonstrated in 1985 drought-relief operations.

B. Grain price and marketing policies

36. There have also been several accomplishments in reforming grains pricing and marketing policies during the first five years of the PRMC. These include both qualitative changes in institutions and attitudes that have led to increased market deregulation and quantitative changes in official prices and financial operating losses of OPAM.

1. Acceptance of the market

37. On the qualitative side, the real progress in marketing reform in Mali may simply be a greater acceptance by government of the role of market forces, private merchants, and free market prices. The PRMC implicitly aimed to improve how the market functions, with an eventual goal of unifying the official and free markets. The government has taken a number of steps in this direction.

38. First, it decontrolled grain trade. Prior to formal agreement on a reform program, the government suspended in mid-1980 roadblocks designed to restrict grain shipments on the main roads to Bamako. Within the first year of the program, beginning in the 1981/82 marketing season, the government opened all domestic grain trade, except paddy marketing on government irrigation perimeters, to licensed merchants. It legalized all grain imports by private merchants; there were no taxes nor quotas, and there is no evidence that imports were limited by restrictive access to foreign exchange.

39. In 1985, merchants were authorized to purchase paddy in one large public irrigation perimeter near Mopti (Operation Riz Mopti), after farmers had paid fees and reimbursed credit. Decontrol of paddy marketing in the Office du Niger, the largest irrigated perimeter with full water control, and where official purchases regularly exceed 40,000 tons, was initiated in 1985/86.[14] The paddy market is expected to be fully liberalized in 1986/87.During the first year, private merchants were allowed to enter the command area in mid-February, well into the harvest season, but after the Office judged that sufficient farmers had paid their user fees and reimbursed their loans.

40. This liberalization in the Office du Niger is being supported in three specific ways by the PRMC. First, the PRMC has agreed that its counterpart funds can be used to compensate the Office for unpaid fees that may result when farmers are allowed to sell to merchants. Second, food aid donors in the PRMC have agreed to make available to OPAM up to 15,000 tons of rice per year. This would be used to compensate for a possible decline in the amount of rice that the Office du Niger can supply to OPAM when merchants are allowed to buy paddy from farmers. Third, the PRMC has agreed that its counterpart funds can be used to finance certain costs (such as interest on marketing credit) on a declining basis while the Office is financially restructured as part of an overall rehabilitation program. In addition to allowing merchants legal access to rice farmers, the liberalization program has resulted in other positive changes in the Office, such as allowing farmers organized into cooperatives the freedom to thresh their own paddy and deliver it to the mills. The Office has also started paying farmers in cash rather than promissory notes.

41. Second, the government broadened its view of grain pricing. While it did not abandon the system of fixed official prices, it recognized that official government prices were not the only prices prevailing in the grain trade. The government began to search for ways to integrate commercial prices with the official price structure. In the government decrees setting official prices for 1981/82, the nomenclature for producer prices was changed from "official" to "minimum," which the government would guarantee and merchants would be expected to meet. The government also partially adopted the notion

of a price band, within which commercial prices would be expected to fluctuate. If they exceeded the upper limit, it would trigger government sales of grain to bring the commercial price down within the band. The government decrees established a two tier consumer price structure for coarse grains. The government maintained a fixed official selling price for coarse grains handled by OPAM but no longer required private merchants to respect it. For commercial transactions, the government set a ceiling price.[15] When commercial prices exceeded this price, OPAM was to sell grain to regulate the private market and bring free market prices back within the band between the official and intervention prices. This intervention price was set at about 8 percent above the government selling price during the first year of the PRMC and raised to 12 percent above the government selling price in each of the next three years.

42. The government has demonstrated uncustomary restraint in the face of severe market price increases, such as occurred during the first half of 1984. Commercial prices for coarse grains rose dramatically from CFAF 125 to 165 per kg in six months, an annual rate of over 60 percent. The increase followed a poor harvest and coincided with monetary conversion to the CFAF, which generated inflationary tendencies. Other than a few initial attempts to force merchants to respect official prices, the government largely refrained from administrative controls on market prices. Local officials authorized merchants to post consumer prices that were significantly above official selling and ceiling prices (in Sikasso, for example, posted prices, approved and stamped by local offices of the economic affairs directorates, were some 35 to 75 percent higher than the official selling prices for rice and coarse grains, respectively). This administrative flexibility recognized that merchants buying locally from farmers or importing from neighboring countries had to pay more than OPAM for their supplies.

43. Third, the PRMC has taken some measures to improve the functioning of the free market. For example, it has helped establish a consortium of grain merchants capable of pooling resources to finance grain imports. Recent price data also suggest that price differentials between the main grain surplus region (Sikasso) and other deficit areas have narrowed in post-harvest periods from 1982/83 to 1984/85 (see table 12). There is a decline as well in the price differentials between major consumer markets. For rice in particular, prices are much more standardized across regions, especially since 1981. This has probably occurred both as a result of larger and more timely sales of grain (especially rice) by OPAM as well as the removal of marketing obstacles, like roadblocks and the prohibition of private imports.

2. Better pricing

44. On the quantitative side, there are several indications of progress, from changes in prices to improvements in OPAM operations. First, official producer and consumer prices have been raised during the reform period as summarized below (based on tables 4 and 5).

Total percentage change in official prices
(1980/81 through 1985/86)

	coarse grains	paddy/rice
Producer	57	84
Consumer	121	65

Official producer prices were raised steadily over the period, at the rate of 6 and 8 percent per year for coarse grains and paddy, respectively. Consumer prices were raised significantly in two distinct phases. During the first two years, the increases were 47 percent for coarse grains and 25 percent for rice. Following three years of stagnation, there was redoubled progress at the end of 1985, when official consumer prices were again significantly increased--51 percent for coarse grains and 32 percent for rice--as a condition of the third IMF Stand-by loan. Over the first five years of the program, official consumer prices increased at the rate of 12 and 7 percent a year, for coarse grains and rice, respectively. For coarse grains, consumer prices rose faster than producer prices, thus increasing OPAM's gross margin on grain purchases and sales.

45. Second, the level and pace of official price changes have exceeded ajustments in urban salaries. The government followed a policy of severe wage restraint in the 1980s, with minimum wages and civil service salary scales being frozen from 1980 to 1985, except for a slight adjustment in 1982 (see table 9). Although there was some wage drift resulting from quasi-automatic promotions, government salaries declined in real terms by over 5 percent a year in the 1980s.[16] Relative to public sector wages, gross earnings of grain producers improved by one-sixth to one-third during the 1980s, which was marginally better than in earlier periods, as indicated by the ratio of official producer prices to entry-level civil service salaries (indices with 1985=100, based on tables 4 and 9):

Rural-urban terms of trade
(official producer prices compared to entry-level civil service salaries)

	Based on coarse grains	Based on paddy
1970	35	40
1975	44	44
1980	86	73
1985	100	100

46. Third, the gap between official and market consumer prices (as indicated by the average annual price in the Bamako market) narrowed considerably during the first two years of the reform program (1982 and 1983), when official prices were roughly two-thirds of the average market price. This was clearly an improvement relative to the last part of the 1970s, when

official prices were often less than half the market prices, especially for coarse grains. The gap widened again, as official prices were frozen during 1983/85 while market prices for coarse grains rose substantially, in part because of the 1984 drought. But the substantial price increases announced at the end of 1985, combined with the good grain harvests of 1985, are likely to go far in removing the gap, possibly eliminating it altogether for rice.

47. Fourth, there is some evidence that market prices may have been slightly more stable under the program than before. For coarse grains, the large price fluctuations during the 1984 drought were less than during the 1973 drought, which may be attributed to more timely arrival and distribution of emergency food aid that was made possible under the PRMC. For rice, market prices have been considerably more stable since 1981 (the average annual spread between high and low prices in 1981-84 being about one-third of the 1976-80 spreads).

C. Improved OPAM operations

48. The PRMC has helped improve OPAM operations and its management of food aid. The agency's administrative, logistical, and technical capacity has improved, as indicated by a number of factors. The number of employees has been reduced from over 1,000 at the end of 1979 to about 800 in 1984. [17] Physical losses of grain have been reduced from an estimated 12 percent in 1981/82 to about 5 percent by 1983/84 through a variety of measures, including penalties for losses under private transport contracts, installation of scales to weigh truckloads and avoid repeated bag handling, and tighter security over stores. The vehicle fleet has been cut by more than half, and contracts with private truckers have reduced transport costs. Shipments of grain have been minimized through more forward planning. This improvement depends a lot on expatriate technical assistance, but no progress would have been possible without vigorous support from OPAM management.

49. In addition, OPAM is better able to fulfill its functions as market regulator and supplier of last resort. Its management of public food stocks and distribution of local grains and food aid to shortage areas are generally considered to be more efficient and timely. Stock management is more tightly controlled. Food shipments, including food aid, are better programmed. As a result, more grain is available to be sold during lean months and in areas where production does not cover consumption. This is a technical improvement over which there is little dispute.

50. Not only does OPAM function better technically, its overall financial situation also appears to have improved, especially prospects for 1985/86. The price policy supported by the PRMC was designed to reduce OPAM's financial losses per unit of domestic grain handled by gradually increasing the spread between official producer and consumer prices. These price adjustments aimed to lower both OPAM's financial deficit and its reliance on budget subsidies and bank credit. Reducing public transfers to finance OPAM's operating losses was also one of the objectives of the IMF stabilization programs.

51. Based on the financial picture given by OPAM accounts, there has been considerable progress in reaching this objective. Net operating losses (after interest and depreciation) have declined from over CFAF 4 billion in 1979/80 (which exceeded total revenues in that year) to slightly over CFAF 500 million

in 1984/85 (table 14). Given the substantial increases in official consumer prices in late 1985, OPAM's net operating loss is projected to be zero in 1985/86. There has thus been a steady trend in reducing the financial deficit during the reform period. This progress was achieved in a number of ways.

52. First, OPAM has improved the efficiency of its operations, as mentioned above. Total payroll costs were held constant in nominal terms during the reform period. Nonwage operating costs (other than interest and depreciation) were reduced from CFAF 1.5 billion before the PRMC started to CFAF 0.6 billion in 1984/85. There were also some important changes in operational methods to reduce fixed costs. To illustrate, the reduction in OPAM's truck fleet and greater use of private transporters transforms shortrun fixed costs (maintaining the truck fleet) into variable costs linked directly to volumes handled. Efforts to reduce overheads and the level of fixed costs, together with better programming of shipments, have resulted in a decline of nonwage operating expenses on a per unit of domestic grain bought and sold by about one-third. In addition, successful efforts to lower physical losses have increased OPAM's gross margin between the cost of purchasing grain and the revenue earned from its sale. Part of the savings reflected the lower volume of domestic grain handled. Compared to the five years preceding the reform period (1975/76 to 1979/80), average annual throughput during the first four years of the program (1981/82 to 1984/85) fell by over 30,000 tons for coarse grains and by 20,000 tons for rice (tables 2 and 14). The quantity of domestically-produced grain sold in 1984/85 was only half the amount sold in 1979/80. As noted below, to the extent that allowable margins did not cover variable costs, the decline in throughput reduced operating losses. Although difficult to estimate precisely, this financial improvement resulting from a reduction in volume may have been as much as CFAF 0.5 billion a year.

53. Third, interest costs were reduced significantly when Mali rejoined the West African Monetary Union. Under the arrangements to clean up the portfolio of the Mali Central Bank before it could be absorbed by the Central Bank of West African States (BCEAO), the government assumed responsibility for most nonperforming debts. These included a medium-term debt of CFAF 7 billion, which was part of the debt OPAM had been left with following the 1972/73 drought. In 1984/85, this amounted to a saving of over CFAF 0.3 billion in interest payments. The PRMC also helps reduce interests costs marginally by prefinancing some of OPAM's buying operations pending approval of a line of bank credit for the current marketing season.

54. Fourth, OPAM's deficit was reduced by increasing the spread between official producer buying and official consumer selling prices.[18] This was the heart of the price policy reforms advocated and supported by the PRMC. These spreads are set by the price schedules adopted by the government at the start of each harvest season. There are several price schedules for each crop because they depend in part on the cost structure of the rural development agencies and other institutions responsible for primary marketing. Two major ones are illustrated in table 15; the pattern is roughly the same for other price schedules for the same crops. The change in margins is different for coarse grains and rice.

55. For coarse grains, OPAM's margin was raised slightly in the initial period of the reform program. Although it was allowed to fall in 1983/84 and 1984/85, by 1985/86 it was three times the level in the late 1970s. For rice,

the margin declined initially, but was then steadily increased, especially in 1983/84 and 1985/86.

