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Agricultural Credit Cooperatives and the Restructuring of the Supply of Agricultural Credit in Portugal: Healthy Innovation or Institutional Collapse?

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ABSTRACT

This paper documents the radical restructuring of the supply of agricultural credit in Portugal in the 1980s. In the previous decade commercial banks and the Ministry of Agriculture programs dominated the supply of agricultural finance. However by 1986 the national network of agricultural credit cooperatives (Caixas de Credito Agricola Mutuo) had emerged as the major supplier of agricultural credit in the country. Controversies such as portfolio concentration, a high incidence of rescheduled loans, high equity multipliers, low capital asset ratios and unstable and ambiguous rate of return on equity(net worth) have led to the creation of a second tier institution to intermediate excess liquidity in the network and act as a lender of last resort. Statutory limitations on CCAM lending activity and controversies surrounding a new national bank-type role for the second tier institution currently create uncertainty about the future of the CCAM system in Portugal.

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I. Introduction

The institutional framework and supply of agricultural credit in Portugal experienced dramatic changes during the 1980s. In the previous decade government credit channels through the Ministry of Agriculture or through the recently nationalized commercial bank network dominated the institutional supply of credit to agricultural producers in the country. Yet within five years this scenario changed. This paper documents that change and underscores the pattern of decentralization of agricultural credit supply in the 1980s through the extensive network of small agricultural credit cooperatives in the country (hereafter referred to as CCAMs after the Portuguese acronym Caixas de Credito Agricola Mutno). To highlight these changes we look not only at the profile of change in the rural financial markets of the country, but also, at the changes within the structure of assets and liabilities for the CCAMs in a key growth region of Portugal, the Algarve. The results indicate that this decentralized pattern of growth of agricultural credit carries both promise and potential dangers for the future of agricultural finance in Portugal.

II. The Evolution of Agricultural Credit Markets in Portugal in the 1980s

Table 1 sets forth the major indicators of credit activity in the financial markets of Portugal in the first half of the 1980s. Not surprisingly the world recession affected the performance of the credit markets of the country. The first panel underscores the rapid decline in both agricultural and non-agricultural credit from 1980 to 1985, however the decline in the real value of new loans to agriculture was more striking than for non-agricultural credit. Panel 2 illustrates how this decline was reflected as a percent of their respective sectoral GDPs. In general the decline in non-agricultural credit was less severe than the decline in non-agricultural GDP, hence the ratio by 1984 and 1985 had risen in comparison to 1979 or 1980. The agricultural sector (in line 2b) was much less serviced with credit throughout this period with credit to GDP ratios far lower than those registered by the non-agricultural sector. Nevertheless these ratios compare favorably to those for other middle income LDCs but unfavorably for other lower income European countries. By the end of the period the ratio was roughly the same as in the beginning.

The surprising finding stands out in panel 3. It is clear that the relative role of the small scale agricultural credit cooperatives in the total supply of agricultural credit grew appreciably during this period (from roughly one-fifth to two thirds). The balance of this paper is concerned with why this happened, how it changed the financial structure of these cooperatives and the current controversies surrounding their future role as a major supplier of credit to Portuguese farmers.

Despite the gradual liberalization of economic policies in Portugal in the 1980s price controls constrained the rate of return for many agricultural products for most of this period. At the same time declining market demand induced by the recession of the early 1980s added to the risk of agricultural investments. As a result, the commercial bank network began to ration out this risky and low rate of return agricultural clientele from their portfolios. The agricultural credit cooperatives, on the other hand, were prohibited from engaging in similar behavior. By statute they are only allowed to make loans to agriculture since they are limited to making loans to their members who by law can only be farmers. Hence the CCAMs by default began to inherit a proportionately larger share of the agricultural portfolio in the Portuguese economy.

