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PhD Thesis

Presented by

Christos Staikouras

European Banking Industry: Sources of Income and Profitability

In fulfilment of the requirement for the degree of

Doctor of Philosophy

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List of Annexes

Annex 1: Ratios for Evaluating Performance	3
Annex 2: Profitability Measures	6
Annex 3: Profitability Measures used by Several Authors	7
Annex 4: Balance sheet structure of banking industry (Fitch-IBCA database)	10
Annex 5: Five-firm concentration in European Union countries (1993-1998) (by total assets)	14
Annex 6: Foreign market penetration	15
Annex 7: Income Statement of European Banking Industries (OECD Database)	17
Annex 8: Balance Sheet and Income Statement Structure of European Banking Sector (Fitch-IBCA Database)	33
Annex 9: Correlation Matrix for the several Types of Financial Institutions	43
Annex 10: OLS Estimates (independent variable: funds gap)	45
Annex 11: Within (fixed effects) estimates (independent variables: level and variability of interest rates, funds gap)	45
Annex 12: Within (fixed effects) estimates (independent variables: level and variability of interest rates, funds gap, concentration)	46
Annex 13: Within (fixed effects) estimates of the several types of financial institutions (independent variables: funds gap)	47
Annex 14: Within (fixed effects) estimates for the several types of financial institutions (independent variables: level and variability of interest rates, funds gap, their lagged values, concentration, and asset size)	49
Annex 15: Main types of financial institutions for each EU country	53
Annex 16: Unbalanced results for non-interest income	55
Annex 17: Several Categories of Non-Interest Income	60

Annex 18: Bank Performance (Determinants – Measures – Method)	61
Annex 19: Total (plain) OLS estimates (independent variables: Gap, EA, LLP/TL)	81
Annex 20: Total (plain) OLS estimates (independent variables: Gap, EA, LLP/TL, MSH, H)	82
Annex 21: Total (plain) OLS estimates (independent variables: lnassets, LA, OA, Gap, EA, LLP/TL, MSH, H)	83
Annex 22: Total (plain) OLS estimates for large and small banks (independent variables: Gap, EA, LLP/TL)	84
Annex 23: Total (plain) OLS estimates for the different types of financial institutions (independent variables: Gap, EA, LLP/TL)	85
Annex 24: The variance components (random effects) estimates for cooperative banks (independent variables: Gap, EA, LLP/TL)	86
Annex 25: The variance components (random effects) estimates for cooperative banks (independent variables: lnassets, LA, OA, MSH, H, Gap, EA, LLP/TL)	87

Annex 1: Ratios for Evaluating Performance

Portfolio Composition

Cash and due from Banks/Total Assets

Cash and due from Banks/Average Demand Deposits

Short-term Assets/Demand Deposits

Government Securities/Total Assets

State and Municipal Securities/Total Assets

Total Loans/Total Assets

Commercial and Industrial Loans/Total Assets

Real Estate Loans/Total Assets

Loans to Individuals/Total Assets

Deposits/Total Liabilities

Liquid Assets/Total Assets

Time and Savings Deposits/Total Deposits

Average Net Loans/Average Deposits

Average Purchased Liabilities/Average Total Assets

Average Short-term assets/Average Net Loans

Risky Assets/Total Assets

Deposits with Foreign Banks/Total Assets

Earning Assets/Total Assets

Real Estate Loans/Total Loans

Commercial and Industrial Loans/Total Loans

Consumer Loans/Total Loans

Demand Deposits/Total Deposits

Total Deposits/Total Assets

(Total Deposits-Total Demand Deposits)/Total Deposits

Demand Deposits/Total Liabilities

Government Securities/Total Securities

Bank Capital

Equity Capital/Total Assets

Equity Capital plus Subordinated Notes and Debentures/total Assets

Equity Capital/Risk Assets

Purchased Funds/Total Assets

Loans/(Capital+Reserves)

Operating Efficiency

Operating Expenses/Operating Income

Operating Expenses/Total Assets

Salaries and Wages/Total Assets

Other Operating Expenses/Total Assets

Loan Recoveries/Total Loans

(Loan Recoveries-Loan Charge-offs)/Total Loans

Loan Loss Provisions/Total Assets

Loan Loss Provisions/Net Charge-offs

Allowance for Loan Losses/Loan Loss Provisions

Loan Charge-offs/Total Loans

Loan Charge-offs/Net Income

Salaries/Employees

Personnel Expenses/Number of Employees

Number of Employees/Average Total Assets

Occupancy Expenses/Average Total Assets

Occupancy Expenses/Total Revenues

Non-interest Expenses/Net Income

Loan Fee Income/Net Income

Non-interest Income/Net Income

Non-interest Expenses/Total Operating Income

Non-interest Expenses/Total Operating Expenses

Non-interest Income/Total Operating Income

Loan Fee Income/Average Net Income

Non-interest Income/Average Total Assets

Total Operating Income/Average Total Assets

Total Operating Income/Total Assets

Demand deposit Service Charge/Total Operating Income

Interest and Fees on Loan/Total Operating Income

Total Operating Income/Total Operating Expenses

Interest Expenses/Interest-Bearing Liabilities

Non-interest Expenses/Total Assets

Prices of Bank Services

Interest and Fees on Loans/Total Loans

Service charges on Deposits/Total Demand Deposits

Interest on Time and Savings Deposits/Total Time and savings Deposits

Interest paid on Deposits/Total Deposits

Annex 2: Profitability Measures

$$\text{Profit Margin} = \frac{\text{Net Income}}{\text{Total Revenue}}$$

$$\text{Return on Assets} = \frac{\text{Net Income}}{\text{Total Assets}}$$

$$\text{Return on Equity} = \frac{\text{Net Income}}{\text{Total Equity}}$$

$$\text{Earnings per Share} = \frac{\text{Market Share Price}}{\text{Earnings per Share}}$$

$$\text{Net Interest Margin} = \frac{\text{Interest Income} - \text{Interest Expense}}{\text{Total Assets (or Earning Assets)}}$$

$$\text{Return on Capital} = \frac{\text{Net Income}}{\text{Book Value of Capital}}$$

$$\text{Value Added Return} = \frac{\text{Net Income before Taxes} + \text{Staff Expenses}}{\text{Total Assets}}$$

$$\text{Revenue - to - Income Ratio} = \frac{\text{Total Operating Income}}{\text{Net Income after Taxes}}$$

$$\frac{\text{Current Operating Income}}{\text{Total Assets (or Capital Accounts)}}$$

$$\text{Net Non - interest Margin} = \frac{\text{Non - interest Income} - \text{Non - interest Expense}}{\text{Total Assets}}$$