56. The impact of these adjustments is seen in the change in the gross operating margin between grain purchases and grain sales, adjusted for stock changes.[19] For the seven years prior to the PRMC (1973/74 to 1979/80), the average annual gross operating margin averaged a negative CFAF 0.2 billion. For the four years after the reform program got underway (1981/82 to 1984/85), the gross margin has averaged a positive CFAF 0.3 billion. There has been steady improvement since the financially disastrous year of 1979/80, and it has been positive every year after 1981/82.

VI. ASSESSMENT OF PROGRESS

57. When the achievements described above are compared to the targets established by the PRMC, to past experience, and to adjustments needed to reduce distortions significantly, progress under the PRMC does not appear so substantial. But evaluating progress is complicated by several factors. First, action under the PRMC must be put into the larger context of macroeconomic reform in Mali. Actions on grains pricing and marketing may have been subordinated to reform efforts in other areas of the economy and to achieving overall improvement in public finances. Second, the PRMC targets for market deregulation, price changes, and OPAM operating performance were generally flexible as to level and timing. This flexibility helped build a consensus between donors and government on reforms to be taken and facilitated the working out of bilateral legal and logistical arrangements between government and donors for the food aid needed to support the reforms. But because the consensus was established at a general level, it left each participant open to interpret whether government performance was adequate relative to the targets. Third, the objectives of the reform program were never fully and clearly stated. And the targets themselves were not always specified in a way that was clearly monitorable and would measure progress toward marketing reform and improved sector operations. The only signed legal document for the PRMC as a whole is the World Food Programme project document, in which WFP undertakes to support the reform program, to provide the secretariat for the PRMC, and to supervise food aid stocks and funds. In this document, the government is committed only to continue efforts to liberalize the grains market, to reorganize and revamp OPAM, and to allow private commerce in grains. As a result, the reform effort can only be monitored in a vague fashion, leaving ambiguous any judgments about the adequacy of reforms actually implemented.

A. Meeting targets

1. Market liberalization

58. In assessing PRMC progress, the first question is whether targets were met. Regarding grain market liberalization, the government moved fairly quickly on coarse grains. Decontrol of the market for millet, sorghum and maize was accomplished by the first year of the program, 1981/82. But decontrol was more symbolic than material. During the previous five years, official purchases had accounted for no more than 7 percent of production and

usually less (see table 2). Most of the coarse grains marketed was already handled by private traders. Lifting the roadblocks and other sanctions reduced risks of fines and confiscation and undoubtedly eased transport. Deregulation reportedly created a sense of optimism among merchants. It may have increased effective prices to producers or reduced them to consumers in the parallel market. But the evidence of price effects is at best uncertain. In any case, it did not appreciably affect the quantity of coarse grains marketed through government channels.

59. With respect to paddy marketing, where official purchases accounted for roughly one-third of the production in the late 1970s, the government decided to go slow. There was no action until 1984/85, when merchants were legally permitted to operate inside the Mopti rice perimeter. Even this action was more symbolic than real. Because of poor water availability which severely restricted planting and drastically lowered yields, the Mopti rice authority had not purchased paddy (for OPAM) since 1981/82, the last year of normal production. Water availability was again so limited in 1984 almost no paddy was produced, and none was purchased by the rice authority. Market decontrol in 1984/85 thus had no effect on government marketings in Mopti. Nor is there any evidence of lower consumer rice prices following this deregulation. Where paddy liberalization could have a significant impact on official marketing, in the Office du Niger, first steps were not taken until the fifth year of the PRMC and full liberalization is not expected until the sixth year (1986/87).

60. The most important reasons for such slow and relatively inconsequential action by the government may be among the following. First, there was a fear that liberalization would reduce the supply of grain, especially rice, that OPAM would have available for sale to politically powerful consumers, in particular civil servants and the military. This fear persisted despite the promises under the PRMC that food aid donors would help assure adequate supplies. Government's hesitancy may have resulted from the fact that most food aid under the PRMC was intended to be maize, not rice even though it considered rice as the key wage good. Second, government officials, and some donor representatives, believed that merchants would take advantage of farmers, who were not used to selling in a competitive environment, by paying them excessively low prices. The government also believed that private merchants lacked sufficient transport, storage, and financial capacity to handle the increased volume that was expected to be marketed through private channels. Nor was such caution surprising given the behavior of merchants in 1969, when they diverted credit extended by OPAM and intended for grain purchases on account for OPAM to other uses. Finally, agricultural officials worried that market liberalization would interfere with cost recovery in publicly managed irrigation schemes. Poor cost recovery would in turn, it was argued, weaken the government's ability to finance its share of donor supported projects in these areas. Not all of these reasons are consistent with each other--nor factually valid--but they created enough doubt and confusion to retard deregulation. And they help explain why action taken was radically different regarding coarse grains and paddy marketing.

2. Price adjustments

61. With respect to price policy, performance has been poor in raising the level of prices, speeding up the pace of change, improving

internal terms of trade, narrowing the gap between official and market prices, and increasing temporal and geographic price stability. The indicative targets for price changes under the reform program are given in table 3. Over the five-year period (1980/81 to 1985/86), minimum producer prices supported by government were to be doubled in nominal terms for coarse grains and nearly tripled for paddy. OPAM consumer prices were to be nearly tripled for coarse grains and increased by two-thirds for rice. No targets were given for prices in real terms, but it was generally understood that real prices had to increase. To stimulate production rapidly, the initial increases were to be greater for producer prices. The margin between producer and consumer prices was also to be widened to reduce OPAM operating losses.

62. Regarding price levels, actual performance has been less than targeted in all cases up through 1984/85, the fourth year of reform. Even following the very substantial price increases announced in late 1985, the official consumer price of rice was the only price that matched the PRMC targets. In real terms, prices have actually fallen. Official producer prices for coarse grains were lower in constant CFAF in 1985/86 than in 1980. For paddy, there was an initial increase in 1981, but by 1985/86 official producer prices in constant terms had fallen below the 1981 level (see tables 4 and 6). The change in real consumer prices has been even less satisfactory. By 1985, the official consumer price in constant CFAF was no higher than in 1980 and below levels of the early to mid-1970s. For rice, which accounts for over three-fourths of OPAM sales and distribution, official consumer prices in constant CFAF have actually declined during the reform program. In 1985, they were lower than at any time during the past decade and a half except 1977 (see tables 5 and 10).

63. Regarding rates of change, the reform program called for a rapid increase in official producer prices, followed by a gradual increase in official consumer prices. In fact, the opposite pattern has prevailed. The government started with larger and faster increases in consumer prices, followed by a slower but steady (in the case of paddy) increase in producer prices. This performance is no better than in the past. Official consumer and producer price adjustments have actually been slower in the five years (1981-85) following the start of the reform program than in the five years (1976-80) preceding it, as indicated by the following annual percentage changes (based on data in tables 3 and 4):[20]

Annual percentage change in official prices

		Official producer prices				Official consumer prices	
		Coarse grains	Paddy			Coarse grains	Rice
1976/77 to 1980/81	(actual)	19*	15*	1977-81	(actual)	13	15*
1980/81 to 1985/86	(actual)	6*	8*	1981-86	(actual)	12	7*
1980/81 to 1985/86	(PRMC target)	14	19	1981-86	(PRMC target)	19	10

The rapid price increases during 1977-81 followed three years of stagnant prices and may therefore have reflected an effort to catch up. Nonetheless, the record since then is poor given that the PRMC was intended to accelerate price adjustments.

64. One of the explanations for the donor failure to press for faster consumer price adjustments may lie in the relationship between reforms in the cereals sector and the objectives of the broader macroeconomic stabilization and adjustment programs in Mali. Two of the major objectives of these programs were to reduce public sector financial deficits, both government budget deficits and operating losses of parastatals, and to move toward more economic pricing for both producers and consumers. In the grains sector, the move toward more economic pricing entailed either raising OPAM's selling prices or scaling back the share of OPAM in the consumer market to allow a larger share of transactions to occur at market prices. However, government had come to view grains, especially rice, as a wage good for the public sector. Low prices, in this case well below the market levels, were thus considered by the authorities to be essential to keeping down wage demands. To the extent that OPAM sales to public service agencies and to civil servants forestall wage increases, they reduce the demand for budgetary revenues. For example, the 40 to 50 percent of OPAM grain sold mainly to civil servants could be considered to have reduced annual budgetary costs by as much as CFAF 3.0 billion, or over 5 percent of government expenditures. [21]

65. A general salary increase would probably have widened the government budget deficit. Since reducing the deficit was one of the preeminent stabilization objectives, other objectives were subordinated to it. As long as increases in official producer prices and improvements in OPAM's management and operations were sufficient actions to induce food aid donors to continue to finance OPAM's financial losses, the slowness in raising OPAM selling prices allowed the government to concentrate on other policy areas, for example, reducing the budget deficit. Thus, poor performance in cereals policy reform may have contributed to better performance in other policy areas. Once the fiscal balance was close at hand (the consolidated government budget deficit (commitment basis, excluding grants) fell from 24 percent of GDP in 1979/80 to an estimated 4 percent in 1985), the pressure to move toward more economic, market-determined prices could be increased and facilitated by some wage adjustments. Government salaries were increased in early 1985.

66. Although the rural-urban terms of trade based on official prices has improved under the PRMC, the improvement is not so large as during the preceding five years. Compared to entry-level civil service salaries, official producer prices rose by 66-95 percent during 1975-80, compared to only 16-37 percent during 1980-85. As measured by market prices (as indicated by Bamako consumer prices), the rural-urban terms of trade stagnated or actually declined for coarse grains and rice, respectively, during the PRMC, compared to increases of 83-145 percent during 1975-80 (see rural-urban terms of trade table on p. 13).

67. The gap between official and market prices (annual average price in the Bamako grains market) in 1985, the fourth full year of the PRMC, was still about 50 percent for coarse grains and 30 percent for rice. [22] This is less than in the late 1970s, but is no smaller than the gap following the substantial price increases in 1975. Regardless of relative performance, the gap has remained substantial throughout the reform period (25 percent or more). Only in 1986, the fifth year of the reform program and a year of bumper crops, are there indications of substantial reductions in the gap. The persistence of this gap indicates a failure to restructure cereals marketing so as to unify official and parallel markets and to eliminate the consumer subsidy implicit in the official price structure. [23]

68. The PRMC reforms were also intended to reduce consumer price variations during the year, primarily through grain sales to consumers. For coarse grains, price stability (as measured by the spread between high and low monthly index values; see table 11) has been no better than in the late 1970s. The first year of the reform program saw prices about as stable as any time during the 1970s, helped in part by an abundant 1981 harvest. During the second year, instability for coarse grains was again as high as in 1977 and 1978, when there were significant and rapid price increases. For rice, market prices have been more stable. But much of the stability in rice prices undoubtedly resulted from the larger commercial imports in 1981-84 at relatively constant import prices (in CFA francs). [24]

69. Spatial price distortions represent the extent to which price differentials between major markets exceed normal marketing and transport costs and the failure of price changes in these markets to be correlated. Under the PRMC, the government has maintained, as before, a policy of panterritorial pricing, in the interest of equity. If implemented effectively, there would be no difference in prices in different markets and there would be perfect correlation of price movements. While geographic price differentials may have narrowed in the post-harvest period, there is not much evidence of changes in differentials during the hungry seasons in 1983 and in 1984 (see table 12). The effect on market integration, as measured by how strongly price movements are correlated in different markets, can be estimated only for 1983 and 1984. Based on the correlations in monthly prices between different markets, there is some evidence that integration was less in 1984 than 1983 for coarse grains (see table 13).

3. OPAM operations

70. Regarding OPAM operations, the PRMC goal was to eliminate financial losses by reducing operating costs and widening commercial margins. Losses have declined, but it is interesting to note that the average deficit during the first three years of the reform (1981/82 to 1983/84) was not much smaller than the five years before the reform (1974/75 to 1978/79), excluding 1979/80 when the deficit was uncharacteristically large. It is also interesting to note that OPAM's gross operating margin was larger in some years in the 1970s than during the PRMC. This problematical performance in raising the gross operating income reflects mediocre progress in adjusting OPAM's price margin. Nor would the progress that was achieved have been possible without important changes outside the domain of how public sector grain marketing is financed, for example, the debt consolidation connected to rejoining WAMU.

71. The commercial margins allowed by OPAM's buying and selling prices for coarse grains stagnated after an initial increase. During the first five years of the reform program, the margins averaged roughly half the level of the previous five years. At only CFAF 5 per kg, the gross margin probably amounted to only one-sixth to one-fourth of variable costs, whether as established in the official price schedules (commissions, handling, interest on marketing credit, transport, and grain losses) or as estimated by the price spread between market prices in Sikasso, the major producing area, and Bamako, the major consumer market. With marketed volumes at the 1984/85 level, the low official margin indicates direct losses of up to CFAF 0.2 billion a year, probably higher than the period prior to the reform. The situation was not substantially redressed until 1985/86, the fifth year of the PRMC.