Another development from 1980 to 1986 was the creation of the Agricultural and Fisheries Investment Finance System (SIFAP) in which government rediscount funds were made available at subsidized interest rates largely for medium and long term investment loans in agriculture. This tended to lengthen the portfolio of the CCAMs. The peak years of this financing was 1980-1982 which accounts for the rise in the agricultural credit to GDP ratio in 1981-82 (line 2b in Table 1). However by 1984-5 this financing had declined in importance. Still this alternative source of financing did allow the CCAMs to break away from the rigid control and supervision of the Caixa Geral de Depositos (CGD). This large government savings bank had directed the operation of the several hundred CCAMs scattered throughout the country in their respective municipalities (conselhos) where they were to service the loan needs of their farmer members. This connection with the CGD was gradually removed from 1979 onwards when the network of CCAMs were allowed to mobilize their own deposits and secure longer term loan financing from the SIFAP. The growing financial autonomy of the CCAMs from 1979 onwards forms the basis of the rest of the paper as we evaluate their progress through a case study of the CCAMs in the important Southern region of the country, the Algarve.

III. The Organizational Restructuring of Rural Finance in Portugal: The Case of the Algarve CCAMs

The Algarve is a dynamic agricultural region in Southernmost Portugal in which the growth of horticultural products in intensive greenhouse operations marks the 1980s. Seventeen CCAMs operate in their respective county-sized "conselhos". Five of these credit cooperatives are quite large in assets and liabilities (those located in the conselhos of Monchique, Portimao, Faro, Silves and Lagoa). The other thirteen are of more modest or smaller sizes serving a lower income and less dynamic agricultural clientele. This split also reflects the heterogeneous nature of the national network of CCAMs in which roughly 18-20 credit cooperatives are quite large while the remaining 180 or so active CCAMs are smaller in size. Finally the experience of the Algarve CCAMs offers a valuable insight into the changing structure of assets and liabilities for the more dynamic cooperatives of the national network. This is due to the fact that the Algarve network grew more rapidly than the national network as a whole, increasing its share of total system-wide deposits from 8.6 percent in 1981 to 10.9 percent in 1986 and system-wide loans from 7.9 percent in 1981 to 11.2 percent in 1986.

Tables 2, 3 and 4 summarize the experience of the CCAMs in the Algarve in the first half of the 1980s.

1. Table 2 shows a distinct shift in the structure of assets and liabilities for these 17 credit cooperatives. The source of funding (i.e. liabilities) has shifted from largely outside borrowings (i.e. CGD funds) in 1980 to own deposits by 1986. This reflects the growing financial autonomy of the CCAMs as they have come to rely more on local depositors for loan resources.
2. Table 2 also shows a shift in the structure of assets as loans have declined from 82 percent of total assets in 1980 to 60 percent in 1986. On the other hand, deposits in other CCAMs, in branches of commercial

banks and in the recently created Central Liquidity Fund for the national network (the Caixa Central) have grown from 15.9 percent of total assets in 1980 to 28.5 percent in 1986. Thus as these Algarve CCAMs gained greater autonomy through local deposit mobilization strategies, they became more conservative in their lending practices. Instead of lending out all their resources they hedged by increasing the share of their risk-free assets (i.e.deposits in other institutions).

3. The net worth (or capital) base, except for a brief rise in 1986 generally has been declining during this period as a share of total liabilities. The implications of this small capital base can be seen in Table 3 where unusually high rates of return on equity are recorded for the Algarve group of CCAMs. This in turn grows out of unusually high equity multipliers in line 2 of Table 3 and commensurately low capital asset ratios (line 3). Banks in developed countries rarely record equity multipliers beyond 20 to 1 or capital asset ratios below 6 percent. The CCAM results in Table 3 are usually above or below these two thresholds. In short the CCAMs have leveraged their meager capital base into unusually high asset positions. On the one hand this potentially vulnerable situation is partially offset or minimized by having a good portion of their assets held in risk-free deposits. On the other hand these high rates of return are clearly overstated in that the net income used for this measure includes accrued (but uncollected) loan interest payments as income received (from delinquent or rescheduled loans). Thus higher capital asset ratios are clearly advisable to cover potential default risks.

