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BANK EARNINGS IN PORTUGAL: TREND OR CYCLE?

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1 — Introduction

As of December 31, 1991 (see table 1) banks' assets totaled 14 344 bilion escudos, representing 144 % of the Portuguese gross domestic product. Commercial banks accounted for the largest share of the market (66,8 %), followed by savings banks (26,7 %). Among commercial banks, government-owned companies represented 5197 bilions of escudos in total assets, by far the largest share of the market. Private commercial banks represented 30,8 % of the total assets of the industry, a sharp increase from the 1,1 % share in 1984. Regardless of the type of institution, private banks (both Portuguese and foreign) represented 35,6 % of the market (5100,2 bilion escudos of total assets) against the 64,4 % held by public banks (9244,2 bilion escudos of total assets).

TABLE 1

The Portuguese banking system, activity in Portugal (December 31, 1991)

	Total assets (*) (million esc.)	Staff (#)
Commercial banks	*9 611 216*	*45 529*
Public companies	*5 196 557*	*30 485*
Banco Borges & Irmão	593 173	3 790
Banco Comercial dos Açores	66 657	559
Banco Espírito Santo & Comercial de Lisboa	1 095 855	6 656
Banco Nacional Ultramarino	662 997	4 420
Banco Pinto & Sotto Mayor	951 205	6 019
Banco Português do Atlântico	1 294 209	5 716
União de Bancos Portugueses	532 461	3 325
Private Portuguese	*3 626 860*	*13 049*
Banco Comercial de Macau	121 244	193
Banco Comercial Português	1 087 207	3 408
Banco Comércio e Indústria	304 823	1 356
Banco Fonsecas & Burnay	654 512	3 099
Banco Internacional de Crédito	127 491	331
Banco Internacional do Funchal	228 519	557
Banco Totta & Açores	1 103 064	4 105

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	Total assets (*) (million esc.)	Staff (#)
Private foreign	*787 799*	*1 995*
Algemene Bank Nederland	50 575	34
Banco do Brasil	24 466	56
Banco Bilbao-Vizcaia	173 876	472
Banco Exterior de Espanha	27 653	99
Banque Nationale de Paris	54 613	88
Bank of Tokyo	14 759	14
Barclays Bank	106 807	422
Chase Manhattan Bank	17 522	31
Citibank	37 322	59
Crédit Lyonnais	148 590	601
Generale Bank	34 909	38
Manufacturers Hanover Bank	96 707	81
Investment banks	*903 194*	*1 556*
Public Companies	*472 499*	*957*
Banco de Fomento e Exterior	472 499	957
Private Portuguese	*365 183*	*478*
Banco Mello	53 667	109
Banco Nacional de Crédito Imobiliário	7 416	70
Banco Português de Investimentos	304 100	299
Private Foreign	*65 512*	*121*
Banco Hispano de Investimento	17 573	60
Deutshe Bank de Investimento	47 939	61
Savings Banks	*3 830 005*	*13 970*
Public companies	*3 575 110*	*12 585*
Caixa Geral de Depósitos	3 068 963	9 931
Crédito Predial Português	506 147	2 654
Private Portuguese	*254 895*	*1 385*
Caixa Económica de Lisboa	254 495	1 385
Other economic «Caixas»	n/a	n/a
Mutual agricultural «Caixas»	n/a	n/a
Total	**14 344 415**	**61 055**

(*) Net of fixed assets depreciation.
n/a — Not available.

There are two widely used indicators of performance: return on assets (ROA) and return on equity (ROE). We use these ratios to assess the global performance of the Portuguese banking industry over the 1965-1991 period. Nominal return on assets (NROA) is defined as profits for the year before taxes divided by total assets at year end net of fixed assets depreciation. Nominal return on equity (NROE) is defined as profits for the year before taxes divided by year-end capital plus reserves and balance brought forward ([1]).

(1) Profits before taxes are the sum of profits for the year and taxes, for the 1965-77 period; and equal to profits for the year plus annual provisions for tax purposes, for the years 1978-91. See Mendes (1990) for a detailed explanation of the data set used in this study.