72. For rice, the commercial margin required for rice is comparatively lower than for coarse grains because most marketing and milling costs are paid by the Office du Niger. Even so, the official margin for OPAM fell during the first four years of reform. It was below (by CFAF 2 per kg) the estimated variable costs as established in the official price schedule, which tends to underestimate real costs. Even with the significant upward adjustment in 1985/86, the allowable margin in constant prices is no larger than in the years immediately preceding the reform program.

73. Moreover, the gains that were made for OPAM were at the expense of other official agencies in the grains sector. The performance on commercial margins for the sector overall has been less impressive than for OPAM. First, the marketing margin between official producer and consumer prices was not increased until 1986 (see table 8). For coarse grains, the official margin was about 12 CFAF per kg in the late 1970s; in 1984/85 it had fallen back to this level despite the initial improvement in the early years of the reform program. For rice, the official margin by 1984/85 had fallen by almost half during the reform period, to about 20 CFAF per kg, the lowest spread since the drought years of the early 1970s.

74. The government succeeded in shifting some of the incidence of financial losses from OPAM to rural development agencies by manipulating internal transfer prices. The official price schedules established for the consumer prices announced for 1983/84 were designed to benefit OPAM financially as shown by the following figures (in CFAF per kg of rice).

Price structure between OPAM and Office du Niger

Marketing year	Producer price (rice equivalent)	OPAM buying price	Gross margin of Office du Niger
1979/80	48	75	27
1980/81	61	80	19
1981/82	81	110	29
1982/83	89	115	26
1983/84	97	102	5
1984/85	105	100	-5
1985/86	113	128	15

The new price schedules reduced by 11 percent the cost of rice bought by OPAM from the major irrigation authority responsible for primary marketing and milling (the Office du Niger). This was done despite a 9 percent increase in the official producer price that the irrigation authority was required to pay farmers. The same pattern was continued in 1984/85. As a result, Office du Niger's gross margin averaged zero for the two seasons (1983/84 and 1984/85) while OPAM's rose to the highest levels since before the 1980s. The overall effect of these two adjustments in 1983/84 were to reduce OPAM's losses by about CFAF 0.25 billion (equivalent to roughly 20 percent of the previous year's operating deficit) while increasing the Office du Niger's costs by almost CFAF 0.5 billion. The price schedules in 1984/85 shifted additional losses from OPAM to Office du Niger, saving OPAM some CFAF 0.2 billion while increasing the Office du Niger's costs by over CFAF 0.2 billion.

75. For the grains sector as a whole, the financial deficit has declined only marginally during the reform period (see table 16). Even the estimated level for 1985/86 is about the same as in 1974/75 (although considerably less in constant prices). By shifting financial losses from OPAM to Office du Niger in 1983/84 and 1984/85, the government was able to meet the specific objective under the IMF program of reducing public transfers to OPAM without raising consumer prices.

B. Were the targets right?

76. The targets set for the PRMC can be questioned on several grounds. The indicative quantitative targets did not always accord well with the more generally stated objectives and thus would only poorly measure real progress. In other cases, targets were inconsistent with one another. And in some cases, the targets were simply wrong, in that achieving them would undermine the reform program generally.

1. Liberalization

77. The program contained basic inconsistencies that stemmed from misconceptions about how the private market works. [25] The de Meel report, for example, argued that market liberalization would raise effective producer prices and thereby reduce allegedly large-scale, clandestine exports. The expectation was illfounded for several reasons. Most grain was already traded outside official channels; and prices on the parallel market were already well above official prices. Even sales at official prices may have reflected market decisions. For example, farmers may have sold lower quality grain to OPAM. Or sales to OPAM may have been seen by farmers as a kind of payment for government services provided to producers; such sales would help assure that the services would be continued. Border trade was not effectively controlled, so that domestic parallel market prices were already linked to prices in trading partners. If grain were being exported, the export price was more attractive than the domestic market price. This situation would imply that domestic grain availability exceeded demand at the domestic price, leaving a surplus to export. Domestic market supplies could exceed domestic market demand if the government were displacing domestic market demand through large sales of subsidized grain. In this case, the correct reform would be to raise official consumer prices or reduce sales of subsidized grain. Market liberalization in the absence of these other reforms would simply facilitate more exports by reducing risks.

78. What in fact was happening in the 1970s is difficult to assess as data on export quantities are lacking. However, market prices for both coarse grains and rice in Mali during the early and mid-1970s tended to be lower than in some neighboring countries but about the same as in others (see table 18). In 1976 and 1977, Mali became, temporarily, a grain exporter; recorded exports totalled 58,000 tons, [26] of which two-fifths (25,000 tons) were exported by OPAM, not private traders. These exports reflected both reductions in stocks built up by the massive imports in the early 1970s and relatively good harvests following the drought. Price differences may or may not have been large enough to stimulate unrecorded exports except to a limited extent near border areas.

79. By the late 1970s, however, the evidence no longer supported the allegation of substantial exports. The comparative price data and actual recorded commercial imports for rice from the late 1970s show that Mali had become a net grain importer, with domestic market prices being affected by consumer rice prices in neighboring countries. In particular, the tightly controlled rice prices in Ivory Coast and Senegal during the late 1970s and 1980s may explain in part the relative stability of commercial rice prices in Mali. Market liberalization would, in this case, simply facilitate more imports but not lead to higher market prices. In fact, to the extent that illegal imports were made more expensive by risks of confiscation and by small, irregular procurements, liberalization could have actually lowered domestic market prices. The correct reform in this case would be production oriented efforts to lower production costs, high tariffs or import quotas, or, possibly, exchange rate devaluation to raise the local costs of imports.

80. While increased producer incentives were a major rhetorical justification for the reforms, there was little solid evidence that the program would raise effective market prices. Liberalization could, however, give more farmers greater access to existing higher market prices. Or higher official producer prices could benefit farmers where liberalization was not implemented, as in the case of paddy production in the Office du Niger.

81. A second misconception was how official and parallel markets and prices are linked. This link was poorly understood and not adequately taken into account. The PRMC wanted to unify the official and parallel markets yet it maintained a system of rigid, administratively determined official prices. On the consumer side, fixed prices beneath market levels mean that official sales had to be rationed to selected consumers. Second, OPAM was given responsibility to regulate the private market, but it was not allowed to operate via pricing policy as official prices continued to be set administratively. All adjustments had to be borne by changes in quantities bought and sold. Yet official prices were not set according to the feasible scope of intervention. Finally, the PRMC placed virtually no emphasis on the functioning of the private market. In fact, the structure of administrative prices (no seasonal or geographic variations) as well as several of the activities of OPAM actually interfered with the better functioning of the private market.

82. More appropriate targets or benchmarks could have been established regarding the adoption of institutional mechanisms to introduce flexibility in official prices and to link them to movements in market prices. Several criteria could have been established to assess improvements in the functioning of the market, including price spreads between markets, price correlations among markets, and seasonal price fluctuations.

2. Prices

83. First, the reform program focused on the wrong prices. The PRMC focused on raising the level of official prices, rather than on reducing the distortion between official and commercial prices or on improving market performance. The best measure of progress toward this objective would be the gap between prices in the two markets. Specified in this way, the targets for official prices would have been not their absolute level, but their level relative to market prices. The reforms under the PRMC officially recognized,

of course, the existence of a parallel market, at least for coarse grains, that functioned apart from and at different prices than the official market. This recognition was an important change in official stance. Yet the reform prescriptions were full of inconsistencies that reflected past policy positions based on a view of the official market as separate and distinct. For example, the PRMC called for the immediate and full legalization of all private grain trade, yet maintained official producer and consumer prices that were far from being aligned with the private market prices and were set on the basis of political feasibility, not market realities or the government capacity to implement policies that could substantially affect market realities.

84. In this contradictory environment, OPAM was called upon to regulate, stabilize, and assure competitiveness in the market. Its ability to do so effectively, however, was severely circumscribed by the continuation of fixed prices established largely independent of market conditions and allowing for no seasonal variation, no geographic differentials, and no quality differences (except for two main grades of rice--40 percent broken and 100 percent broken). All government purchases, sales and transfers had to be at the fixed official prices. OPAM, and the rural development authorities that purchased on account for OPAM, had no authority to adjust official producer prices as a function of market conditions and their own financial resources. Nor did OPAM have the authority to adjust consumer prices as a function of market conditions and its own grain stocks. The inability to adjust the price variable has meant that the only adjustment mechanism open to OPAM is quantities bought and sold. These are limited by financial constraints, as in the past. Therefore, official marketing policy has had limited impact on private market prices and performance. The PRMC has, however, by supplying large quantities of cheap grain, made it possible to affect consumers more than producers.

85. The requirement to deal in fixed prices established independent of the market has had virtually no impact on OPAM's ability (directly, or through other buying agents) to guarantee producer prices for coarse grains. Market prices almost everywhere exceeded official prices until 1985/86. The large harvest in that year, coming with continued large deliveries of food aid, depressed market producer price levels enough immediately after harvest to make OPAM prices attractive. But financial constraints obliged OPAM to interrupt purchases before the end of the harvest season. For paddy, the fixed prices, coupled with tightly restricted access of farmers to the private market, has probably actually depressed producer incentives. Although it is difficult to obtain price quotes for paddy in primary markets, the current market price for rice would indicate that the official producer price is still some 25 percent below the market price.[27]

86. Where the limitations of fixed official prices have been most evident is in defending guaranteed consumer prices. Because official prices have been well below the range of normal market fluctuations (table 5 gives monthly high and low market prices during the year), meeting demand at these prices (and bringing market prices down in line with guaranteed consumer prices) would only be accomplished through massive grain sales, which have far exceeded available stocks and the possibility of increasing imports. Open-market sales, using a system of bids and tenders that would have brought supply and demand in line in both official and private markets were precluded by the

rigid pricing structure. Sales at prices substantially below prevailing market prices and even below official intervention prices must, of course, be rationed. This implies continued administrative control of access to the official market. The reform program thus perpetuated segmented dual markets (official and commercial) and provided tangible justification for maintaining, and even strengthening, the complex and costly administrative structure needed to operate the restricted official consumer market.

87. Other major areas of marketing and price policy reform were sidestepped by both the PRMC and the government. These include the issue of whether official producer prices are floor or incentive prices, the depressing effect that official consumer prices may have on commercial producer prices, and the need for seasonal and spatial flexibility in official prices to encourage better integration of markets. Because the severe operational difficulties in setting and enforcing official prices were not discussed, simpler alternatives based on flexible official prices linked to market conditions were not considered. Linkage to market prices would have reduced the need for adminstrative decision and introduced some measure of automaticity in setting prices. This specification would thus have had the additional advantage of reducing the politicization of setting official prices.

88. Even if targets for price levels were to be fixed in absolute terms, they should have been determined both on the basis of some notion of economic pricing (such as import parity, price levels needed to call forth a level of production given supply elasticities, or price levels needed to offset price distortions elsewhere in the sector) and relative to the financial and logistical means of the government to influence market prices.

89. The price targets adopted under the PRMC were also poorly specified. In any case, the proposed pace of change was in some instances actually slower than in preceding years (especially official producer prices for coarse grains and official consumer prices for rice). Even if the pricing targets had been achieved, it would not have meant an acceleration of price adjustments. With respect to margins, the pricing targets implied that the commercial margin for rice would decline, not increase. The proposed producer prices for paddy were much larger than the consumer price increase for rice. The margin between paddy producers and rice consumers implicit in the price targets would have fallen, after milling, from CFAF 40 per kg to only CFAF 4 (table 3). If OPAM prices had actually followed the proposed targets, its operating losses would have increased, not decreased, even if marketing efficiency had improved to some extent to help offset lower margins.

90. Finally, the PRMC did not establish specific expectations about market prices in terms of their level, spread, and stability. As a result, there was no way to judge whether the reform program was accomplishing what was intended for changes in market prices. The only yardstick was official prices.

3. Financial losses

91. The objective for financial losses was set only in terms of OPAM's deficit. As noted above, the financial improvement for OPAM came at the expense of the financial well-being of other actors in the sector. Moreover, by financing the cost of higher official producer prices, while

accepting stagnant official consumer prices, the PRMC actually weakened the underlying financial health of the public grains sector. Moreover, financial resources generated by the sale of free food aid were considered in a different light than other public financial resources, in that continued OPAM losses were tolerated if financed by the PRMC.