Annex 3: Profitability Measures used by Several Authors

Author (s)	ROA	ROE	ROC	Other Measures
Edwards and Heggestad (1963)	✓			
Kaufman (1965)				✓
Hester and Zoellner (1966)	✓			✓
Haslem (1968)			✓	
Haslem (1969)			✓	
Brimmer (1971)	✓		✓	✓
Emery (1971)		✓		
Fraser and Rose (1971)			✓	
Fraser and Rose (1972)	✓		✓	✓
Elliott (1972)		✓		✓
Boorman (1974)	✓		✓	✓
Yeats (1974)	✓		✓	
Gilbert and Peterson (1975)	✓		✓	
Mingo (1975)	✓		✓	
Mayne (1976)		✓		✓
McCall and Peterson (1977)	✓		✓	✓
Heggestad (1977)	✓			
Richetts and Stover (1978)	✓			✓
Francis (1978)		✓		
Short (1979)			✓	
Karna (1979)		✓	✓	
Opper (1981)	✓	✓		✓

Cole (1981)	✓			✓
Rhoades and Rutz (1982)	✓			
Kwast and Rose (1982)	✓			
Sinkey (1983)		✓		
Smirlock, Gilligan, and Marchall (1984)				✓
Curry and Rose (1984)	✓	✓		✓
Schuster (1984)	✓			
Wall (1985)	✓	✓		
Meinster and Elyasiani (1985)		✓		✓
Smirlock (1985)	✓	✓	✓	
Clark (1986)	✓	✓		
Arshadi and Lawrence (1987)	✓			
Whalen (1988)		✓		
Barry (1988)	✓	✓		✓
Bourke (1989)	✓			✓
Boyd and Graham (1991)	✓	✓		
Hannan (1991)	✓		✓	
Molyneux and Thornton (1992)	✓		✓	✓
Davis, Gouzouli, et.al. (1993)		✓		✓
Molyneux (1993)	✓			
Schranz (1993)				✓
Boyd and Runkle (1993)	✓			✓
Lloyd-Williams, Molyneux, Thornton (1994)	✓			
Berger (1995)	✓	✓		

Woosley and Baer (1995)	✓	✓		✓
Zimmerman (1996)	✓			
Vennet (1996)	✓	✓		✓
Margan and St-Onge (1997)	✓			
Miller and Noulas (1997)	✓			
Samolyk (1997)	✓			
Peristian (1997)	✓			
Neely and Wheelock (1997)	✓	✓		✓
Hoggarth, Milne, and Woods (1998)	✓			✓
DeYoung and Hannan (1998)	✓			
Williams (1998)	✓			

Annex 4: Balance sheet structure of banking industry (Fitch-IBCA Database)

Loans/Total Assets [%]

	1992	1993	1994	1995	1996	1997	1998	1999
Austria	59.21	48.69	49.31	50.41	50.66	53.10	54.66	62.45
Belgium	38.66	37.65	36.92	36.26	35.15	34.60	37.44	40.34
Denmark	54.56	59.68	60.77	58.98	57.11	57.11	56.51	59.50
Finland	55.50	53.03	45.64	49.31	52.54	52.43	58.56	62.30
France	46.66	43.76	42.47	41.12	39.31	39.60	41.54	41.75
Germany	65.11	61.97	62.47	62.63	61.38	58.71	55.80	54.46
Greece	40.92	30.35	34.01	35.22	36.44	35.25	38.28	35.72
Ireland	63.16	59.88	59.09	58.33	60.03	60.82	54.53	52.79
Italy	49.00	55.36	49.86	51.49	50.08	50.98	52.84	56.78
Luxembourg	26.41	24.99	21.45	21.30	20.61	22.15	20.78	21.11
Netherlands	60.88	61.45	61.87	61.10	61.74	60.01	57.29	58.76
Portugal	42.70	41.01	40.02	39.62	42.16	44.63	52.11	56.20
Spain	50.21	43.09	43.40	42.95	44.43	47.29	50.29	52.18
Sweden	79.89	76.95	76.23	69.48	67.20	71.02	70.80	67.76
UK	61.04	57.99	56.92	56.45	58.82	54.33	53.76	52.20
EU countries	53.55	52.00	51.06	50.75	50.76	50.61	50.76	51.70
EMU countries	50.70	49.82	49.15	49.08	48.45	49.20	49.52	50.71
Switzerland	60.10	55.68	55.46	50.78	47.07	33.66	34.68	25.79
Japan	65.69	65.26	64.98	66.28	66.38	63.47	64.93	
US	62.05	57.53	56.85	57.92	59.64	58.95	60.00	60.30

Other Earning Assets/Total Assets [%]

	1992	1993	1994	1995	1996	1997	1998	1999
Austria	35.99	46.92	46.02	44.81	44.53	42.07	40.36	32.46
Belgium	56.23	57.97	59.06	59.36	60.52	60.36	56.75	52.99
Denmark	38.79	36.71	35.01	36.94	37.35	35.19	35.25	33.15
Finland	31.54	33.78	44.46	41.73	40.17	38.73	31.42	27.68
France	45.76	48.98	50.68	51.46	53.03	52.52	49.59	44.52
Germany	30.96	34.48	33.59	33.33	34.42	36.45	39.01	37.75
Greece	36.17	61.61	57.73	57.96	57.29	56.73	55.07	56.86
Ireland	28.27	31.43	32.80	34.54	33.48	33.10	35.44	30.93
Italy	36.93	34.88	39.80	38.07	40.14	39.60	37.43	31.52
Luxembourg	70.30	72.12	75.69	75.58	76.23	74.20	75.36	74.54
Netherlands	33.34	32.71	32.80	34.05	33.22	34.52	37.51	37.21
Portugal	37.77	40.72	49.92	50.21	47.81	45.23	38.61	33.49
Spain	39.92	48.29	47.09	47.90	46.23	43.67	39.89	37.22
Sweden	14.65	17.02	18.51	20.53	25.02	21.29	22.14	23.64
UK	29.33	33.41	34.16	33.86	33.07	36.65	37.39	39.84
EU countries	38.37	41.01	42.15	42.19	42.33	42.26	41.79	38.97
EMU countries	41.42	43.42	44.34	44.34	44.89	44.06	43.30	39.47
Switzerland	32.96	36.92	36.51	37.29	40.40	48.96	44.28	52.51
Japan	30.73	31.08	31.25	29.42	28.64	30.09	27.76	
US	25.47	31.95	33.74	32.82	30.42	31.19	30.05	28.67