TABLE 2

Nominal return on assets and equity (percentage), 1965-1991: activity in Portugal

	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977
Nominal return on equity (NROE):													
Commercial banks	16,46	14,60	14,20	12,84	12,99	12,04	11,51	10,72	10,40	7,32	— 6,48	2,12	4,85
Investment banks	6,84	6,72	6,64	6,57	6,76	6,85	7,23	5,04	5,85	0,04	3,69	2,84	2,34
Savings banks	1,35	1,64	1,49	1,85	1,42	1,58	1,73	1,87	1,59	1,24	— 0,48	1,04	1,30
All banks	*10,93*	*10,09*	*9,79*	*9,21*	*8,72*	*8,19*	*8,00*	*7,61*	*7,34*	*4,79*	*— 3,54*	*1,87*	*3,33*
Nominal return on assets (NROA):													
Commercial banks	0,90	0,80	0,73	0,64	0,57	0,52	0,47	0,50	0,47	0,32	— 0,34	0,10	0,16
Investment banks	1,11	1,12	1,07	0,99	1,05	0,94	0,83	0,71	0,69	0,00	0,30	0,27	0,26
Savings banks	0,15	0,19	0,18	0,21	0,18	0,19	0,19	0,20	0,18	0,11	— 0,04	0,06	0,06
All banks	*0,78*	*0,72*	*0,66*	*0,59*	*0,53*	*0,49*	*0,44*	*0,46*	*0,44*	*0,27*	*— 0,22*	*0,10*	*0,14*

	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Nominal return on equity (NROE):														
Commercial banks	9,91	7,36	16,08	18,40	15,54	12,23	9,34	9,71	2,13	11,16	10,79	14,12	17,38	17,81
Investment banks	3,94	3,82	5,40	6,84	6,26	2,39	2,42	4,39	8,36	10,86	20,87	20,54	28,11	18,97
Savings banks	1,12	23,40	25,36	46,91	34,56	27,20	20,53	24,07	22,74	35,34	22,23	17,53	16,85	17,50
All banks	*5,69*	*11,63*	*17,43*	*25,56*	*20,77*	*16,40*	*12,79*	*14,19*	*9,43*	*18,18*	*15,20*	*15,57*	*18,43*	*17,86*
Nominal return on assets (NROA):														
Commercial banks	0,23	0,18	0,31	0,34	0,32	0,21	0,17	0,20	0,06	0,32	0,47	0,83	1,17	1,25
Investment banks	0,42	0,36	0,38	0,43	0,40	0,12	0,11	0,21	0,44	0,75	1,48	1,65	4,08	2,56
Savings banks	0,06	0,86	0,84	1,41	1,20	0,84	0,67	0,70	0,69	1,03	1,05	1,09	1,26	1,42
All banks	*0,20*	*0,37*	*0,45*	*0,62*	*0,56*	*0,38*	*0,31*	*0,35*	*0,28*	*0,56*	*0,70*	*0,95*	*1,36*	*1,38*

Table 2 shows before taxes NROA and NROE for banks' activity in Portugal, by type of institution. There seems to be a general decrease in banks' profitability until the mid 70s, followed by an inversion of this trend. Commercial and investiment banks seem to have had an edge relative to savings instittutions in the early years, but this situation was reversed in 1979 and thereafter. It is also clear that banks operating in Portugal have had an increasingly higher need of external funding: NROA has been decreasing relatively more than NROE (2). This means more expensive funding and lower performance levels. This trend was somewhat reversed in the last few years: commercial banks increased their equity to assets ratio from 1,8 % in 1984 to 4,4 % in 1988 and 7 % in 1991; investment banks went from 4,5 % in 1984 to 7,1 % in 1988 and 13,5 % in 1991; and savings banks increased that ratio by 4,8 % between 1984 and 1991 (from 3,3 % to 8,1 %).