4. Role of OPAM

92. The future role of OPAM was ambiguous in the reform program, except that the PRMC assumed its continued existence and actively sought to strengthen its operations. The scope of its operations (like level of sales and purchases) was not discussed or agreed to, but both food aid donors and government wanted a grains board that would function better, with more, rather than less, access to funding and supplies. Donors provided the resources and technical assistance to help strengthen, not reduce, the role of OPAM, although there was a natural tendency to increase the volume of grain it handled. Compared to the four years prior to the PRMC, the quantity of grain sold annually by OPAM rose by about 10 percent. The amount distributed annually rose by 50 percent between the two periods, but much of this resulted from increased distribution of food aid for drought relief. Its role of regulating the market was tacitly accepted but not defined. It continued to be a marketing agent to displace the commercial sector by implementing government policies directly, rather than an agency to influence commercial markets at the margin.

93. Nor were technical targets to judge improvements in its operating efficiency formally discussed and agreed to by the PRMC, although OPAM itself developed cost reduction programs and plans to improve operating efficiency (for example, reductions in physical losses, staff, and vehicles). The critical indicator of unit operating costs was, of course, discussed but was not made a specific and monitorable operating target. Financial ratios used to judge the health of enterprises were not specified. Finally, there was no agreement of what the extent of OPAM's social objectives (such as maintaining regional income equity) should be and how these would be financed. The PRMC in principle was to finance only losses arising from the policy of adjusting producer and consumer prices at different rates, not losses arising from other policies. But the distinction was never clarified in discussions of OPAM losses, except for interest on the medium debt incurred in the 1970s.

94. More specific targets might have dealt with the expected volume of OPAM transactions, the extent its physical facilities and areas of operation, key technical and financial losses. Such specificity would have put into sharper focus the inconsistencies between some reform policies and the role OPAM was expected to play.

VII. WINNERS AND LOSERS

95. Who gets what from a reform program affects its feasibility and desirability, In this regard, there are four key questions: did farmers get more; which consumers got less; who paid for the gains; and did the PRMC change the outcome from what it otherwise would have been.

96. The gains to farmers other than those working within major government irrigation perimeters have probably been small. As discussed above, there is little evidence that market prices for coarse grains have increased, although there may have been some improvement in market efficiency that could have been passed on to farmers.[28] The increase in official producer prices has been more than offset by the decline in official purchases. The real gain will have been the shift in sales by farmers from government agencies to private traders; The magnitude of this shift depends importantly on production levels and market prices, both of which have fluctuated widely during the reform period, and on the sales pattern before the reform program started.

97. For paddy producers, the gain has come from increased official producer prices on compulsory paddy sales (from 1986/87 there may be gains from liberalization that allows farmers to shift sales to the parallel market). Because production of paddy outside the Office du Niger has stagnated during the reform, in part owing to poor water availability, the real beneficiaries have been farmers in the Office du Niger.

98. The minor improvements for coarse grains farmers have been supported primarily by the PRMC, which financed the gap between official producer and consumer prices that resulted from raising producer prices faster than consumer prices, and by consumers in the official market who have had to pay higher OPAM prices. Improvements for farmers in the Office du Niger have been financed exclusively by the PRMC, which has made up part of the difference between changes in official producer and consumer prices, and by the Office itself as the result of changes in the government price schedules that raised its buying and lowered its selling prices. In both cases, consumers in the official market have had to pay more, with price increases in the case of rice exceeding those on the private market.

99. But on balance, that consumers have benefited from the PRMC, despite the upward adjustments in OPAM selling prices, because the volume of sales at official prices has also increased owing to the availability of food aid through the PRMC. The total transfers to consumers, compared to market prices for domestic production and commercial imports, have increased during the reform period.

100. An idea of the magnitude of the changes in income transfers that have resulted during the PRMC can be had by comparing estimates of producer taxes and consumer subsidies before and after the PRMC began. These taxes and subsidies can be estimated by the difference between official and market prices for both producers and consumers and the volume of sales transacted at official prices. In summary form, these values for coarse grains, rice, and for both combined are given below (based on data taken from tables 2, 4, 5, and 14):

Aggregate changes in subsidies and taxes

	1976/77 to 1979/80			1981/82 to 1984/85		
	Coarse grains	Rice	Total	Coarse grains	Rice	Total
Government purchases (000 T, rice = paddy)	171	276	447	49	154	203
Producer tax (CFAF in billions)	3.6	5.3	8.9	1.6	3.5	5.1
Government sales (000 T)	174	190	364	173	234	407
Consumer subsidies (CFAF in billions)	6.0	11.3	17.2	9.6	9.1	18.7
Public sector loss (CFAF in billions)	2.4	6.0	8.4	8.0	5.6	13.6
PRMC financing (CFAF in billions)	-	-	-	4.7	9.1	13.8
Net public sector loss (CFAF in billions, minus = gain)	2.4	6.0	8.4	3.3	-3.5	-0.2

101. Between the two periods, implicit taxation of farmers declined by 43 percent. All of this decline is owed to the reduction in the quantity purchased by the government, which was the result of both low levels of production as well as market liberalization for coarse grains. The unit rate of taxation in fact rose between the two periods, from CFAF 20 per kg during the first period, 1976/77 to 1979/80, to CFAF 25 during the second, 1981/82 to 1984/85. Part of the increase in implicit taxation is, however, due to high domestic prices caused by the drought, but the substantive impact of this is small as government purchases in the drought years were also small. The decline in producer taxation is the positive side of the adjustment sought through the PRMC.

102. The other side of the adjustment sought was a reduction in consumer subsidies. Just the opposite occurred. Between the two periods, implicit subsidies to consumers rose by about 10 percent. All of this increase is the result of the increase in the unit rate of subsidization, from CFAF 47 per kg in the first period to CFAF 52 in the second.

103. As a result of these two opposing trends, the implicit losses to the public grains sector rose by almost two-thirds between the two periods: there was less taxation of farmers and more subsidies to consumers. What is different in the later period as compared to the earlier one is that the food aid donors under the PRMC provided grain that could be used to finance the losses. The implicit subsidy value of PRMC grain sold in the first four years of the PRMC has been roughly equal to the value of the implicit losses in the public grains sector.

104. Thus, consumers with access to official sales received a substantial net transfer from food aid donors, worth over US$20 million at the 1985 exchange rate.[29] Of the CFAF 16 billion that was paid by consumers (for sales at official prices), approximately 85 percent accrues as net revenue to the PRMC. During the first three years of the PRMC, for which accounts have been finalized, roughly half of the PRMC financial resources were channeled back to OPAM and rural development authorities to subsidize official consumer prices of domestically produced or imported cereals, either directly or indirectly (table 17). If the same ratio holds for the fourth year (1984/85), selected consumers in Mali will have received a total transfer from the PRMC of about US$8 million a year over four years.

105. The question of which consumers benefited most from these transfers can be answered partially by looking at the pattern of OPAM's grain sales, although it is difficult to determine if the pattern of grain sales and distribution has changed significantly as a result of the PRMC. Regarding regional distribution, the evidence suggests that the share going to Bamako is not substantially different, considering that during severe drought years a larger percentage is usually distributed or sold to other areas with shortages. Bamako is normally allocated some 35 to 45 percent of OPAM sales, to supply three major groups: (i) public service agencies, notably the Army; (ii) consumer cooperatives; and (iii) others, including privileged individuals. The fact that the share sold in Bamako is so high, even though it is probably the most affluent market with a large solvent demand than could be supplied by commercial trade, is additional evidence that the government is using grains marketing to implement its incomes policy.

106. In Bamako, roughly 40 to 45 percent is channeled through cooperatives, which are responsible for allocating grains to members. Until 1982/83, half or so went to public service institutions, with the rest allocated to "others." More recently, the share distributed to "others" has doubled or tripled, which may be an indication that access to cheaper grain has increased for special groups. Moreover, the Bamako consumers have a preponderate access to rice, which is the grain of choice. Whereas the share of rice in food aid is about one-third, and about half in total OPAM sales, it is over three-fourths in Bamako sales. Regional information is even less adequate, although cooperatives constitute about 70 percent of sales, higher than in Bamako, probably reflecting in part the fact that most public services are located in the capital. There is no particular evidence that OPAM sales of local purchases and PRMC food aid are targeted toward low-income groups.

107. A critical issue is whether these distributional effects would have been much different in the absence of the reform. If implemented effectively, the reform program would mean an income gain for farmers and an income loss for consumers. Losses to public intermediaries (OPAM, rural development authorities, the state-owned development bank) were also to be reduced or eliminated. During the first five years of the reform program, what has occurred are small gains to some farmers, an increase in total income transfers to consumers because of the persistent gap between market and official prices together with increased OPAM sales, and a shift of the financial burden from Malian farmers and public agencies to food aid donors. The PRMC provided such financing in two ways: grain to sell at official prices; and official revenue from these sales to subsidize other deficit operations in the grains sector to forestall consumer price increases.

108. Without the PRMC, the income adjustments as intended under the program might have been faster. OPAM would have had less grain to sell at subsidized prices and less revenue to finance deficit operations. In such a situation, it is probable that OPAM operations and sales would have had to be scaled back, especially given the financial stringency in fiscal and monetary policy under the IMF programs. Alternatively, official consumer prices might have been raised more and faster. Either would have reduced implicit income transfers to consumers that have benefited from access to OPAM sales, which would have raised their share of financing domestic grain production. As it turns out, the internal terms of trade has been adjusted more slowly under the PRMC than in the latter half of the 1970s, when policy support was not available to the government. It is conceivable that the PRMC, as actually implemented, has slowed the underlying structural adjustments need if the public grains sector in Mali is to become self-financing.

VIII. COST AND FINANCING

109. Assessing the cost of the reform effort is difficult. There were clearly additional management and investment costs associated with improving the technical operations of OPAM. These are economic costs, in the sense that they remunerate the additional resources brought into the sector. While these are relatively easy to quantify, it is less clear that they are a necessary cost of reform. For example, OPAM could have been scaled back rather than maintained and made to function better.

110. What is less easy to classify as a cost of reform and to quantify is the cost of convincing government to adopt reforms and the cost of stretching out the impact of the reforms to give those who stand to lose time to adjust. In the case of grains policy reform in Mali, these "adjustment" costs could cover two areas. First, the position of government officials supporting reform could be bolstered vis-a-vis their political opponents if they were seen as bringing in significant public resources to the government, irrespective of the ultimate use of these funds. Second, during the transition when the consumer prices are raised in line with higher producer prices, there may need to be an increase in public expenditures to finance the consumer subsidies, which were previously borne by farmers through low producer prices and market restrictions. Neither cost is additional in an economic sense of paying for additional resources. The second, in particular, simply represents a shift in incidence. But they are public sector costs of reforms if the reforms would not occur as rapidly or extensively unless they were met. Yet, in conditions of financial stringency, as in Mali prior to and during the PRMC period, adjustments are inevitable if existing policies have public financial costs that cannot be met. If additional public resources are to be justified as a cost of the reforms, it must be shown that the economic distortions would worsen without the resources, as government increasingly tightens its grip on the economic activity either to secure more revenue or to force other sectors to pay rents to the sectors meant to benefit from government policies. Thus, this section looks at both costs and their financing.

111. First, to improve the management of OPAM, there have been some minor investments (such as truck sales), some training, and a lot of technical

assistance. This assistance is directly responsible for improving the operation of OPAM and the conduct of grains policy in general. The amount of technical assistance to improve OPAM management was increased from an average per year of less than five staffyears before the PRMC to over seven during the program. Over the original five-year life of the PRMC, the incremental cost would be about US$1.0 million. The incremental cost of this technical assistance amounts to 6-7 percent of OPAM's operating expenses (excluding interest and depreciation); the bill for all the donor-supplied technical assistance is equivalent to almost one-fourth of OPAM's operating costs. This underestimates the full cost because donor representatives have also been extensively involved in monitoring and guiding OPAM operational improvements. Donors have provided funds to pay for additional technical assistance.

112. Second, to "encourage" policy reforms, food aid has been provided to supplement domestic production and commercial imports. The value of this food aid has been significant. The cost to purchase and deliver to selected sites in Mali the 250,000 tons of maize or maize equivalent during the first five years of the program is about US$90 million.[30] A proposed extension of the project to a sixth year (1986/87) as well as an increase in food aid by about 150,000 tons would bring the total donor cost of the PRMC to about US$150 million. At 1985 exchange rates and local delivery costs of about CFAF 15 per kg, the value of this grain amounts to roughly CFAF 300 per kg for rice and CFAF 180 per kg for maize.[31] If one-third of the grain is rice (under the first three years, 37 percent of the grain sold for the PRMC was rice), the total value to Mali of the program as extended would be over CFAF 50 billion.[32] On an annual basis, this amounts to about 2 percent of GDP.

113. At the end of the first four years, approximately 186,000 tons had been delivered, worth about CFAF 40 billion on these assumptions. At prevailing official sales prices, consumers paid about CFAF 16 billion for this grain. At prevailing market prices, this grain was worth about CFAF 26 billion.