4. An additional feature of this slim capital base is the highly unstable fluctuation in the rates of return on capital or equity. Lines 1 (a) and (b) in Table 3 illustrate this profile with two measures of dispersion. Table 4 highlights the fact that this instability is in part associated with greater earnings fluctuations for the smaller units in the network. Line one of Table 4 shows there is a negative correlation between the coefficient of variation for the rates of return on equity over the period 1978-86 and the size of the CCAMs (in total assets) in 1986 . Similarly there is a negative tendency (though not statistically significant) between the rank order of rates of return in 1985 and 1986 and the size of the CCAMs.

5. A final feature of the evolution of the Algarve CCAMs merits comment. Personal interviews with CCAM managers in the spring of 1987 by the authors documented fairly high portfolio concentration with a large part of the portfolio concentrated in a few large sized loans in some of the credit cooperatives. Also the common practice of rescheduling loans falling due could be hiding a potential growing loan arrears problem in some CCAMs. Both of these fears have led to the creation of a Central Liquidity Fund to draw off excess liquidity, intermediate between surplus and deficit units, and act as a lender of last resort to the national network of CCAMs. This last function will shortly be reinforced by a guarantee fund to be set up through contributions from the Central Bank of Portugal and the CCAMs themselves.

IV Conclusions: The Emergence of a New System of Rural Finance in Portugal.

The rapid growth of the agricultural credit cooperatives in Portugal illustrate several important lessons about the creation and expansion of financial institutions in rural financial markets of LDCs. First it is clear that given the proper incentives, credit cooperatives can mobilize savings successfully. By the mid 1980s this local resource mobilization allowed the CCAMs to gain financial autonomy and become the major supplier of agricultural credit in the country. The CCAMs in the Algarve still experienced growing excess liquidity with declining loan deposit ratios in the face of the decline in demand for agricultural loans during the resession years of the early to mid 1980s. It was no doubt unwise to loan out all these resources, hence contingency reserves were held in commercial banks until a Central Liquidity Fund was established in 1985 to intermediate these excess funds within and outside the network for the benefit of the CCAMs.

A second lesson from the CCAM experience is that depositors could be placed at risk (i.e. moral hazard) in a widely dispersed network of relatively autonomous credit cooperatives operating in a weak regulatory environment. Thus the authorities view the recently created Central Liquidity Fund (Caixa Central) as not only serving an intermediation role between surplus and deficit units and check clearing functions, but also acting an implicit deposit insurance mechanism (i.e. lender of last resort to cover deposit runs) for the system as a whole. These functions, taken together, presumably justify the reserves that the CCAMs are required to hold in the Central Liquidity Fund.

The third lesson from the CCAM experience highlights both the heterogeneity and uneven performance that can emerge in a dispersed system of agricultural credit cooperatives. Field data from the Algarve documented several large, solid CCAMs with relatively stable returns, and many smaller units with more problematical performances in their statutory areas of operation. Portfolio concentration, a high incidence of rescheduled loans and highly leveraged equity or capital multipliers are evident in a number of these cooperatives. This in part grow out of inexperienced management. However this also results from the statutory constraints that prevent mergers of cooperatives across geographical lines to gain scale economies and limit lending activity to agriculture thereby preventing diversification or scope economies in the loan portfolio.

The CCAM movement is currently at a crossroads in Portugal. Should the set of roughly 220 CCAMs remain locked into their current set of statutory rules limiting scale and scope economies? If so, the Central Liquidity Fund, established to act as a mini central bank on their behalf will have to be given the opportunity to gain the scale economies and diversified portfolio denied to the member cooperatives. Or should the current statutory limitations on CCAM lending and mergers be relaxed to allow these field-level institutions to acquire more wide spread services and financial products. If the latter path is followed the cooperative movement will have to abandon its special tax exempt status and become subject to the same competitive rules governing commercial banks in Portugal. The correct decision is still an open question. This issue merits more detailed field studies and research on the financial viability of the credit cooperatives and the potential scale and scope economies in the CCAM network in Portugal.