The mid sixties and, more recently, 1981-82 and 1987-91 were good years for Portuguese banking. Nominal return on assets for the whole industry peaked in 1965 (0,78 %) and again in the last three years of our sample. Investment banks reach their highest NROA during the years 1988–1991, passing for the first time the values of the years 1965-71. Nominal return on assets for savings banks peaked in 1981-82, and again in the last two years of our sample. Commercial banks were unable to reach in 1988 the earnings performance of the years 1965-73: the 0,47 % NROA ratio in 1988 equals that for 1971 and 1973, but it is still about half of what it was in 1965 (0,9 %). However, commercial banks have been gaining some momentum in the last few years, particularly 1990–1991, the highest values for the sample. Nominal return on equity figures tell the same story regarding performance in the last few years. Recent deregulation, increased competition and the «getting ready for 1993» behavior are possible explanations for this phenomenon.

2 — The effects of inflation on bank earnings

In terms of inflation, the time period under analysis can be characterized by two different subperiods. In the first, comprising the years 1965-73, inflation figures remained at the one-digit level.

The second, after 1973, is characterized by inflation figures in the two-digit level. In the banking industry in particular, inflation affects operating revenue and expenses because banks typically deal in nominal terms. Interest rates on loans are expected to rise with inflation because banks are to be compensated for the lower purchasing power of the principal. Borrowers, on the other hand, accept higher interest rates because of the lower real burden of their future payments. Whether banks gain or lose with inflation is, therefore, a function of the banks interest-sensitive assets and liabilities.

«There are several possible explanations for banks' poor earnings performance during periods of inflation. First, [...] banks' real profits can be hurt by

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(2) Note that NROA = NROE*Equity/Total assets.

fully anticipated inflation when the tax system fails to distinguish between real interest income and inflation premiums. Banks' real profits are hurt still further if inflation is not anticipated. Finally, banks can be hurt by inflation if they hold long-term, fixed-rate assets that are funded by short-term or variable-rate liabilities.» (Federal Reserve Bank of New York, 1986, p. 109.) «In an inflationary situation, banks are born losers. They are net creditors, or, in the language of accountants, they have a positive net monetary position. That is to say, their monetary assets [...] exceed their monetary liabilities. Having more assets that lose value through inflation than liabilities, the real (constant dollar) value of their capital suffers.» (Wallich 1977, p. 12) ([3]).

We can break down banks' total assets (A) into monetary and nonmonetary assets (A_M and A_{NM}, respectively). Liabilities may also be defined as monetary (L_M) and nonmonetary (L_{NM}) ([4]). The average interest rate on these types of assets and liabilities should include a real component and an inflation premium, or:

Interest rate on $A_M = {}^{r}A_M + I_e$;
Interest rate on $A_{NM} = {}^{r}A_{NM} + I_e$;
Interest rate on $L_M = {}^{r}L_M + I_e$; and
Interest rate on $L_{NM} = {}^{r}L_{NM} + I_e$;

where I_e is the expected rate of inflation and r is the real interest rate. Therefore, profits before taxes (Π_{bt}) may be defined as:

(1) $$\Pi_{bt} = (rA_M + I_e)A_M + (rA_{NM} + I_e)A_{NM} - (rL_M + I_e)L_M - (rL_{NM} + I_e)L_{NM}$$

where all the variables are defined as an average over the period. If we assume that firms' nonmonetary items are not affected by inflation ([5]), banks' gain or losses from inflation will be:

(2) $$\text{Net gain (or loss)} = (A_M - L_M)I_a$$

where I_a is the actual inflation rate. Therefore, profits before taxes in **(1)** should be adjusted by **(2)**, that is to say:

(3) $$\text{Adjusted profits} = \textbf{(1)} - \textbf{(2)}$$

([3]) For a more detailed analysis of the effects of inflation on bank profitability see Federal Reserve Bank of New York (1986), Santoni (1986), Spong, Meeker and Myers (1980), and Wallich (1977).

([4]) Nominal or «escudo» denominated assets and liabilities are defined as monetary items.

([5]) We could assume that it is always possible to reevaluate these items at the actual general inflation rate in the economy.