114. It is difficult to assess how much of the food aid under the PRMC was additional to regular flows, especially given the drought that began in 1983. For the four calendar years 1982-85, total food aid amounted to 427,000 tons (plus Food for Work contributions and food aid provided by private voluntary organizations, which generally amount to 9,000 tons per year but reached 24,000 tons in 1985). Deliveries under the umbrella of the PRMC represented 44 percent of this total. Total shipments during the two drought-affected years (1984 and 1985) averaged about 150,000 tons a year (two-fifths being under the PRMC). This compares to deliveries of about 125,000 tons a year during the two drought-affected years in the early 1970s (1972/73 and 1973/74). By this comparison, given that the recent drought is considered to have been more severe, it is likely that much of the PRMC food aid would have been shipped in any case. Thus, the real cost of the program in terms of additional food aid may be relatively small. What the PRMC framework provided, however, was some additional leverage to promote price and marketing reform and a mechanism to channel the counterpart resources generated by sales to specific uses intended to facilitate the reform process.

IX. SOME LESSONS

115. The grains marketing reform experience in Mali points to several lessons that might influence the design and implementation of the reform program if it were done over again or replicated elsewhere.

A. Policy complexity

116. First, policy reform is more complex than simply changing official prices and liberalizing government market regulations. Policies in the grains sector involve more than issues of food production and consumption; they are linked to broader economic policy questions, especially income distribution concerns. As a result, there is likely to be deep-seated resistance to reform programs designed to raise producer incentives and output by raising official grain prices and deregulate grain trade. The Mali reforms improved incentives for some farmers, but have not changed the basic structure of income distrubution supported by official grain policies. What has occurred is that foreign resources, supplied to support the reform effort, have cushioned the potentially disruptive distributional effects of the reforms. External resources enlarged the pie (and much of the increase did go to the rural sector). The PRMC did not explicitly require a redistribution of the old pie. This points to a general concern: reformers need to give attention to the distributional effects of their proposals.

117. In addition, reforms in the grains sector may have to be subordinated to reforms being sought in other policy areas. In Mali, official consumer prices had to be held down to postpone possible increases in government wages. Holding wages down was considered crucial in reducing the fiscal deficit, which was a major objective of the IMF stabilization program.

B. Market linkages

118. Second, official and private markets are linked, but the linkages are not necessarily straight forward. The gains within the grains sector (higher production and efficiency) that can be expected from policy reforms like those in Mali--higher official prices and legalized private trade--depend a great deal on the extent of the effective price distortions and market segmentation. In a situation of an open economy with an active parallel market, it may be unrealistic to expect substantial changes in market prices. What will change is the income of farmers who are no longer required to sell grain at low official prices. The direct income transfer effects are much more important than the market price effects. Decontrol will raise the effective price to the farmer who is compelled to sell in the official market. The same end could be accomplished by raising official producer prices, although this alternative has direct budgetary implications. Attention needs to be given to the linkages between the official and private markets in establishing expectations about progress. Linkages must be considered, especially if one of the objectives of the reform program is to unify official and private markets and if the government marketing board is to be called upon to stabilize or to regulate the unified market.

C. Institutional development

119. Third, the issue of institutional development requires special attention. It has at least four facets. The first relates to the analytical capacity to develop the reform program. In Mali, the program was largely designed and implemented without a clear concept of grains policies relative to other economic policies and without a clear notion of how official grain policies fit into market prices and mechanisms, (points one and two above). Government officials and donor representatives were naturally caught up in the daily problems associated with implementing reforms and making the new system function. No outside institutions, like research groups and universities, undertook independent analysis or animated the public debate. As a result, the reform program focused more on operational issues than broad structural questions of market integration, the role of international trade, producer incentives, and overall policy effects. Attention needs to be given to the local capacity to do the needed policy analysis.

120. The second institutional issue concerns the durability of reforms. The likelihood that the reforms will stick after the PRMC comes to a close may be doubted for three reasons. First, the reform program failed to substitute more flexible and automatic mechanisms to determine official prices and sales. It allowed the government to retain rigid, administered prices, the setting of which is subject to annual political debates. Given the strong income distribution objectives that continue to underlie most government policies, it is unlikely that the administered prices will reflect market conditions or the capacity of the grains board to intervene to change them. During the existence of the reform program in Mali, donor pressure on political authorities has helped curtail some tendencies to allow new distortions between official and market prices to creep back into government policies. But once this pressure is stopped, regression is likely. There appears to have been a tendency on the part of both donors and government officials to prolong the existing system of price fixing with only marginal efforts to link it with the market.

121. The next question relating to durability of the reforms is whether government agencies have been strengthened to cope better with a market-oriented environment, to the extent that the practice of fixed, administered prices is relaxed. For example, do government services (like the military) now have the ability to program and budget for grain purchases when future prices are unknown? Does OPAM now have the administrative, logistical, and accounting capacities needed to carry out open-market sales and purchases at varying prices? Do public agencies have the critical skills needed to cope with deregulation and unification of official and private markets? The PRMC has made an important contribution in this regard by increasing OPAM's use of private contractors for grain transport, in lieu of maintaining its own vehicle fleet. But in other operational areas (like forward contracting of futures to reduce market uncertainty), and in agencies outside OPAM where technical assistance was not supplied, the reform program has contributed little to help public agencies make the transition from an administered to a market economy.

122. The final reason to doubt the durability of the reforms deals with the financing intended to support the reform program. This financing was meant to facilitate the price adjustments by stretching out the increase in consumer

prices so as to cushion the impact on those adversely affected (mainly consumers with access to grain at official prices). For the reforms to last, there must eventually be a real income adjustment; those benefiting from low official consumer prices in the past will be expected to pay higher prices. Income transfers to this group via the pricing system should be expected to contract, not expand, as part of the process of weaning these consumers away from government subsidies. In Mali, the food aid has been sufficiently generous, and the price adjustments sufficiently small, that consumers, as well as producers, have benefited from higher total income transfers during the reform period. In fact, consumer subsidies have increased almost half as much as producer taxes have fallen. As a result, it may be that the underlying political adjustment required if reforms are to be sustained after the PRMC ends has not been promoted by this external assistance.

123. The third institutional issue concerns the functioning of the private market. By focusing so much on official prices, on the functioning of the official market (that is, OPAM operations), and on a continued desire to control and regulate the private market, little attention was given by the PRMC to strengthening the operations of the commercial market. Liberalization of course grain marketing probably reduced inefficiencies caused by small scale operations; it also probably lowered risk premia that had driven a wedge between market consumer and producer prices. Another positive effort was the organization of several small grain merchants in Bamako into a mutual guarantee group that would have the collective resources to obtain credit for sizeable grain imports. But other actions, like improving market infrastructure, increasing the exchange of market information, and further standardizing weights, measures and qualities, were largely not taken up. Moreover, rigid, panterritorial pricing and rationed consumer sales have perpetuated segmented markets and interfered with better integration of markets.

124. The last institutional issue concerns the inconsistency between market regulation responsibilities assigned to OPAM and the means it was accorded to discharge this responsibility. The focus on fixed, rigid official prices severely handicapped OPAM's ability to regulate the commercial market, both temporally and spatially. Because official prices could not be adjusted according to market conditions and OPAM's resources OPAM's regulating activities could be affected only by changing quantities bought or sold. Regulation of the producer market has seldom been effective. Official prices were almost always below market prices. Without compulsory sales, farmers offered little grain for OPAM to buy. Nor was regulation of the consumer market effective. Official prices were set so much lower than market prices that all the grain OPAM could sell was insufficient to meet demand at official prices. This unmet demand kept prices higher in the parallel market. In such a situation, there is no way that market prices can be brought in line with the official prices that have been politically negotiated and administratively fixed. To avoid continued distortions, objectives need to be brought into line with means available to meet them.

D. Feasibility

125. The fourth lesson is what is feasible. It is interesting that the most significant improvements have been in the operation of OPAM, and that the least progress is observable in price policy reform and reducing public sector

subsidies. Purely technical changes that improve internal operating efficiency are the easiest to agree on, design, and carry out. Technical reform is a fairly unambiguous task, except perhaps in the area of reducing employment and controlling stock losses and special access to grain at low prices. To the extent that the main problem is simply a lack of management skill and tools, it can be compensated for in the short run through technical assistance and targeted investments. Moreover, the vested interests working to maintain such inefficiency (in this case, OPAM employees) are usually fragmented and weak. But a strong commitment by OPAM's management and its oversight Ministry was essential in drawing effectively on internationally-recruited technical assistance to help design and implement major operational and administrative reforms. Donor coordination regarding technical improvements is also relatively easier to obtain, especially when each has a vested interest to assure that the grains agency functions smoothly and is accountable, as in the distribution of food aid.

126. In contrast, price and marketing policies are more difficult to change. There is an understandable reluctance to implement policy reforms that will have immediate and highly visible negative income effects. The effects are larger (for example, most of the losses of OPAM are accounted for by narrow price margins, not technical inefficiency). And the transfers, often hidden, are more likely to be part of a system of entitlements, often of vocal and visible groups (such as the Army, urban consumers, civil servants, and employees of public enterprises). In the case of the PRMC, the government acted first in easier areas (liberalizing coarse grains and steadily raising official producer prices). Donors backing the reform were apparently satisfied enough with such actions not to insist too much on more difficult steps. Moreover, donors are less likely to agree on appropriate price policies. One of the constraints to continued reform in Mali, particularly to using food aid counterpart to support further reform, has been the inability of the donor group to work out effective, monitorable reforms in areas outside OPAM management.

E. Replicability

127. The fifth lesson relates to replicability of this experience, either in other areas of possible reform in Mali or in the grains sector in other countries. One of the key features of the PRMC was its high degree of effective donor cohesion. Much of the credit for this cohesion, including relatively good coordination, is owed to its grassroots origins; local representatives of key food aid donors agreed that grains policy reform was needed and joined forces to sketch out the reform scenario and to convince both the government and their headquarters to support the program. In addition, the decentralized implementation of the PRMC, with most donor representatives having authority to negotiate directly with the government concerning reform actions to be taken, made it possible to develop common donor positions on the spot prior to meetings with the government. Moreover, the flexible makeup of the PRMC targets as noted above (which, ironically, might have been lost had there been greater analytical rigor in the design of the program) made it possible to downplay differences among donors on certain issues, like the ultimate role of OPAM or the continuation of fixed administrative prices. While this donor coordination was critical in achieving the success registered under the PRMC, its effectiveness was also substantially enhanced by the inclusion of PRMC ideas in the IMF Stand-by

programs that were being developed and negotiated at the same time. The combination of a well-coordinated local group, that had good relations with the government and the capability of providing food aid to maintain the level of government sales, and the IMF missions, which were willing to include specific reform objectives for the grains sector in a comprehensive macroeconomic stabilization program backed by considerable financial resources, helped convince the government to give special attention to the PRMC reforms. Some of these conditions were probably serendipitous; in any case replicating the Mali experience is likely to require a similar combination of effective local donor cohesion and coordination, flexible policy objectives and donor positions, and a broader reform program to provide the overall context and negotiating strength.

F. Reform process

128. The sixth lesson concerns the process of policy reform. The lessons from Mali point in two different directions. The early efforts to raise official consumer prices substantially increased the politicization of price fixing; this may have been responsible for the three year hiatus during which official consumer prices were not changed. The lesson would be to make adjustments incrementally (which is what the original formulation provided for).

129. The consumer price increases initially proposed at the technical level for 1981/82 were so large that the decision process became much more highly politicized, which may have made adopting subsequent price increases more difficult. Normally, price levels were recommended by a technical commission representing concerned ministries, approved by an inter-ministerial council meeting, and promulgated by presidential decree. To illustrate, the technical commission initially proposed a consumer price of CFAF 77 per kg for coarse grains (almost double the current price). This was rejected by the council of ministers which instructed the technical commission to propose lower prices. The subsequent technical proposal was CFAF 68-70. Controversy was so strong that an extraordinary joint meeting of the Council of Ministers and the Central Executive Bureau of the UDPM, the single political party, was called. Faced with strong labor union opposition, the joint meeting adopted an even lower price, CFAF 58. This protracted price-setting experience was a departure from past procedures. Price setting had become more openly politicized and beyond government's strict control.

130. With respect to market liberalization, however, partial action was tantamount to no action. It will have taken six years to deregulate the paddy market, which is the only market that mattered, and even then certain restrictions on access may continue to apply (for example, merchants may be authorized to buy only after farmers have paid fees and credit). Official sales must still be rationed to selected beneficiaries, who appear to have strengthened their rights of entitlement. In the case of deregulation, swift and complete action is probably necessary to accomplish the reform; incremental adjustments simply lead to new distortions and allow additional resistance to develop.