Customers and Short Term Funds (Deposits)/Total Assets [%]

	1992	1993	1994	1995	1996	1997	1998	1999
Austria	83.48	77.15	73.41	72.26	72.20	70.34	70.21	72.58
Belgium	90.75	90.81	90.98	90.46	89.88	88.79	87.49	86.67
Denmark	80.05	56.18	59.12	58.13	58.79	57.01	54.57	53.90
Finland	58.44	62.69	72.04	74.69	77.99	78.76	78.41	78.11
France	80.25	80.38	81.76	80.21	78.99	78.01	78.08	72.12
Germany	66.01	68.10	69.57	65.90	64.92	63.14	63.95	55.81
Greece	83.43	85.80	85.84	87.07	88.99	88.24	89.69	86.71
Ireland	86.22	84.07	84.07	85.04	85.03	86.51	80.59	73.37
Italy	75.37	80.99	75.60	75.40	71.83	69.37	67.34	64.02
Luxembourg	87.71	89.02	88.80	86.82	85.71	84.27	82.71	77.99
Netherlands	76.86	75.91	75.39	74.69	72.10	73.26	73.36	74.90
Portugal	83.63	85.05	85.65	87.27	84.97	84.06	83.64	79.59
Spain	83.16	84.86	84.54	85.07	84.06	83.92	82.52	80.02
Sweden	47.26	43.20	43.55	51.60	48.22	52.25	51.24	49.55
UK	83.71	82.47	80.57	79.06	79.19	77.70	77.73	78.22
EU countries	77.95	78.08	77.39	76.04	74.87	73.15	72.91	69.71
EMU countries	78.02	78.78	78.17	76.62	75.12	73.18	72.96	68.47
Switzerland	70.87	72.29	72.89	71.40	74.41	71.13	66.21	68.96
Japan	79.61	79.22	78.87	78.52	78.70	76.28	77.25	
US	39.28	67.66	61.28	59.53	60.43	59.69	58.13	62.43

Equity/Total Assets [%]

	1992	1993	1994	1995	1996	1997	1998	1999
Austria	5.05	4.35	3.90	3.98	3.88	4.01	4.07	5.23
Belgium	3.00	3.13	3.14	3.07	3.13	3.23	3.52	3.16
Denmark	6.51	5.15	6.12	6.55	6.61	6.22	6.08	5.34
Finland	5.20	4.89	5.34	4.94	4.94	4.55	5.03	5.19
France	3.95	4.13	4.30	4.26	4.10	4.05	4.26	4.25
Germany	4.98	4.56	4.52	4.40	4.14	3.65	3.61	2.90
Greece	5.39	3.42	4.37	4.17	4.39	4.62	5.41	8.43
Ireland	5.47	6.30	6.79	7.24	7.26	5.79	6.35	6.04
Italy	6.14	6.11	6.19	5.97	5.84	5.81	6.38	5.58
Luxembourg	3.43	3.23	3.28	3.32	3.30	3.14	3.61	4.80
Netherlands	4.39	4.56	4.70	4.68	5.24	4.67	4.20	4.46
Portugal	6.83	6.15	5.68	5.39	5.36	5.04	5.45	5.92
Spain	6.32	5.37	5.70	5.49	5.79	6.04	6.43	6.79
Sweden	3.43	3.77	4.31	4.40	4.02	4.07	4.10	4.04
UK	4.44	4.63	5.02	5.02	5.21	4.86	4.85	5.00
EU countries	4.67	4.63	4.78	4.68	4.69	4.43	4.54	4.50
EMU countries	4.75	4.65	4.73	4.60	4.57	4.34	4.46	4.35
Switzerland	6.51	6.61	6.78	5.96	4.85	3.35	3.82	3.47
Japan	3.59	3.67	3.68	3.43	3.40	3.12	4.28	
US	6.13	7.32	7.03	7.36	7.57	7.77	7.93	8.01

Annex 5: Five-firm concentration in European Union countries (1993-1998) (by total assets)

	1993	1994	1995	1996	1997	1998
Luxembourg	29.37	29.36	28.49	29.10	28.35	32.11
Finland	97.68	96.67	97.80	96.69	90.90	91.51
Netherlands	86.21	85.63	83.51	82.92	86.90	89.80
Ireland	88.64	84.44	78.71	72.59	72.77	71.46
Greece	98.04	91.98	91.61	89.37	79.33	80.17
Sweden	79.36	73.31	72.56	67.27	73.50	75.46
Belgium	72.94	70.41	71.11	71.15	67.60	82.68
Denmark	88.13	80.02	77.68	78.35	79.01	78.65
Portugal	59.06	59.61	62.54	59.79	58.12	62.05
Austria	82.57	80.14	58.11	62.07	60.46	60.21
UK	53.12	51.54	48.19	43.31	49.21	47.99
Spain	55.90	56.84	56.34	55.86	57.78	59.58
France	46.86	41.96	41.33	44.97	43.42	44.03
Italy	36.46	37.96	36.26	39.64	37.75	47.04
Switzerland	81.82	80.58	78.66	86.79	89.53	87.22
Germany	22.54	28.35	29.08	29.96	35.38	39.31
EU	12.24	10.96	10.71	11.30	10.95	12.10
Japan	32.57	32.61	32.87	36.92	38.23	33.13
US	19.49	19.31	19.37	21.58	21.71	24.25

Source: IBCA database and own calculations.

- The UK figures are for UK-owned banks and building societies. The respective figures for all banks incorporated in the UK (i.e. including the foreign-owned banks) would only account for 31% in 1998.
- Domestic and foreign banks are included but not the investment banks.