Real (or adjusted) return on assets (RROA) and real (or adjusted) return on equity (RROE) can therefore be defined as:

(4) $$RROA = [(1) - (2)] / A$$

(5) $$RROE = [(1) - (2)] / \text{Equity}$$

Furthermore, assuming that $l_e = l_a$ and $L_{NM} = 0$, **(4)** and **(5)** may be written as:

(4') $$RROA = NROA - [(\text{Equity} - A_{NM}) / A]\ l_a$$

(5') $$RROE = NROE - [(\text{Equity} - A_{NM})/\text{Equity}]\ l_a$$

We use this simple model to assess the effects of inflation on Portuguese banking. Before we present our results, however, a few notes are worth mentioning. First, we assume fully anticipated inflation. Interest rates on loans and deposits were fixed by the Banco de Portugal throughout the period. It is a maintained hypothesis that the central bank correctly assessed inflation and that nominal interest rates were indexed do price increases. Second, the model assumes instantaneous (same period) adjustment for both revenue and expenses, this being shown by the current income statement. To the extent that the effect is delayed rather than instantaneous, some distortions are introduced. Third, nonmonetary assets (particularly fixed assets) are affected by inflation. The real value of these fixed assets, as well as the real value of their depreciation allowances may be significantly affected. We assume that this effect is negligible ([6]). Fourth, the effect of inflation is not the same on stocks and flows; inflation will affect beginning of period stocks during the full period, but that is not the case for the period's addition to the stock of assets and liabilities. We assume a full effect on end of year stocks, therefore overcorrecting for inflation ([7]). Finally, we assume that all liabilities including provisions are monetary items, and that all assets except fixed assets net of depreciation are monetary items.

Table 3 shows inflation adjusted ROA an ROE by type of institution. RROA figures indicate that between 1973 and 1979 inflation adjusted earnings for the banking industry as a whole were negative, but this pattern is not constant across institutions. Negative earnings for investment banks occur during the 1972-1986 period; savings institutions from 1965 to 1978 (except year 1968). Otherwise, the general comments on nominal return on assets and equity apply.

([6]) The legal possibility to reevaluate fixed assets and depreciation allowances and bring their book value closer to the market value supports this assumption.

([7]) We do not want to «lose» the first year of the sample, which we had to if we did not make this assumption.

TABLE 3

Real return on assets and equity (percentage), 1965-1991: acitivity in Portugal

	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977
Real return on equity (RROE):													
Commercial banks	12,90	9,68	11,17	11,64	7,74	9,10	7,11	3,80	2,12	— 7,58	— 17,87	— 10,08	— 13,94
Investment banks	2,75	0,93	3,17	5,14	0,51	3,39	2,16	— 2,59	— 3,48	— 17,74	— 12,04	— 13,26	— 23,91
Savings banks	— 2,12	— 3,29	— 1,61	0,58	— 4,68	— 1,84	— 3,35	— 5,93	— 7,77	— 17,33	— 16,19	— 15,01	— 24,54
All banks	*7,32*	*5,06*	*6,70*	*7,97*	*3,10*	*5,04*	*3,32*	*0,36*	*— 1,34*	*— 11,49*	*— 16,78*	*— 12,06*	*— 18,93*
Real return on assets (RROA):													
Commercial banks	0,71	0,53	0,57	0,58	0,34	0,39	0,29	0,18	0,10	— 0,33	— 0,96	— 0,45	— 0,45
Investment banks	0,44	0,16	0,51	0,78	0,08	0,47	0,24	— 0,36	— 0,41	— 1,78	— 0,98	— 1,28	— 2,62
Savings banks	— 0,24	— 0,38	— 0,19	0,07	— 0,60	— 0,22	— 0,37	— 0,64	— 0,90	— 1,51	— 1,29	— 0,93	— 1,20
All banks	*0,52*	*0,36*	*0,44*	*0,51*	*0,19*	*0,30*	*0,18*	*0,02*	*— 0,8*	*— 0,64*	*— 1,04*	*— 0,64*	*— 0,79*