X. IN SUMMARY

131. After the first four years of the program, it can only be called a mixed success, although changes in 1986 may improve the record. The qualitative improvements are more striking than the quantitative ones. The reform program has focused attention on grains marketing problems and created a situation conducive to open dialogue. It enhanced coordination among food aid donors while at the same time reserving food aid resources to support various aspects of the reform program. The government has shown greater acceptance of market transactions and prices, which has reportedly increased morale and optimism among private merchants.

132. On the quantitative side, it is difficult to argue that the PRMC has in itself notably increased producer incentives for coarse grains. Because official marketings were always small and administrative controls were often weak, liberalization had little impact on market prices, except perhaps by improving marketing efficiency. Free market prices are in any case probably closely linked to import or export prices. The program may have even reduced producer incentives. If domestic market prices are below import prices (as was the case before the recent drought), the large sales of food aid at official prices lower than market prices would tend to reduce demand on the parallel market and bring market prices down. However, because the government controls a minor share of the coarse grains market, and in volume less than paddy, and because farm sales to the grains board are more likely to be voluntary, neither the poor performance in raising official producer prices nor the good performance in liberalizing marketing is particularly important in changing incentives.

133. For paddy, results of the PRMC are better. Official producer prices have risen faster than inflation, while market prices have fallen in real terms by about 20 percent during the program. This policy effort should be considered significant because paddy is the only grain for which the government can (and does) effectively control a substantial share of marketing by administrative means, especially in the Office du Niger. However, because government control is firmer and distortions are still significant in paddy markets, liberalization would appear to offer some scope for improving producer incentives, even though government performance on price policy has been relatively good. One of the advantages of liberalization is that producer incentives become less a hostage to political negotiation and availability of deficit financing. For example, paddy price increases had begun to stall in 1984/85; and donor pressure was needed to secure the price increase, which was announced six months later than usual, well after all production decisions had already been made.

134. The shift to economic prices for consumers has also been slow and inadequate. Until 1985/86, official consumer prices fell in constant terms, resulting in substantial net positive income gains for those with access to OPAM sales. The quantity of grains marketed at these official prices exceeds the level sold before the reform program, in large part because PRMC food aid has more than compensated for lower official marketings of domestically produced grain. Thus, total income transfers (measured by the difference between official and commercial market prices and calculated on total flows) to selected consumer groups have probably increased. Likewise, with respect

to financial losses in the grains sector, the program, until 1985/86, had not succeeded in dramatic reductions. It did shift the way they are financed, however, mainly from farmers, taxpayers (via the OSRP), and the banking system to the Office du Niger and, most notably, to food aid donors.

135. If the PRMC targets had been set in terms of minimizing the gap between offical and market prices, and in terms of reducing the financial deficit for the overall sector, the sense of progress expressed by both donors and government would have been less positive, especially in view of the costs.

FOOTNOTES

1. For example, a 1984 evaluation by the World Food Programme (WFP) Committee on Food Aid Policies and Programs (CFA) of this type of program in five countries in Africa concluded that the Malian experience has been the most promising. See WFP/CFA, 18/11 Add. 1, "Sectoral Evaluation on Food Aid for Price Stabilization and Food Reserve (Emergency Stock) Projects", Rome, October 1984.

2. See, for example, the evaluation by USAID, "Evaluation of the Title II, Section 206 Project in Mali (688-0230)," Bamako, February 1985.

3. Office des Produits Agricoles du Mali.

4. In the longrun, it could, of course, stimulate production to expand supplies.

5. Office pour la Stabilisation et Régularisation des Prix.

6. Based on the FAO food production index.

7. At the then prevailing exchange, this overdraft amounted to about US$80 million.

8. For instance, the French Ministry of Cooperation commissioned a study of OPAM in 1975 by the French consulting firm, Bureau pour le Développement de la Production Agricole (BDPA); in 1976 the World Bank commissioned a study on the grain market by another French consulting firm, CEGOS; the Malian business management institute, Institut de la Productivité et de la Gestion Prévissionnelle (IPGP) issued a report for the government on OPAM in 1977.

9. H. de Meel, "La Politique Céréalière au Mali," (Report No. TF-MLI 8(SWI)), Government of Mali and FAO, Rome, 1978.

10. See Anna Borg, "Cereal Marketing Reform in Mali: Political and Institutional Aspects, " report prepared for the World Bank, Bamako, June 1984.

11. Four documents were prepared for the seminar; see Republic of Mali, OPAM, "Seminaire 1980 - Documents de Base," (A. Problèmes de structure, B. Evaluation de la situation commerciale au cours des années 1971 á 1980, C. Examen de l'évolution des moyens logistiques á l'OPAM et perspective, and D. Reflexions sur la situation financière de l'OPAM), Bamako, 1980.

12. Projet pour la Réstructuration du Marché Céréalier.

13. For example, the government established a state ministry in 1983 to oversee Economy, Finance, and Plan, headed by one of the more economically liberal ministers who supported the PRMC. In early 1985, the Minister of Agriculture, who had long opposed market liberalization, was replaced.

14. Merchants were reportedly officially allowed to purchase paddy produced as a second crop in 1985, which in any case was produced on less than 5 percent of the command area and on which no water use fees were levied or had to be collected.

15. The legal status of this ceiling price is unclear. The government decree establishing the official prices and the price schedules simply refers to it as a consumer ceiling price on the free market for coarse grains. The technical proposals prepared as the basis for the official decisions specified two types of ceiling prices. The lower, "intervention" price would have been the threshold to trigger OPAM sales to bring down free market prices. The higher, "ceiling" price would have called forth punitive action by the economic police to stop price fraud.

16. During 1980-84, salaries rose in nominal terms about 3.4 percent a year as the result of promotions and advancements, while inflation amounted to about 8.8 percent a year, as measured by the GDP deflator.

17. The payroll has not fallen significantly as salaries have been increased to improve worker productivity.

18. Analysis of margins is often done on a percentage basis, which is appropriate if selling prices are varied as a function of supply and demand, expected returns, as well as costs, as on the private market. For OPAM, margins are set to cover specific costs, which are largely unrelated to the value of the commodity.

19. OPAM's gross margin based on its accounts includes the subsidies established in the official price schedules for all agencies responsible for primary marketing except Office du Niger. It does not, therefore, always represent the difference between OPAM's buying and selling prices as given in the official cost schedules, except in the case of the Office du Niger. In aggregate terms, the differences are slight.

20. Estimated by least-squares regression. Actual growth rates in the before and after periods were estimated by a single equation; asterisks indicate that the growth rates in the two periods are statistically different within a confidence interval of 90 percent or more. PRMC target growth rates were estimated in separate equations.

21. Based on 1983/84 OPAM sales to public services and others (about 60,000 tons), as estimated by the distribution of sales in Bamako, and an average spread between official and market consumer prices of about CFAF 50 per kg (based on rice; it is higher for coarse grains). See tables 5 and 19.

22. Defined as the difference between average annual Bamako market prices and official comsumer prices as a percent of market prices.

23. The ceiling price set by the government for coarse grains in the parallel market, as explained in the previous section, was an attempt to reduce the apparent gap between official and market prices. This ceiling price has always been well below the market price (except occasionally for old grain being disposed of before a new harvest). This dual pricing structure for coarse grains was eliminated in 1985/86. For rice, it was never established.

24. For example, the annual prices in CFA francs for Thai rice (f.o.b. Bangkok) for 1980-85 are: 1980, 92; 1981, 131; 1982, 96; 1983, 105; 1984, 110; and 1985, 97. Such stability resulted because the decline in world prices (-55 percent during 1981-85) was offset by the depreciation of the French franc (-53 percent during 1980-85).

25. Much of this discussion on this point was inspired by Michael Roemer, "Simple Analytics of Segmented Markets: What Case for Liberalization?", Development Discussion Paper No. 175, Harvard Institute for International Development, Cambridge, July 1984.

26. Includes rice equivalent of 29,000 tons of paddy.

27. A robust rule of thumb in estimating a producer price for paddy in the unregulated market is to halve the consumer rice price prevailing in the ungregulated market.

28. Many contradictory tendencies affect market prices for coarse grains. If prices are near import parity levels, liberalization will have no effect except from improvements in market efficiency. If they are below import prices, large sales of food aid (including rice) at lower prices will reduce demand for domestic production and could cause prices to fall. Even improvements in market efficiency resulting from liberalization may be offset by the fact that OPAM intervention, the capacity for which has been increased under the PRMC, tends to exacerbate market segmentation, which reduces market demand in major grain producing regions.

29. The other CFAF 14 billion (about US$30 million) that is the difference between domestic market prices and the delivered cost of the grain, represents a transfer from donor governments to farmers in their countries, assuming that local market prices are reasonably aligned with world prices.

30. This cost is based on estimates of the World Food Program ("Project Mali 2628 (exp.) -- Food security, price stabilization and restructuring of cereals marketing," document WFP/CFA: 19/13-A(WPMA)Add. 3, 11 April 1985). These costs are US$133 per ton of maize fob (calculated from estimated cost of rice under the project of US$400 per ton f.o.b., converted to maize equivalent at the rate of one to three, the convention adopted under the PRMC). In addition, transport, insurance and forwarding costs are estimated at about US$230 per ton, exclusive of unloading, clearance, storage and internal transport of commodities.

31. For the first three full years of the PRMC (1981-82 to 1983-84), internal handling and transport costs ranged from CFAF 13 per kg (1981-82), to CFAF 8 (1982-83), to CFAF 5 (1983-84), and the contribution to OPAM's fixed costs declined from CFAF 9 in 1981-82 to CFAF 7 in 1983-84. The overall average of direct and indirect costs to deliver food aid over the three years is CFAF 17 per kg.

32. Assumes 160,000 tons of coarse grains and 80,000 tons rice.

CEREALS POLICY REFORM IN THE SAHEL

MALI

Statistical Annex

April 1986

Table 1. MALI: Total available grain supply (000 T).

Year	Domestic Production					Imports				Total Supply	Population	Per capita availability
	millet/ sorghum	maize	rice		total	commercial		food aid	total			
			paddy	rice equivalent		private	OPAM					
1969/70	913	73	119	74	1060	..	5	0	5	1065	5162	206
1970/71	756	84	168	104	944	..	27	0	27	971	5297	183
1971/72	691	87	171	106	884	..	31	32	63	947	5435	174
1972/73	624	44	116	72	740	..	61	103	164	904	5577	162
1973/74	660	63	130	81	804	29	94	153	276	1080	5723	189
1974/75	800	100	250	155	1055	29	15	77	121	1176	5873	200
1975/76	800	70	218	135	1005	29	0	12	41	1046	6026	174
1976/77	900	80	237	147	1127	29	0	0	29	1156	6184	187
1977/78	800	50	199	123	973	29	10	46	85	1058	6350	167
1978/79	1000	55	251	156	1211	29	13	47	89	1300	6522	199
1979/80	943	64	165	102	1109	29	22	19	70	1179	6699	176
1980/81	654	73	165	102	829	29	16	41	86	915	6881	133
1981/82	856	75	176	109	1040	71	11	53	135	1175	7076	166
1982/83	795	95	129	80	970	55	0	80	135	1105	7277	152
1983/84	663	95	122	76	834	143	7	170	296	1130	7484	151
1984/85	521	73	104	64	658	181	17	131	329	987	7694	128
1985/86	1200	..	204	126	1326	..	..	..	..	..	7909	..

NB: Production refers to first year but is consumed in second year; imports refer to second year.
Paddy is converted to rice at 62%.
Commercial imports in 1973/74 to 1980/81 assumed to be 20 flour, converted to wheat equivalent at 70%.
Other wheat imports are 15 in 1981/82, 20 in 1982/83, and 17 in 1983/84.
Population is for year of consumption (1970=1969/70).
Estimate of the National Statistical Office for 1984/85 is 1002 for millet, sorghum, and maize.
Millet/sorghum figure for 1985/86 includes maize.