Annex 6: Foreign market penetration

A) Assets to non-banks													
Countries	Cross-border as % of total									% change domestic credit		% change cross-border	
	1992	1993	1994	1995	1996	1997	1998	%change 97/92	%change 98/92	97/92	98/92	97/92	98/92
Austria	2.9	3.8	4.0	4.9	5.3	5.7	n.a.	92.8	n.a.	9.8	n.a.	117.7	n.a.
Belgium	8.2	9.7	8.5	9.0	10.4	12.3	n.a.	50.3	n.a.	8.4	n.a.	70.6	n.a.
France	2.1	2.7	2.4	2.5	2.6	3.8	4.3	81.3	104.7	10.6	8.6	104.2	127.4
Germany	5.3	6.2	5.5	6.1	6.3	6.8	6.6	28.9	24.4	30.5	29.2	70.9	62.9
Italy	8.7	10.0	10.0	10.5	10.6	13.1	14.6	50.2	67.6	-3.9	-7.0	51.7	66.6
Netherlands	14.5	16.2	14.1	13.1	13.5	14.3	n.a.	-1.7	n.a.	38.4	n.a.	35.5	n.a.
Spain	3.3	5.7	4.7	5.6	6.0	6.6	6.9	99.4	109.0	7.5	5.5	121.9	129.1
Switzerland	5.8	4.9	4.6	4.8	5.8	6.0	n.a.	4.7	n.a.	20.5	n.a.	26.5	n.a.
UK	5.9	10.6	8.8	9.9	10.3	10.9	10.8	82.9	82.6	46.6	53.3	183.1	195.3
USA	6.4	6.8	6.4	8.0	9.1	9.6	9.5	49.3	47.7	30.7	32.4	101.9	102.2
B) Liabilities to non-banks													
Countries	Cross-border as % of total									% change domestic credit		% change cross-border	
	1992	1993	1994	1995	1996	1997	1998	%change 97/92	%change 98/92	97/92	98/92	97/92	98/92
Austria	3.2	3.1	3.0	2.9	3.6	3.8	4.2	16.6	30.7	6.2	2.0	24.5	34.7
Belgium	16.9	18.0	19.3	19.4	18.4	16.7	16.7	-0.9	-1.3	12.0	10.1	10.8	8.4
France	4.7	4.6	4.7	4.7	5.5	5.6	5.8	19.0	24.9	-5.8	-8.0	13.1	16.4
Germany	13.3	15.1	14.1	13.0	12.1	11.5	12.8	-13.8	-3.8	17.8	14.8	-0.6	9.8
Italy	6.5	6.9	7.2	7.7	7.8	8.8	9.3	35.8	42.2	-4.0	-8.5	33.6	34.1
Netherlands	20.6	22.1	24.6	27.0	28.5	30.5	31.8	48.4	54.7	13.5	12.2	92.5	102.3
Spain	3.6	4.4	4.1	5.0	5.2	7.0	8.6	88.9	137.2	7.4	2.4	114.0	156.2
Switzerland	18.0	16.4	13.3	12.3	13.9	15.3	16.2	-15.0	-10.0	24.0	20.3	2.1	5.9
UK	7.8	8.4	8.8	9.0	8.4	9.6	9.7	22.1	23.6	60.8	67.0	100.0	110.6
USA	5.8	5.4	6.1	6.1	6.7	6.9	6.5	20.7	13.6	28.1	31.7	56.4	50.9

Note: This table represents the cross-border positions of reporting banks vis-à-vis individual countries and vis-à-vis the non-bank system. Cross-border position covers both domestic and foreign positions with non-residents. For the list of reporting countries refer to Historical Data and Methodology of the BIS.
 Sources: BIS, CEPR, Monitoring European Integration, 1999.

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Annex 7: Income Statement of European Banking Industries (OECD Database)
All banks
Net Interest Income

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
<i>Austria</i>	NA	NA	NA	NA	NA	1.76	1.78	1.73	1.77	1.81	1.85	2.11	1.90	1.72	1.66	1.52
<i>Belgium</i>	NA	NA	1.73	1.72	1.80	1.68	1.60	1.57	1.49	1.48	1.51	1.35	1.27	1.23	1.22	1.07
<i>Denmark</i>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<i>Finland</i>	2.84	2.53	2.42	2.42	2.08	2.17	2.06	1.84	1.95	1.63	1.20	1.65	1.64	1.78	1.73	1.78
<i>France</i>	NA	NA	NA	NA	NA	NA	2.00	1.82	1.74	1.64	1.56	1.33	1.27	1.17	1.01	0.84
<i>Germany</i>	2.48	2.64	2.50	2.41	2.39	2.22	2.14	2.01	1.96	2.04	2.07	2.12	2.18	2.02	1.89	1.73
<i>Greece</i>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<i>Ireland</i>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.97	2.53	2.18
<i>Italy</i>	NA	NA	NA	NA	NA	3.29	3.36	3.31	3.36	3.29	3.25	2.99	2.67	2.85	2.71	2.39
<i>Netherlands</i>	NA	2.40	2.23	2.20	2.42	2.55	2.53	2.11	1.82	1.78	1.83	1.82	1.89	1.84	1.84	1.80
<i>Portugal</i>	NA	NA	NA	2.37	2.76	3.41	3.66	4.12	NA	4.97	4.09	3.47	2.78	NA	NA	NA
<i>Spain</i>	4.19	4.34	4.16	3.94	4.08	4.18	4.20	4.07	3.95	3.94	3.63	3.29	3.01	2.76	2.61	2.52

<i>Sweden</i>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<i>UK</i>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<i>US</i>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

In Italy the following categories are included under this heading: limited company banks, co-operative banks, main mutual banks, central credit institutions, branches of foreign banks.

Non Interest Income (net)

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
<i>Austria</i>	NA	NA	NA	NA	NA	0.43	0.49	0.67	0.79	0.86	0.93	0.82	0.77	1.12	1.15	1.14
<i>Belgium</i>	NA	NA	0.32	0.39	0.43	0.46	0.52	0.46	0.34	0.39	0.42	0.54	0.45	0.51	0.54	0.63
<i>Denmark</i>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<i>Finland</i>	1.85	1.75	1.84	2.01	1.90	1.92	2.34	1.73	1.66	1.76	1.78	2.27	1.44	1.35	1.69	1.49
<i>France</i>	NA	NA	NA	NA	NA	NA	0.48	0.45	0.51	0.58	0.81	0.95	0.77	0.98	0.90	0.96
<i>Germany</i>	0.54	0.53	0.55	0.63	0.61	0.56	0.50	0.69	0.72	0.65	0.65	0.66	0.52	0.54	0.50	0.53
<i>Greece</i>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<i>Ireland</i>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.26	1.20	1.11
<i>Italy</i>	NA	NA	NA	NA	NA	1.06	1.04	0.92	0.98	0.95	0.68	1.10	0.79	0.72	0.90	0.98
<i>Netherlands</i>	NA	0.74	0.73	0.76	0.76	0.85	0.90	0.89	0.72	0.75	0.75	0.93	0.76	0.92	1.03	1.18
<i>Portugal</i>	NA	NA	NA	0.75	0.61	0.76	0.80	0.80	NA	1.16	1.34	1.32	1.04	NA	NA	NA
<i>Spain</i>	0.70	0.68	0.65	0.73	0.78	0.90	1.01	0.87	0.88	0.92	0.92	1.15	0.82	0.83	0.95	1.04
<i>Sweden</i>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<i>UK</i>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<i>US</i>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Operating Expenses