	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Real return on equity (RROE):														
Commercial banks	— 4,09	— 0,54	9,71	13,92	13,47	14,13	12,37	8,11	2,10	9,23	6,88	7,27	9,31	10,91
Investment banks	— 17,47	—12,59	— 11,86	— 9,58	— 12,84	— 15,34	— 14,71	— 11,58	— 6,67	0,22	12,07	9,61	15,12	7,51
Savings banks	— 19,33	3,38	3,87	23,57	14,83	10,17	5,77	10,59	12,09	28,08	15,91	9,90	7,93	9,46
All banks	*— 11,99*	*— 1,40*	*4,33*	*13,17*	*9,97*	*8,44*	*6,76*	*6,78*	*4,54*	*13,65*	*10,15*	*8,23*	*9,56*	*10,12*
Real return on assets (RROA):														
Commercial banks	— 0,09	— 0,01	0,19	0,26	0,27	0,24	0,23	0,17	0,06	0,26	0,30	0,43	0,63	0,76
Investment banks	— 1,86	— 1,20	— 0,83	— 0,60	— 0,82	— 0,79	— 0,67	— 0,57	— 0,35	0,02	0,86	0,77	2,20	1,01
Savings banks	— 0,97	0,12	0,13	0,71	0,51	0,31	0,19	0,31	0,37	0,82	0,75	0,61	0,59	0,77
All banks	*— 0,42*	*— 0,04*	*0,11*	*0,32*	*0,27*	*0,20*	*0,16*	*0,17*	*0,13*	*0,42*	*0,46*	*0,50*	*0,71*	*0,78*

3 — Model and results

In order to evaluate the existence (or not) of a global performance trend and the effects of the institutional changes occurring during this period of time on ROA and ROE we use a simple model of the form:

(6) ROA_t(or ROE_t) = f (cyclical, trend, other)

where *cyclical* represents the control variable(s) for the earnings cyclical component, *trend* is a simple linear time trend, and *other* represents other control variables. The idea behind such a model is that movements in bank earnings over time should be separated into an underlying time trend and cyclical deviations from that trend; business cycles should be controlled for because it is expected that when the economy goes well so does the banking industry. At the same time, we ought to control for the different institutional settings for the industry.

In our model the cyclical control variable is represented by the deviation of real gross domestic product (*RGDPDt*) from its trend. The production industrial index deviations were also tried but results were not sensitive to the variable used. We use a two step procedure to obtain $RGDPD_t$. In a first stage we regress real GDP (*RGDP*), on a linear time trend (t) and a dummy variable (*D7576*) which controls for the instability associated with the years 1975 and 1976:

(7) $$RGDP_t = \alpha_1 + \alpha_2 t + \alpha_3 D7576 + \text{residual}$$

where $t = 1, \ldots, 27$, and $D7576 = 1$ if the year is 1975 or 1976 and $D7576 = 0$ otherwise ([8]). In a second stage, $RGDPD_t$ was computed as

(8) $$RGDPD_t = RGDP_t - a_1 - a_2 t - a_3\ D7576$$

where the a's represent the estimated α's.

The following variables are used to control for the different institutional settings (in addition to *D7576*): *D7784* (dummy variable equal to 1 if year = 1977, ..., 1984; 0 otherwise), *D8591* (dummy variable equal to 1 if year = 1985, ..., 1991; 0 otherwise), t^*D7576, t^*D7784, and t^*D8591 (interaction terms; they control for the effect of the institutional changes on the time trend) ([9]).

Therefore, our model becomes:

(9) $$ROA_t \text{ (or } ROE_t) = \beta_0 + \beta_1 RGDPD_t + \beta_2 t + \beta_3 D7576 + \beta_4 D7784 + \beta_5 D8591 + \beta_6 t^* D7576 + \beta_7 t^* D7784 + \beta_8 t^* D8591 + \text{residual}$$

([8]) Correction for autocorrelation was required. We assume that residuals follow an AR (1) process.

([9]) The years 1965-91 witnessed profound changes in Portuguese banking. We can identify the period 1965-74 with a «private banking system», the years 1975-1984, with a «public banking system», and the period 1985-1991 with a «hybrid system» (see Mendes, 1990).

where the residual is assumed to follow an AR(1) process. The global earnings trend is given by:

(10) $\partial\ ROA_t$ (or ROE_t) / $\partial t = \beta_2 + \beta_6 D7576 + \beta_7 D7784 + \beta_8 D8591$

and the effect of, for example, the 1985-1991 institutional settings on earnings is:

(11) $\Delta\ ROA_t$ (or ROE_t) / $\Delta\ D8591 = \beta_5 + \beta_8 t$

Equation **(9)** is run for all banks and also by type of institution, using nominal and inflation adjusted ROA and ROE. Parameter estimates are shown in tables 4 and 5 for the NROA and NROE dependent variables ([10]). The model fits the data quite well considering the limited information available and the necessity to conserve on the degrees of freedom. It fits data on commercial and investment banks better that it does for savings institutions.