Table 2 MALI: Grains production and marketing
('000 T)

year	coarse grains						paddy			
	production			official marketings			production	official marketings		
	millet/ sorghum	maize	total coarse grains	total coarse grains	percent total production	percent total estimated marketing		total paddy	rice equivalent	percent total production
1960	833	65	898	25.0	2.8	18.6	160	4.0	2.5	2.5
1961	828	70	898	29.0	3.2	21.5	145	2.0	1.2	1.4
1962	867	88	955	42.0	4.4	29.3	200	11.0	6.8	5.5
1963	863	100	963	35.0	3.6	24.2	189	4.0	2.5	2.1
1964	946	107	1053	32.0	3.0	20.3	182	5.0	3.1	2.8
1965	880	88	968	45.0	4.6	31.0	182	3.0	1.9	1.9
1966	809	101	910	71.0	7.8	52.0	182	11.0	6.8	6.8
1967	830	98	928	64.0	6.9	46.0	160	35.0	21.7	21.9
1968	757	91	848	18.0	2.2	14.9	84	26.0	16.1	27.7
1969	913	73	986	27.0	2.7	18.3	119	34.0	21.1	28.6
1970	756	84	840	13.0	1.5	10.3	188	40.0	24.8	23.8
1971	691	87	778	32.0	4.1	27.4	171	52.0	32.2	30.4
1972	624	44	668	10.0	1.5	10.0	116	47.0	29.1	40.5
1973	660	63	723	10.0	1.4	9.2	130	59.0	36.6	45.4
1974	800	100	900	49.0	5.4	36.3	250	84.0	52.1	33.6
1975	800	70	870	48.0	5.5	36.8	218	100.0	62.0	45.9
1976	900	80	980	70.0	7.1	47.6	237	107.0	66.3	45.1
1977	800	50	850	27.0	3.2	21.2	199	66.0	40.9	33.2
1978	1000	55	1055	49.0	4.6	31.0	251	50.6	31.4	20.2
1979	943	64	1007	25.2	2.5	16.7	165	52.1	32.3	31.6
1980	654	73	727	15.1	2.1	13.8	165	32.9	20.4	19.9
1981	856	75	931	17.5	1.9	12.5	176	42.7	26.5	24.3
1982	795	95	890	18.3	2.1	13.7	129	38.2	23.7	29.6
1983	663	95	758	3.2	0.4	2.8	122	31.6	19.6	25.9
1984	521	73	594	9.9	1.7	11.1	104	41.6	25.8	40.0
1985	..	..	1200	39.0	3.3	21.7	204	47.4	29.4	23.2

NB: All data from Ministry of Agriculture except 1978-85 marketing, which are from OPAM.
Year is year of planting (1970=1970/71); marketing in fact occurs following year.
Paddy is converted to rice at 62%.
Estimate of the National Statistical Office for 1984 is 1002 for coarse grains.
1985 purchases of coarse grains as of February 1986, when buying operations were halted.
Total marketings estimated at 15% of production.

Table 3. MALI: Price reform program: proposals and actuals [CFAF/kg]

	coarse grains					
	producer		consumer		margin	
season	proposal	actual	proposal	actual	proposal	actual
1980/8	35	35	43	43	8	8
1981/8	40	43	53	58	13	16
1982/8	46	45	68	63	22	18
1983/8	53	50	81	63	29	13
1984/8	60	50	95	63	35	13
1985/8	70	55	110	95	40	40

	paddy & rice							
	producer				consumer		margin	
	proposal		actual					
season	paddy	rice equiv.	paddy	rice equiv.	proposal	actual	propos	actual
1980/8	38	60	38	60	100	100	40	40
1981/8	55	89	50	81	110	115	21	34
1982/8	65	105	55	89	120	125	15	36
1983/8	80	129	60	97	135	125	8	28
1984/8	90	145	65	105	150	125	5	20
1985/8	100	161	70	113	165	165	4	52

NB: Producer price for paddy; consumer price for rice (40% brokens)
In 1981/82, maize was 90; in 1982/83, maize was 95.
Paddy converted to rice at 0.62.

Table 4. MALI: Official producer prices in current terms (CFAF/kg)

year	millet/ sorghum	maize	paddy	cotton	ground-nuts
1970	9	10	13	25	15
1971	9	10	13	25	15
1972	10	10	13	25	15
1973	10	10	13	25	15
1974	16	16	20	37	20
1975	16	16	20	37	20
1976	16	16	20	37	25
1977	18	18	23	43	25
1978	20	20	25	45	30
1979	25	25	30	55	40
1980	35	35	38	55	40
1981	43	45	50	65	45
1982	45	48	55	65	45
1983	50	50	60	65	..
1984	50	50	65	65	..
1985	55	55	70	85	..

NB: Prices are for year of planting (1970=1970/71).
Cotton prices are average of different qualities.
Groundnut prices were decontrolled from 1983.
Prices are normally announced in May-June,
but the paddy price in 1984 was raised to CFAF 65 only in December.

Table 5. MALI: Consumer grain prices in current terms (CFAF/kg)

Year	millet/sorghum						rice (40% brokens)				
	official		market			% gap	official	market			% gap
	sales	inter-vention	average	low	high		sales	average	low	high	
1970	13	-	21	17	26	40	39	49	44	56	20
1971	18	-	29	25	38	39	39	57	47	72	32
1972	18	-	35	28	45	49	40	62	55	76	35
1973	18	-	58	38	84	70	44	73	60	98	40
1974	18	-	39	35	44	55	44	79	65	95	44
1975	26	-	35	34	37	26	56	75	67	85	25
1976	26	-	36	32	39	27	56	73	65	87	23
1977	26	-	57	39	96	54	56	97	50	153	42
1978	29	-	82	65	103	65	69	145	91	188	53
1979	33	-	54	46	62	39	75	131	122	153	43
1980	39	-	95	68	113	59	90	153	148	160	41
1981	43	-	104	86	131	59	100	165	148	191	39
1982	58	63	83	74	90	30	115	171	160	182	33
1983	63	70	105	75	135	40	125	163	163	167	23
1984	63	70	140	109	169	55	125	177	163	181	29
1985	63	70	131	105	148	52	125	174	171	175	28
1986	95	-					165				

NB: Prices are for year of consumption (1970=1969/70); annual average (January-December).
Market average, high, and low prices are based on monthly averages of several major Bamako markets.
Gap betweem official sales and average market price is defined as percentage of market price.
Official prices are announced in October-December of preceding year.
1985 market prices are for January-November. For comparison, the 1984 January-November market prices are 143 for millet and sorghum and 173 for rice.

Table 6. MALI: Official producer prices in constant terms (CFAF/kg) (base year = 1985)

year	millet/ sorghum	maize	paddy	cotton	ground-nuts
1970	35	39	49	96	59
1971	33	37	46	91	56
1972	35	35	43	85	52
1973	33	33	41	80	49
1974	50	50	62	115	62
1975	41	41	51	95	51
1976	37	37	46	86	58
1977	39	39	48	92	54
1978	39	39	49	88	59
1979	44	44	53	97	71
1980	57	57	61	89	65
1981	62	66	73	95	66
1982	62	65	75	89	62
1983	62	62	74	81	..
1984	54	54	70	70	..
1985	55	55	70	85	..

NB: Prices are for year of planting (1970=1970/71).
Price index is GDP deflator. 1985 estimated.

Table 7. MALI: Fertilizer prices (CFAF/kg) (base year=1985)

year	——farm gate—— current	constant	cost price current	percent subsidy
1970				
1971				
1972				
1973				
1974				
1975	38	96	123	70
1976	55	127	75	27
1977	55	118	69	20
1978	63	122	79	21
1979	68	119	90	25
1980	73	118	83	13
1981	105	154	123	14
1982	105	144	135	22
1983	105	130	136	23
1984	105	113	131	20
1985	135	135	158	15

NB: Prices are for year of planting (1970=1970/71).
Subsidies as percent of cost prices.
Fertilizer is NPK formulation (14-23-14) for cotton.
Price index is GDP deflator. 1985 estimated.

Table 8. MALI: Officially-allowed marketing margins (CFAF/kg)

year	millet/sorhgum			paddy/rice		
	producer	consumer	margin	producer	consumer	margin
1970	9	18	9	13	39	18
1971	9	18	9	13	40	20
1972	10	18	8	13	44	24
1973	16	18	2	13	44	24
1974	16	26	10	20	56	24
1975	16	26	10	20	58	24
1976	16	26	10	20	56	24
1977	18	29	11	23	69	32
1978	20	33	13	25	75	35
1979	25	39	14	30	90	42
1980	35	43	8	38	100	40
1981	43	58	16	50	115	34
1982	45	63	18	55	125	36
1983	50	63	13	60	125	28
1984	50	63	13	65	125	20
1985	55	95	40	70	165	52

NB: Year is first year of season (i.e., 1984=1984/85).
Producer prices are for first half of marketing year; consumer prices for second.
Paddy is converted to rice at 62% to calculate marketing margin.
1985/86 consumer prices are planned.

Table 9 MALI: Wage rates, 1970-1984

	Nominal				Real (base year = 1985)			
	Industrial minimum (SMIG)	Agricultural minimum (SMAG)	Public sector grade 100	Public sector grade 700	Industrial Minimum (SMIG)	Agricultural Minimum (SMAG)	Public Sector Grade 100	Public Sector Grade 700
	(CFAF/hour)		('000 CFAF/month)		(CFAF/hour)		('000 CFAF/month)	
1970	16	14	9.0	54.0	63	53	35.4	212.2
1971	16	14	9.0	54.0	60	50	33.6	201.8
1972	16	14	9.0	54.0	56	47	31.4	188.4
1973	22	19	10.0	55.0	72	64	33.0	181.4
1974	35	32	12.3	80.3	108	101	38.2	188.1
1975	35	32	12.8	80.3	90	83	32.9	207.1
1976	36	34	14.0	89.0	85	78	32.6	207.2
1977	36	34	14.0	89.0	79	73	30.3	192.3
1978	37	34	14.1	114.0	73	68	27.8	224.6
1979	37	34	14.1	114.0	66	61	25.1	202.6
1980	44	44	14.4	125.3	72	73	23.4	204.6
1981	44	44	14.4	125.3	65	65	21.1	184.2
1982	50	50	15.4	125.3	67	68	20.7	169.3
1983	50	50	15.4	125.3	62	63	19.2	156.3
1984	50	50	15.4	125.3	54	54	16.6	135.8
1985	67	68	19.5	143.4	67	68	19.5	143.4

Table 10. MALI: Consumer grain prices in constant terms (CFAF/kg) (base year = 1985)

Year	—millet/sorghum—		—rice (40% brokens)—	
	official	market	official	market
1970	49	82	153	190
1971	65	106	145	212
1972	61	120	139	214
1973	57	189	144	240
1974	54	121	137	245
1975	67	90	144	191
1976	60	82	130	169
1977	56	122	120	208
1978	56	161	134	284
1979	57	95	133	231
1980	63	154	146	249
1981	62	151	146	241
1982	79	113	157	233
1983	78	130	155	202
1984	67	151	135	181
1985	63	131	125	174

NB: Prices are for year of consumption (1970=1969/70); annual average (January-December).
Market prices are for Bamako.
Price index is GDP deflator. 1985 estimated.
1985 market prices are for Jan-Nov.

Table 11. Mali: Indications of price stability
(Based on Bamako market prices)

	Coefficients of variation of actual market prices		Standard deviations of adjusted monthly price indices		Range between maximum and minimum values of adjusted monthly price indices	
	Millet/sorghum	Rice	Millet/sorghum	Rice	Millet/sorghum	Rice
1970	13.7	8.2	..	..	..	..
1971	12.3	14.1	8.7	7.5	31.9	25.3
1972	13.3	8.9	6.1	6.2	22.5	23.8
1973	25.9	16.3	21.9	17.0	67.4	54.4
1974	7.4	10.9	10.2	10.1	38.2	33.9
1975	2.3	6.1	2.6	5.9	10.2	21.7
1976	5.9	7.7	4.3	7.4	14.9	28.2
1977	29.9	24.9	12.6	13.6	49.1	50.0
1978	12.8	15.9	12.8	15.6	39.3	61.5
1979	8.4	8.3	7.0	3.5	21.9	13.4
1980	15.6	2.4	8.9	2.5	27.5	7.8
1981	12.4	8.2	12.8	6.5	47.1	18.1
1982	7.1	4.4	11.2	2.3	30.0	7.3
1983	21.0	0.8	11.6	1.2	32.6	4.9
1984	12.8	3.8	11.9	3.3	39.4	9.6
1985	11.4	0.7	10.6	0.6	30.4	1.3
1970-75 average	12.5	10.8	9.9	9.4	34.1	31.8
std. dev.	7.2	3.5	6.5	4.1	19.2	12.0
1976-80 average	14.5	11.4	9.1	8.5	30.6	34.2
std. dev.	8.4	8.0	3.3	5.3	12.3	22.7
1981-85 average	12.9	3.8	11.6	2.8	35.9	8.2
std. dev.	4.5	2.8	0.7	2.1	6.5	5.8

Notes: Coefficient of variation is the standard deviation of the monthly prices divided by the average for the corresponding year.
The index of adjusted monthly prices is calculated from a moving average of monthly prices (the average of two 12 month periods in which the month in question is the sixth and seventh, respectively), which is used to create a seasonally-adjusted index of monthly prices (actual prices divided by the corresponding moving average price), which is then normalized to center on 100.0 for each year. The result allows comparisons across years without distortions introduced by secular changes in price levels.
1985 figures based on 11 months.