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
<i>Austria</i>	NA	NA	NA	NA	NA	1.53	1.55	1.57	1.66	1.73	1.78	1.86	1.74	1.97	1.94	1.85
<i>Belgium</i>	NA	NA	1.44	1.44	1.47	1.48	1.37	1.36	1.32	1.31	1.32	1.28	1.23	1.18	1.16	1.09
<i>Denmark</i>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<i>Finland</i>	3.81	3.53	3.58	3.50	3.26	3.29	3.24	3.03	2.94	4.17	5.67	5.34	4.31	3.52	3.03	2.39
<i>France</i>	NA	NA	NA	NA	NA	NA	1.74	1.64	1.63	1.55	1.58	1.47	1.46	1.41	1.34	1.24
<i>Germany</i>	1.77	1.80	1.81	1.84	1.87	1.83	1.79	1.75	1.74	1.75	1.75	1.74	1.64	1.63	1.53	1.45
<i>Greece</i>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<i>Ireland</i>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.51	2.15	1.92
<i>Italy</i>	NA	NA	NA	NA	NA	2.84	2.78	2.65	2.70	2.76	2.59	2.50	2.38	2.44	2.42	2.33
<i>Netherlands</i>	NA	1.93	1.85	1.86	2.10	2.33	2.32	1.97	1.75	1.70	1.74	1.83	1.78	1.85	1.94	2.06
<i>Portugal</i>	NA	NA	NA	2.17	2.24	2.26	2.27	2.30	NA	2.75	2.78	2.51	2.22	NA	NA	NA
<i>Spain</i>	3.40	3.24	3.09	2.99	3.26	3.14	3.34	3.01	2.95	2.85	2.75	2.65	2.28	2.27	2.21	2.19
<i>Sweden</i>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<i>UK</i>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<i>US</i>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Staff Costs

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
<i>Austria</i>	NA	NA	NA	NA	NA	0.90	0.91	0.92	0.99	1.03	1.06	1.09	1.02	1.04	1.02	0.97
<i>Belgium</i>	NA	NA	0.77	0.75	0.75	0.73	0.69	0.68	0.67	0.66	0.67	0.78	0.75	0.72	0.70	0.62
<i>Denmark</i>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<i>Finland</i>	1.57	1.48	1.88	1.77	1.57	1.56	1.42	1.27	1.13	1.12	1.04	0.94	0.95	0.86	0.92	0.71
<i>France</i>	NA	NA	NA	NA	NA	NA	0.96	0.89	0.88	0.82	0.84	0.81	0.79	0.76	0.73	0.68
<i>Germany</i>	1.19	1.18	1.19	1.18	1.18	1.20	1.18	1.15	1.11	1.11	1.11	1.07	1.00	0.99	0.91	0.84
<i>Greece</i>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<i>Ireland</i>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.48	1.25	1.06
<i>Italy</i>	NA	NA	NA	NA	NA	1.86	1.83	1.77	1.77	1.80	1.66	1.58	1.55	1.56	1.56	1.46
<i>Netherlands</i>	NA	1.27	1.22	1.21	1.27	1.39	1.37	1.13	1.01	0.98	1.01	1.01	0.98	1.02	1.04	1.10
<i>Portugal</i>	NA	NA	NA	1.54	1.56	1.56	1.51	1.49	NA	1.62	1.58	1.40	1.24	NA	NA	NA
<i>Spain</i>	2.28	2.16	2.04	1.98	2.27	2.11	2.31	1.96	1.84	1.73	1.67	1.64	1.39	1.39	1.36	1.34
<i>Sweden</i>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<i>UK</i>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<i>US</i>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Net Income

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
<i>Austria</i>	NA	NA	NA	NA	NA	0.65	0.72	0.83	0.90	0.93	1.00	1.07	0.93	0.87	0.87	0.81
<i>Belgium</i>	NA	NA	0.62	0.67	0.76	0.66	0.75	0.67	0.51	0.56	0.61	0.61	0.49	0.56	0.60	0.61
<i>Denmark</i>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<i>Finland</i>	0.89	0.76	0.68	0.93	0.72	0.80	1.16	0.54	0.67	-0.79	-2.69	-1.43	-1.23	-0.38	0.39	0.87
<i>France</i>	NA	NA	NA	NA	NA	NA	0.73	0.63	0.62	0.68	0.78	0.80	0.59	0.74	0.58	0.56
<i>Germany</i>	1.25	1.36	1.24	1.20	1.12	0.94	0.84	0.96	0.95	0.93	0.96	1.05	1.06	0.93	0.87	0.81
<i>Greece</i>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<i>Ireland</i>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.72	1.58	1.37
<i>Italy</i>	NA	NA	NA	NA	NA	1.50	1.63	1.58	1.65	1.49	1.34	1.59	1.08	1.14	1.19	1.04
<i>Luxembourg</i>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<i>Portugal</i>	NA	NA	NA	0.95	1.13	1.91	2.18	2.61	NA	3.38	2.63	2.18	1.60	NA	NA	NA
<i>Spain</i>	1.50	1.78	1.73	1.68	1.60	1.94	1.86	1.93	1.88	2.02	1.81	1.79	1.54	1.32	1.34	1.37
<i>Sweden</i>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<i>UK</i>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<i>US</i>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Provisions (net)