TABLE 4

Parameter estimates and t-statistics, NROA

Variable	All banks	Commercial banks	Investment banks	Savings banks
Intercept	(*) 0,909	(*) 0,947	(*) 1,506	0,364
	(9,39)	(10,24)	(7,15)	(1,55)
RGDPD	(**) 0,001	0,000	0,0001	(**) 0,002
	(2,28)	(1,01)	(0,59)	(2,26)
D7576	— 3,302	(*) — 5,902	— 3,523	1,595
	(1,60)	(3,16)	(0,46)	(0,38)
D7784	(*) — 1,411	(*) — 0,919	— 1,076	(*) — 2,178
	(4,39)	(3,04)	(1,32)	(2,98)
D8591	(*) — 4,910	(*) — 5,500	(*)— 14,794	— 1,620
	(9,88)	(11,78)	(11,90)	(1,43)
t	(*) — 0,060	(*) — 0,057	(*) — 0,098	— 0,031
	(4,36)	(4,38)	(3,08)	(0,98)
*t**D7576	0,246	(*) 0,444	0,277	— 0,124
	(1,50)	(2,99)	(0,46)	(0,38)
*t**D7784	(*) 0,112	(*) 0,070	0,094	(*) 0,182
	(4,72)	(3,13)	(1,55)	(3,38)
*t**D8591	(*) 0,250	(*) 0,263	(*) 0,694	(**) 0,121
	(11,07)	(12,29)	(13,08)	(2,29)
R2	0,940	0,949	0,896	0,861
N	27	27	27	27
ρ	— 0,095	— 0,054	— 0,703	0,039

(*) Significant at the 1 % level.
(**) Significant at the 5 % level.
(***) Significant at the 10 % level.

([10]) The use of RROA and RROE provided similar parameter estimates.

TABLE 5

Parameter estimates and t-statistics, NROE

Variable	All banks	Commercial banks	Investment banks	Savings banks
Intercept	(*) 14,008	(*) 19,189	(*) 10,684	5,350
	(3,39)	(8,88)	(6,45)	(0,60)
RGDPD	(***) 0,027	(**) 0,023	(**) 0,024	0,049
	(2,00)	(2,27)	(2,88)	(1,72)
D7576	— 39,361	— 70,236	28,428	52,796
	(0,06)	(1,11)	(0,52)	(0,38)
D7784	(*)— 38,774	(*)— 31,163	(**)— 14,437	(**)— 62,305
	(3,14)	(3,94)	(2,31)	(2,35)
D8591	— 9,762	(*)— 56,532	(*)— 76,198	(***) 80,717
	(0,51)	(4,70)	(8,01)	(1,95)
t	— 0,905	(*) — 1,127	(*) — 0,783	— 0,668
	(1,62)	(3,53)	(3,15)	(0,55)
*t**D7576	2,873	5,040	— 2,085	— 3,960
	(0,55)	(1,01)	(0,48)	(0,35)
*t**D7784	(*) 3,187	(*) 2,554	(**) 1,292	(**) 5,317
	(3,51)	(4,34)	(2,76)	(2,72)
*t**D8591	1,339	(*) 3,060	(*) 4,035	— 1,919
	(1,48)	(5,80)	(9,81)	(0,98)
R2	0,798	0,820	0,912	0,794
N	27	27	27	27
ρ	0,109	— 0,378	— 0,542	0,117

(*) Significant at the 1 % level.
(**) Significant at the 5 % level.
(***) Significant at the 10 % level.