Table 12. MALI: Average millet/sorghum/maize prices in regional capitals

	December-January 1982-83			July-September 1983			December-January 1983-84			July-September 1984			December-January 1984-85		
	price level (CFAF/Kg)	percent of Sikasso price	percent of Bamako price	price level (CFAF/Kg)	percent of Sikasso price	percent of Bamako price	price level (CFAF/Kg)	percent of Sikasso price	percent of Bamako price	price level (CFAF/Kg)	percent of Sikasso price	percent of Bamako price	price level (CFAF/Kg)	percent of Sikasso price	percent of Bamako price
Sikasso	53	..	69	83	..	76	93	..	79	99	..	89	100	..	95
Segou	53	100	69	97	104	79	83	101	80	133	135	94	103	103	98
Mopti	75	143	98	125	135	102	96	104	82	137	139	96	95	95	90
Kayes	75	143	98	129	140	106	152	164	130	140	142	99	104	104	99
Gao & Timbuktu	98	187	128	131	142	108	107	116	92	159	161	112	114	114	109
Bamako	77	146	..	122	132	..	117	126	..	142	144	..	105	105	..

Table 13 MALI: Regional market integration (correlation coefficients based on monthly prices)

Market pairs		Coarse grains		Rice	
		1983	1984	1983	1984
Sikasso	Segou	0.96	-0.06	-0.88	0.20
	Mopti	0.82	-0.23	-0.43	0.60
	Kayes	0.92	-0.19	0.25	0.21
	Bamako	0.91	-0.30	-0.25	-0.59
	Gao & Timbuktu	0.87	0.14	0.04	0.37
Segou	Mopti	0.89	0.74	0.52	0.06
	Kayes	0.86	0.41	0.23	-0.27
	Bamako	0.87	0.84	0.37	0.57
	Gao & Timbuktu	0.85	0.71	0.06	0.68
Mopti	Kayes	0.79	0.42	0.18	-0.08
	Bamako	0.85	0.88	-0.18	-0.22
	Gao & Timbuktu	0.89	0.53	0.71	-0.04
Kayes	Bamako	0.98	0.47	0.25	-0.41
	Gao & Timbuktu	0.88	-0.12	0.21	0.43
Bamako	Gao & Timbuktu	0.87	0.70	0.16	0.15

Notes: 1983 includes December 1982; 1984 includes January 1985.
Source: Bureau pour le Developpement de la Production Agricole, REPORTS.

TABLE 14. MALI: OPAM accounts (CFAF millions)

	1973/74	1974/75	1975/76	1976/77	1977/78	1978/79	1979/80
Grain sales (incl. bags)	4578	3384	4772	6293	4578	4424	3595
Other revenues	6	848	2	65	22	0	0
Total income	4585	4241	4774	6358	4600	4424	3595
Grain purchases	9575	4877	2347	3674	3335	4469	5564
Stock drawdown (- = buildup)	-1408	-2484	1681	1964	-19	-445	-255
Operating expenses	1755	1858	1528	1628	1217	1863	1782
(of which personnel)	..	..	..	..	..	..	288
Financial costs	532	960	1103	1027	235	396	477
(of which interest on long term debt)	..	..	..	..	..	395	395
Depreciation	53	43	63	154	180	329	309
Total expenditures	10506	5253	6720	8446	4948	6611	7877
Net income	-5922	-1012	-1948	-2088	-348	-2188	-4282
Subsidies							
OSRP - Total	5883	0	0	0	0	446	750
- price support	5883	0	0	0	0	51	355
- interest on past debt	0	0	0	0	0	395	395
CNAVS - overhead payments	0	0	0	0	0	0	314
PRMC - Total	0	0	0	0	0	0	0
- overhead payments	0	0	0	0	0	0	0
- price support	0	0	0	0	0	0	0
Other	283	0	0	0	0	114	564
(Depreciation on donated equipment)	..	..	..	..	..	..	..
Total subsidies	5966	0	0	0	0	560	1627
Net income after subsidies	44	-1012	-1948	-2088	-348	-1628	-2655
Memorandum items:							
Gross operating margin (adjusted for stock changes)	-3588	1001	745	856	1282	389	-1714
Net income excluding interest payments on long term debt	-5822	-1012	-1948	-2088	-348	-1793	-3887
Total grain distributed ('000 T)	172	111	95	118	91	80	87
of which: sales of local grain	..	..	..	118	65	80	56
sales of PRMC imported grain	0	0	0	0	0	0	0
OPAM commercial imports	94	15	0	0	10	13	22
Nonwage operating expense and seasonal credit charges per kg of domestic grain sold (CFAF)	..	..	..	..	..	..	28
Cost per kg of domestic grain sold, excluding interest on long-term debt and including overhead payments by CNAVS and PRMC (CFAF)	..	..	..	..	..	..	33

TABLE 14 CON'T. MALI: OPAM accounts (CFAF millions)

	1980/81	1981/82	1982/83	1983/84	1984/85	1985/86
Grain sales (incl. bags)	3846	3366	5733	4368	3418	6132
Other revenues	328	461	9	0	0	0
Total income	4173	3827	5742	4368	3418	6132
Grain purchases	3671	3939	4857	3778	2748	4520
Stock drawdown (- = buildup)	780	-515	628	190	173	42
Operating expenses	1388	1278	1254	1100	925	1248
(of which personnel)	282	270	266	284	292	308
Financial costs	504	489	466	451	39	160
(of which interest on long term debt)	475	455	438	316	0	0
Depreciation	171	200	155	155	157	159
Total expenditures	6483	5391	7159	5874	4040	6127
Net income	-2320	-1564	-1418	-1306	-624	5
Subsidies						
OSRP - Total	0	0	0	0	0	0
- price support	867	295	378	228	84	73
- interest on past debt	475	455	438	316	0	0
CNAVS - overhead payments	328	173	117	151	269	..
PRMC - Total	0	0	0	0	0	..
- overhead payments	0	222	270	326	550	..
- price support	0	452	185	408	0	..
Other	260	17	8	0	0	0
(Depreciation on donated equipment)	..	..	(200)	(200)	(200)	(200)
Total subsidies	588	190	125	151	269	0
Net income after subsidies	-1732	-1374	-1293	-1156	-355	5
Memorandum items:						
Gross operating margin	-605	-59	448	400	497	1570
(adjusted for stock changes)						
Net income excluding interest payments on long term debt	-1845	-1109	-980	-990	-624	5
Total grain distributed ('000 T)	68	64	98	130	205	..
of which: sales of local grain	41	40	39	23	36	68
sales of PRMC imported grain	0	25	35	47	79	..
OPAM commercial imports	18	11	0	7	17	..
Nonwage operating expense and seasonal credit charges per kg of domestic grain sold (CFAF)	28	26	26	41	19	16
Cost per kg of domestic grain sold, excluding interest on long-term debt and including overhead payments by CNAVS and PRMC (CFAF)	30	28	27	40	8	23

Notes: 1984/85 provisional. 1985/86 projected; memorandum items for this year exclude contributions to overhead by PRMS and CNAVS. Depreciation on donated equipment is not included as a financing item for the deficit. Stock drawdown is considered an expense. CNAVS is Comite National d'Aide aux Victimes de la Secheresse.

Table 15. MALI: OPAM margins (CFAF per Kg)

Marketing year	Rice (Office du Niger)		Coarse grains (direct purchases)	
	Buying price	Gross margin	Buying price	Gross margin
1975/76	51	4	17	8
1976/77	51	4	17	8
1977/78	55	14	20	12
1978/79	60	14	22	9
1979/80	75	15	27	11
1980/81	80	18	38	3
1981/82	110	3	50	6
1982/83	115	8	53	8
1983/84	102	21	56	5
1984/85	100	22	56	5
1985/86	128	33	62	31

Notes.
Rice prices refer to average over all qualities but this average is nearly identical to prices for rice with 40 percent brokens.
Buying price for coarse grains is at headquarters of the arrondisement.

Table 16. MALI: Public sector subsidies to grains sector (millions CFAF)

	1973/74	1974/75	1975/76	1976/77	1977/78	1978/79	1979/80	1980/81	1981/82	1982/83	1983/84	1984/85	1985/86
OPAM net deficit	-5922	-1012	-1948	-2088	-348	-2188	-4282	-2320	-1564	-1418	-1306	-624	5
Office du Niger losses	..	..	..	..	..	..	..	..	-175	-285	-809	-1049	-988
Total sector deficit	-5922	-1012	-1948	-2088	-348	-2188	-4282	-2320	-1739	-1703	-2115	-1673	-983
OSRP payments	..	54	238	487	526	475	808	1600	1130	930	1604	234	550

NB: 1984/85 and 1985/86 figures are estimates or projections.

Table 17. MALI: Use of PRMC revenues (millions CFAF)

Marketing year	1981/82	1982/83	1983/84	1984/85 (estimated)	total
Total grains (000 T)	25.1	34.9	46.8	79.0	185.8
of which, rice (000 T)	3.5	16.0	20.0	30.0	69.5
Gross revenue	1415	3390	4117	6952	15874
Handling and transport	317	279	224	395	1215
Overhead charges	222	270	326	550	1368
Net revenue	876	2841	3567	6007	13291
Financing OPAM deficit	452	195	408	0	1055
Price supports	0	0	244	340	584
Import subsidies	0	0	425	1200	1625
Security stock purchases	0	0	0	725	725
Office du Niger interest payments	0	0	0	152	152
Unused balance - year	424	2648	2490	3590	
- cumulative	424	3070	5560	9150	

Table 18. Consumer grains prices in neighboring countries (CFAF/Kg)

Year	Coarse grains										Rice									
	Official					Market					Official					Market				
	Mali	Ivory Coast	Niger	Burkina Faso	Senegal	Mali	Ivory Coast	Niger	Burkina Faso	Senegal 2/	Mali	Ivory Coast	Niger	Burkina Faso	Senegal	Mali	Ivory Coast	Niger	Burkina Faso	Senegal 3/
1970	13		13		32	21		24	32		39	50	45		40	49	74	66	74	53
1971	18		15	20	32	28		27	40		39	50	40		40	57	50	70	62	51
1972	18		17	20	32	35		31	41		40	50	40		40	62	50	73	66	51
1973	18		33	28	37	58		49	60		44	70	60		60	73	63	95	78	64
1974	28		35	30	1/	39		41	68	37	44	125	100		100	79	116	92	93	69
1975	28		35	32	1/	35		39	45	45	58	100	100	80	80	75	108	81	121	122
1976	28		35	30	43/45	38		53	57	54	58	110	80	80	80	73	100	103	144	88
1977	28		45	35	45	57		66	124	61	58	100	80	110	80	97	134	138	174	90
1978	29		45	45	34	83	140-180	88	124	64	69	100	80	125	80	145	100	148	165	88
1979	33		45	57	50	54	140-180	92	135	80	75	100	80	125	80	131	100	160	176	90
1980	39		60	57	55	86	140-180	93	130	73	90	100	80	125	80	153	100	166		93
1981	43		60	69	68	104	160-200	168	167	68	105	110	80	135	82	165	133	208	212	89
1982	58		75	80	64	83	160-200	160		82	115	130	105	135	82	171	130	189		115
1983	63		120	80	64	104	200	105		131	125	130	130	135	105	183	130	194		118
1984	63	1/	120	80	70	140		86-125		147	125	160	160	155	130	177	160-250			130
1985	63		165			131		188-180			125				160	174				
1986	95										165									

1/ No official price set for that year. 2/ Price of millet only. 3/ 100% brokens.

Table 19. MALI: Distribution of OPAM sales

	1975/76	1976/77	1977/78	1978/79	1979/80	1980/81	1981/82	1982/83	1983/84
Total Bamako sales (000 T)	39543	43628	34757	39915	35782	29998	25049	30974	44857
Share of consumption (%)								33	38
Share of all OPAM (%)						37	39	32	36
Share in rice (%)							69 1/	71	59
Sales to public services (000 T)						14700 4/	10518 2/	8821	10643
Share of Bamako sales (%)						49	42	28	24
Share in rice (%)							78 3/	67	65
Sales to cooperatives (000 T)						13200 4/	8757 2/	15105	24113
Share of Bamako sales (%)						44	35	49	54
Share in rice (%)							94 3/	75	56
Sales to others (000 T)						2100 4/	5265 2/	7048	10101
Share of Bamako sales (%)						7	23	23	23
Share in rice (%)							100 3/	68	60

Notes: Split years are November to October.
1/ 1981/82 figure is for OPAM year (September-August).
2/ Calculated from percentage shares. Shares estimated from data for ten months.
3/ First ten months.
4/ Calculated from estimated percentage shares.

Sources: Bureau pour le Developpement de la Production Agricole, Reports.