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
<i>Austria</i>	NA	NA	NA	NA	NA	0.00	0.00	0.39	0.50	0.52	0.66	0.58	0.51	0.44	0.44	0.39
<i>Belgium</i>	NA	NA	0.30	0.32	0.36	0.33	0.44	0.46	0.22	0.31	0.38	0.24	0.14	0.24	0.22	0.23
<i>Denmark</i>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<i>Finland</i>	0.55	0.46	0.34	0.54	0.32	0.46	0.58	0.26	0.27	-0.01	-0.06	-0.01	-0.03	-0.01	-0.02	0.01
<i>France</i>	NA	NA	NA	NA	NA	NA	0.25	0.22	0.26	0.28	0.50	0.68	0.57	0.59	0.39	0.28
<i>Germany</i>	0.55	0.60	0.48	0.48	0.43	0.36	0.22	0.46	0.46	0.35	0.40	0.46	0.54	0.36	0.34	0.34
<i>Greece</i>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<i>Ireland</i>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.16	0.13	0.12
<i>Italy</i>	NA	NA	NA	NA	NA	0.60	0.63	0.63	0.65	0.55	0.64	0.78	0.80	0.78	0.69	0.71
<i>Netherlands</i>	NA	0.62	0.61	0.36	0.34	0.19	0.21	0.19	0.24	0.29	0.27	0.24	0.18	0.16	0.18	0.19
<i>Portugal</i>	NA	NA	NA	0.62	0.84	1.35	1.43	1.59	NA	1.77	1.54	1.17	0.94	NA	NA	NA
<i>Spain</i>	0.81	1.11	0.98	0.85	0.73	0.84	0.70	0.53	0.57	0.64	0.72	1.43	0.77	0.50	0.49	0.43
<i>Sweden</i>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<i>UK</i>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<i>US</i>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Profits before tax

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
<i>Austria</i>	NA	NA	NA	NA	NA	0.65	0.72	0.44	0.40	0.41	0.34	0.49	0.42	0.39	0.43	0.43
<i>Belgium</i>	NA	NA	0.32	0.35	0.40	0.34	0.32	0.21	0.29	0.25	0.23	0.37	0.34	0.33	0.39	0.38
<i>Denmark</i>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<i>Finland</i>	0.34	0.30	0.34	0.39	0.40	0.34	0.59	0.29	0.40	-0.78	-2.63	-1.42	-1.19	-0.37	0.41	0.86
<i>France</i>	NA	NA	NA	NA	NA	NA	0.48	0.41	0.36	0.39	0.28	0.12	0.02	0.15	0.18	0.28
<i>Germany</i>	0.70	0.77	0.76	0.72	0.69	0.58	0.62	0.50	0.48	0.58	0.57	0.58	0.52	0.57	0.53	0.47
<i>Greece</i>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<i>Ireland</i>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.50	1.46	1.35
<i>Italy</i>	NA	NA	NA	NA	NA	0.90	1.00	0.95	1.00	0.94	0.70	0.81	0.28	0.36	0.50	0.33
<i>Netherlands</i>	NA	0.59	0.51	0.74	0.74	0.87	0.90	0.85	0.55	0.53	0.58	0.68	0.70	0.74	0.77	0.73
<i>Portugal</i>	NA	NA	NA	0.33	0.29	0.56	0.75	1.02	NA	1.60	1.09	1.01	0.66	NA	NA	NA
<i>Spain</i>	0.69	0.67	0.75	0.83	0.87	1.11	1.16	1.40	1.31	1.38	1.08	0.36	0.77	0.82	0.86	0.21
<i>Sweden</i>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<i>UK</i>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<i>US</i>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Commercial banks

Net Interest Income

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
<i>Austria</i>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<i>Belgium</i>	1.70	1.61	1.60	1.53	1.62	1.49	1.38	1.32	1.35	1.34	NA	1.51	1.48	1.42	1.33	1.14
<i>Denmark</i>	3.69	3.17	3.01	3.03	2.63	2.86	2.78	2.55	2.61	3.39	3.56	3.93	3.94	3.27	2.70	2.33
<i>Finland</i>	2.08	1.67	1.65	1.70	1.27	1.57	1.61	1.43	1.60	1.25	1.12	1.37	1.36	1.44	1.38	1.50
<i>France</i>	2.74	2.63	2.58	2.53	2.72	2.43	2.00	1.67	1.57	1.43	1.16	0.93	0.89	0.80	0.70	0.56
<i>Germany</i>	2.44	2.71	2.54	2.44	2.58	2.30	2.19	2.04	2.04	2.16	2.21	2.18	2.18	1.98	1.83	1.65
<i>Greece</i>	2.02	1.99	1.73	1.35	1.27	0.68	0.75	1.08	1.34	1.96	1.25	1.27	0.98	1.77	1.70	1.90
<i>Ireland</i>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<i>Italy</i>	3.19	3.14	3.11	3.01	3.26	3.15	3.27	3.54	3.62	3.59	3.55	3.17	NA	NA	NA	NA
<i>Netherlands</i>	2.25	2.40	2.23	2.20	2.42	2.31	2.30	2.01	NA	NA	NA	NA	NA	NA	NA	NA
<i>Portugal</i>	2.47	1.85	1.86	2.37	2.76	3.41	3.66	4.12	NA	4.97	NA	3.19	2.63	2.28	2.08	2.00
<i>Spain</i>	3.90	3.95	3.77	3.58	3.74	3.91	4.06	4.04	3.92	3.96	3.44	2.96	2.63	2.34	2.15	2.07
<i>Sweden</i>	1.99	2.27	2.21	1.98	2.61	2.49	2.44	2.15	2.08	2.09	2.19	2.72	2.56	2.68	2.09	1.64

List of Annexes

<i>UK</i>	NA	NA	3.04	3.11	3.17	3.16	3.25	3.14	2.95	2.97	2.62	2.45	2.34	2.32	2.20	2.09
<i>US</i>	3.16	3.13	3.35	3.47	3.34	3.36	3.50	3.51	3.46	3.62	3.89	3.90	3.78	3.72	3.73	3.67

For Denmark we have commercial and savings banks.

For France we have commercial banks and credit co-operatives until 1987, and commercial banks afterwards.

For Greece we have large commercial banks.

For Belgium commercial banks until 1991 and large commercial banks from 1993.

For Switzerland we have large commercial banks.