The analyis of table 6 confirms the existence of a downward trend in bank earnings, measured by either nominal or adjusted ROA and ROE. From 1965 to 1974, commercial banks' nominal return on assets decreased by 0,057 % a year, investment banks' by 0,098 %, and savings banks' NROA decreased by 0,031 % per year. The negative NROA trend for investment banks continues throughout the 1977-1984 period, being inverted in 1985. The years following the nationalizations and the opening of the industry to the private initiative reversed the downward trend of earnings. The period 1985-1991, in particular, was very good: NROA's trend for the whole banking industry became a positive 0,191 %. Adjusted return on assets figures provide the same general results. Return on equity figures confirm our findings except for the last seven years in our sample. Between 1985 and 1991, the negative trend for savings banks offsets and reverses the positive trend for commercial and investment institutions (NROE), although that is not the case for nominal ROE.

TABLE 6

Earnings trend estimates (in percentage)

	1965-1974	1975-1976	1977-1984	1985-1991
		∂ NROA/∂ *t*		
Commercial banks	— 0,057	0,387	0,013	0,206
Investment banks	— 0,098	0,178	— 0,004	0,596
Savings banks	— 0,031	— 0,156	0,151	0,090
All banks	— 0,060	0,187	0,053	0,191
		∂ RROA/∂ *t*		
Commercial banks	— 0,117	0,331	0,109	0,087
Investment banks	— 0,279	— 0,998	0,337	0,303
Savings banks	— 0,187	— 0,100	0,271	0,006
All banks	— 0,162	0,156	0,157	0,072
		∂ NROE/∂ *t*		
Commercial banks	— 1,127	3,914	1,428	1,934
Investment banks	— 0,783	— 2,868	0,509	3,252
Savings banks	— 0,668	— 4,628	4,650	— 2,587
All banks	— 0,905	1,968	2,282	0,433
		∂ RROE/∂ *t*		
Commercial banks	— 2,417	2,575	4,372	0,010
Investment banks	— 2,764	— 8,541	1,940	3,074
Savings banks	— 2,457	— 8,498	6,239	— 2,145
All banks	— 2,553	— 0,947	4,535	— 0,257

As for the different institutional settings (see table 7), they had a strong impact on banks earnings. The decrease in both ROA and ROE associated with the instability in the years 1975 and 1976 was most clear in the case of commercial banks: evaluated at year 1976, commercial banks' NROA decreased by 0,137 % and NROE diminished 4,715 % relative to the years 1965-73. This picture has changed in the two following periods: there was a positive effect of the institutional settings on both ROA and ROE. Commercial banks were the least affected: evaluated at 1988, commercial banks NROA increased by only 1,073 % against 2,568 % for investment institutions and 1,417 % for savings banks, and NROE by 19,972 % (against 24,673 % and 32,742 % for investment and savings banks respectively).

TABLE 7

Institutional settings estimates (in percentage)

	1976	1981	1988
		Δ NROA/Δ D...	
Commercial banks	— 0,137	0,337	1,073
Investment banks	0,077	0,618	2,568
Savings banks	— 0,019	1,097	1,417
All banks	— 0,098	0,609	1,351

	1976	1981	1988
		Δ RROA/Δ D...	
Commercial banks	— 0,083	1,193	2,187
Investment banks	0,193	2,411	5,604
Savings banks	0,572	2,874	4,484
All banks	0,133	1,721	3,217
		Δ NROE/Δ D...	
Commercial banks	— 4,715	14,817	19,972
Investment banks	1,323	8,814	24,673
Savings banks	1,313	33,409	32,742
All banks	— 2,007	18,601	23,703
		Δ RROE/Δ D...	
Commercial banks	— 3,291	30,634	45,070
Investment banks	2,183	20,465	53,743
Savings banks	1,543	41,660	62,482
All banks	— 0,188	31,510	52,946

4 — Conclusions

It is therefore apparent that, despite the concentration movements of the years 1965-73, bank earnings were rapidly sliding down (overall NROA went from 0,78 % in 1965 to 0,44 % in 1973; NROE decreased from 10,93 % to 7,34 % for those same years). However, the restructuring process following the 1974 «carnation revolution» and the deregulation movements associated with the more recent years seem to have turned things around. Whether or not Portuguese banks are ready to meet the challenges of a unified Europe is a different question ([11]).

([11]) For a review of the problems and perspectives of Portuguese banking see Borges (1988).

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