Table 1

Financial Market Indicators for Agricultural and Non-Agricultural Credit in Portugal 1979-85-86

	1979 (1)	1980 (2)	1981 (3)	1982 (4)	1983 (5)	1984 (6)	1985 (7)
1. Index of Real Credit (1980 = 100)							
a) Ag. Credit (new loans)		100	71.4	72.6	64.2	50.5	29.1
b) Non-Ag. Credit (new loans)		100	71.2	65.6	67.2	61.6	56.2
2. Share of Vol. of Credit End Period Bal.							
a) Ag. Credit/Total Credit	.04	.03	.04	.04	.03	.03	.03
b) Ag. Credit/Ag. GDP	.24	.26	.41	.39	.38	.32	.28
c) Non-Ag Credit/Non Ag. GDP	.82	.82	.96	.96	.97	.97	.98
3. CCAM Credit Activity (%)							
a) CCAM Loans/Total Ag Credit Bal.	--	--	.21	.32	.39	.45	.50 .67 (1986)

Source: Banco do Portugal, International Financial Statistics

Table 2

Relative Distribution of the Structure of Aggregate Assets and Liabilities for the 17 CCAMs (Agricultural Credit Cooperatives) in the Algarve

	1980 (1)	1981 (2)	1982 (3)	1983 (4)	1984 (5)	1985 (6)	1986 (7)
Assets							
1. Vault Cash	1.2	1.6	2.4	2.0	2.1	1.2	.09
2. Deposits	15.9	18.6	20.9	19.2	21.7	26.4	28.5
3. Loans	82.2	78.8	73.8	69.7	64.2	60.4	60.4
4. Fixed Assets	0.5	0.7	1.8	2.7	3.7	3.9	3.6
5. Other Assets	0.2	0.3	1.1	6.4	8.3	8.1	6.7
	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Liabilities							
1. Sight Deposits	27.2	24.1	30.2	25.2	18.3	17.8	19.8
2. Time Deposits	16.4	22.4	30.1	42.4	45.8	52.2	56.6
3. Borrowings	51.2	49.3	33.4	24.7	26.6	20.0	14.1
4. Other Liabilities	0.2	0.2	2.5	4.6	6.9	6.7	4.7
5. Net Worth	5.0	4.0	3.8	3.1	2.4	3.3	4.8
	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Financial Statements of CCAMs in the Algarve

Table 3

Financial Indicators for the Network of Agricultural Credit Cooperatives in the Algarve 1978-1986

Indicators	1978 (1)	1979 (2)	1980 (3)	1981 (4)	1982 (5)	1983 (6)	1984 (7)	1985 (8)	1986 (9)
1. Return on Equity(%)	21.3	21.2	29.4	27.3	35.7	28.3	50.9	47.4	42.5
a) Coefficient of Variation	0.9	0.7	2.8	1.0	-3.8	2.2	1.4	1.9	0.5
b) Range over Mean	16.5	2.8	11.9	3.4	-15.6	9.8	2.8	6.5	2.1
2. Equity Multiplier ([a])	15.2	16.6	19.9	25.2	26.1	32.8	41.4	30.2	21.0
3. Capital Asset Ratio([b])	6.6	6.0	5.0	4.0	3.8	3.1	2.4	3.3	4.8

Sources: Derived from financial statements of the 17 CCAMs in the Algarve
Notes: [a] Assets/Net Worth
[b] Net Worth/Assets

Table 4

Spearman Rank Correlation Coefficients for Selected Performance Indicators of the 17 CCAMs in the Algarve for Selected Years

Indicator	Correlation Coefficient
1. Correlation between the Coefficient of Variation of ROE (1978-86) and Size of CCAM in 1986	-.56*
2. Correlation between Rate of Return of Equity (ROE) and CCAM Size	
a) 1985	-.18
b) 1986	-.22

Note: * Significant at 10% level of significance

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