Non Interest Income (net)

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
<i>Austria</i>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<i>Belgium</i>	0.46	0.52	0.42	0.47	0.56	0.55	0.59	0.50	0.40	0.44	NA	0.71	0.53	0.57	0.64	0.70
<i>Denmark</i>	2.25	5.81	0.55	4.14	-0.47	0.52	1.59	0.71	0.37	0.56	-0.41	1.00	-0.56	1.55	1.28	1.08
<i>Finland</i>	2.05	1.92	2.02	2.31	2.07	1.94	2.18	1.79	1.67	1.67	1.37	1.44	1.44	1.31	1.65	1.34
<i>France</i>	0.53	0.53	0.39	0.41	0.46	0.50	0.51	0.47	0.53	0.62	1.00	1.05	0.82	0.99	0.88	0.95
<i>Germany</i>	0.89	0.90	0.89	1.05	1.08	0.98	0.96	1.15	1.14	0.95	0.99	1.00	0.75	0.78	0.75	0.74
<i>Greece</i>	1.39	1.30	1.63	1.77	1.78	2.16	1.96	1.75	1.96	2.46	2.07	2.03	2.88	2.01	2.02	2.10
<i>Ireland</i>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<i>Italy</i>	1.32	1.17	1.28	1.39	1.52	1.22	1.24	1.23	1.30	1.27	0.89	1.48	NA	NA	NA	NA
<i>Netherlands</i>	0.68	0.74	0.73	0.76	0.76	0.81	0.86	0.88	NA	NA	NA	NA	NA	NA	NA	NA
<i>Portugal</i>	1.25	1.42	1.21	0.75	0.61	0.76	0.80	0.80	NA	1.16	NA	1.01	0.74	0.72	0.94	0.94
<i>Spain</i>	0.87	0.90	0.76	0.82	0.86	1.04	1.14	0.99	1.06	1.16	1.06	1.36	0.89	0.93	1.03	1.13
<i>Sweden</i>	0.90	0.91	0.96	1.07	1.42	0.98	0.99	0.86	0.74	0.71	1.46	3.17	1.48	1.48	1.47	1.50
<i>UK</i>	NA	NA	1.68	1.64	1.81	1.95	1.85	1.92	1.88	2.03	1.93	1.96	1.78	1.75	1.38	1.32
<i>US</i>	1.03	1.13	1.10	1.25	1.42	1.46	1.50	1.65	1.70	1.93	2.07	2.27	1.98	2.03	2.21	2.27

Operating Expenses

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
<i>Austria</i>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<i>Belgium</i>	1.51	1.48	1.39	1.33	1.42	1.39	1.22	1.19	1.21	1.17	NA	1.53	1.46	1.36	1.29	1.20
<i>Denmark</i>	3.21	2.94	2.69	2.48	2.13	2.32	2.32	2.12	2.05	2.47	2.56	2.52	2.45	2.55	2.26	2.02
<i>Finland</i>	3.16	2.88	2.86	2.88	2.59	2.58	2.81	2.64	2.61	4.02	4.35	4.54	3.96	3.32	2.70	1.90
<i>France</i>	2.21	2.14	2.06	2.06	2.12	1.96	1.83	1.66	1.64	1.57	1.57	1.38	1.37	1.34	1.27	1.13
<i>Germany</i>	2.07	2.19	2.19	2.20	2.31	2.25	2.18	2.07	2.03	2.06	2.04	1.95	1.87	1.84	1.69	1.60
<i>Greece</i>	2.52	2.52	2.55	2.45	2.29	2.22	2.20	2.17	2.20	2.23	2.10	2.12	2.27	2.51	2.61	2.56
<i>Ireland</i>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<i>Italy</i>	2.81	2.97	3.03	2.95	3.00	3.07	3.04	3.05	3.10	3.11	2.82	2.75	NA	NA	NA	NA
<i>Netherlands</i>	1.90	1.93	1.85	1.86	2.10	2.15	2.14	1.89	NA	NA	NA	NA	NA	NA	NA	NA
<i>Portugal</i>	2.06	2.13	2.14	2.17	2.24	2.26	2.27	2.30	NA	2.75	NA	2.36	2.08	1.95	1.95	1.77
<i>Spain</i>	3.28	3.08	2.88	2.80	3.00	3.04	3.06	2.88	2.90	2.87	2.73	2.57	2.08	2.09	2.03	2.02
<i>Sweden</i>	1.98	1.80	2.06	1.89	2.19	1.93	1.90	1.68	2.21	3.38	5.35	6.46	3.28	2.98	2.36	2.49
<i>UK</i>	NA	NA	3.15	3.10	3.24	3.34	3.33	3.28	3.18	3.28	3.01	2.79	2.64	2.60	2.23	2.08
<i>US</i>	2.92	2.95	3.04	3.14	3.18	3.28	3.30	3.42	3.49	3.75	3.86	3.94	3.75	3.64	3.71	3.61

Staff Costs

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
<i>Austria</i>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<i>Belgium</i>	1.13	1.07	1.00	0.92	0.97	0.93	0.87	0.83	0.85	0.82	NA	1.01	0.95	0.88	0.82	0.72
<i>Denmark</i>	2.15	1.93	1.74	1.57	1.34	1.46	1.46	1.32	1.27	1.49	1.56	1.54	1.52	1.57	1.35	1.19
<i>Finland</i>	1.34	1.22	1.44	1.40	1.19	1.17	1.13	1.05	0.93	0.97	0.86	0.77	0.86	0.79	0.87	0.59
<i>France</i>	1.48	1.42	1.34	1.33	1.35	1.22	1.11	0.99	0.97	0.91	0.90	0.80	0.78	0.76	0.73	0.65
<i>Germany</i>	1.43	1.50	1.47	1.45	1.51	1.46	1.42	1.33	1.29	1.29	1.27	1.21	1.13	1.11	0.99	0.90
<i>Greece</i>	2.04	2.04	2.07	1.98	1.82	1.71	1.71	1.70	1.72	1.73	1.56	1.53	1.66	1.82	1.88	1.76
<i>Ireland</i>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<i>Italy</i>	1.97	2.17	2.17	2.12	2.15	2.19	2.18	2.18	2.18	2.19	1.97	1.85	NA	NA	NA	NA
<i>Netherlands</i>	1.27	1.27	1.22	1.21	1.27	1.31	1.28	1.10	NA	NA	NA	NA	NA	NA	NA	NA
<i>Portugal</i>	1.51	1.57	1.53	1.54	1.56	1.56	1.51	1.49	NA	1.62	NA	1.32	1.16	1.09	1.06	0.98
<i>Spain</i>	2.23	2.07	1.93	1.88	2.09	2.12	2.10	1.89	1.84	1.76	1.68	1.62	1.26	1.29	1.25	1.27
<i>Sweden</i>	0.78	0.74	0.77	0.78	0.84	0.87	0.79	0.71	0.69	0.74	0.86	0.96	1.02	1.16	1.04	0.99
<i>UK</i>	NA	NA	1.88	1.86	1.94	1.96	1.95	1.89	1.81	1.82	1.65	1.54	1.48	1.45	1.22	1.11
<i>US</i>	1.49	1.49	1.52	1.52	1.51	1.52	1.52	1.55	1.56	1.59	1.61	1.64	1.58	1.54	1.55	1.53

Net Income

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
<i>Austria</i>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<i>Belgium</i>	0.65	0.65	0.63	0.67	0.76	0.65	0.75	0.62	0.54	0.61	NA	0.69	0.55	0.63	0.68	0.65
<i>Denmark</i>	2.73	6.03	0.87	4.69	0.02	1.06	2.04	1.14	0.94	1.48	0.59	2.41	0.93	2.17	1.72	1.39
<i>Finland</i>	0.97	0.70	0.81	1.13	0.76	0.92	0.97	0.58	0.66	-1.10	-1.86	-1.73	-1.17	-0.57	0.33	0.94
<i>France</i>	1.06	1.02	0.91	0.88	1.06	0.96	0.68	0.48	0.46	0.48	0.60	0.60	0.34	0.46	0.31	0.38
<i>Germany</i>	1.21	1.41	1.24	1.30	1.36	1.04	0.97	1.11	1.16	1.05	1.16	1.24	1.06	0.92	0.89	0.80
<i>Greece</i>	0.89	0.77	0.81	0.67	0.76	0.62	0.51	0.66	1.10	2.18	1.22	1.19	1.59	1.28	1.11	1.44
<i>Ireland</i>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<i>Italy</i>	1.70	1.34	1.36	1.44	1.78	1.31	1.47	1.72	1.83	1.76	1.61	1.91	NA	NA	NA	NA
<i>Netherlands</i>	1.03	1.21	1.11	1.10	1.08	0.97	1.02	1.00	NA	NA	NA	NA	NA	NA	NA	NA
<i>Portugal</i>	1.66	1.13	0.93	0.95	1.13	1.91	2.18	2.61	NA	3.38	NA	1.84	1.29	1.05	1.08	1.16
<i>Spain</i>	1.48	1.77	1.65	1.59	1.60	1.91	2.13	2.15	2.08	2.25	1.78	1.75	1.44	1.17	1.15	1.17
<i>Sweden</i>	0.91	1.39	1.11	1.16	1.84	1.54	1.52	1.33	0.61	-0.58	-1.70	-0.58	0.77	1.19	1.31	0.65
<i>UK</i>	NA	NA	1.56	1.64	1.73	1.77	1.77	1.79	1.65	1.72	1.54	1.63	1.48	1.47	1.35	1.33
<i>US</i>	1.28	1.31	1.40	1.58	1.58	1.54	1.70	1.75	1.67	1.80	2.11	2.23	2.02	2.11	2.22	2.33

Provisions (net)

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
<i>Austria</i>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<i>Belgium</i>	0.31	0.30	0.29	0.30	0.31	0.28	0.40	0.43	0.20	0.31	NA	0.29	0.17	0.23	0.24	0.23
<i>Denmark</i>	1.55	1.31	0.77	0.97	0.39	0.70	1.09	0.87	1.21	1.49	1.79	1.76	0.92	0.76	0.49	0.34
<i>Finland</i>	0.45	0.28	0.32	0.58	0.21	0.48	0.40	0.24	0.19	-0.01	-0.01	0.00	-0.05	-0.03	-0.05	0.01
<i>France</i>	0.68	0.68	0.61	0.57	0.68	0.55	0.31	0.22	0.25	0.23	0.53	0.63	0.53	0.37	0.28	0.27
<i>Germany</i>	0.73	0.82	0.52	0.47	0.55	0.44	0.25	0.42	0.53	0.47	0.69	0.69	0.52	0.41	0.39	0.39
<i>Greece</i>	0.45	0.36	0.38	0.33	0.32	0.25	0.22	0.33	0.45	0.74	0.26	0.27	0.36	0.21	0.54	0.69
<i>Ireland</i>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<i>Italy</i>	0.83	0.61	0.58	0.55	0.58	0.49	0.56	0.55	0.57	0.51	0.64	0.92	NA	NA	NA	NA
<i>Netherlands</i>	0.80	0.62	0.61	0.36	0.34	0.19	0.42	0.37	NA	NA	NA	NA	NA	NA	NA	NA
<i>Portugal</i>	1.01	0.71	0.59	0.62	0.84	1.35	1.43	1.59	NA	1.77	NA	0.86	0.58	0.40	0.39	0.39
<i>Spain</i>	0.90	1.12	1.05	0.87	0.79	0.91	0.77	0.57	0.55	0.69	0.66	1.74	0.76	0.45	0.42	0.38
<i>Sweden</i>	0.55	0.95	0.76	0.82	0.84	0.81	0.93	0.86	0.40	-3.42	-1.95	-0.73	-0.21	-0.14	0.01	0.03
<i>UK</i>	NA	NA	0.68	0.55	0.54	1.58	0.31	1.60	0.95	1.31	1.24	0.87	0.33	0.30	0.20	0.18
<i>US</i>	0.40	0.47	0.57	0.67	0.78	1.27	0.56	0.98	0.97	1.03	0.78	0.47	0.28	0.30	0.37	0.40

Profits before tax

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
<i>Austria</i>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<i>Belgium</i>	0.34	0.34	0.34	0.35	0.45	0.37	0.34	0.19	0.33	0.31	NA	0.40	0.38	0.40	0.44	0.42
<i>Denmark</i>	1.18	4.73	0.09	3.72	-0.37	0.35	0.96	0.28	-0.27	-0.01	-1.20	0.65	0.01	1.41	1.23	1.05
<i>Finland</i>	0.51	0.42	0.49	0.54	0.55	0.45	0.58	0.34	0.47	-1.08	-1.85	-1.73	-1.12	-0.55	0.37	0.93
<i>France</i>	0.38	0.34	0.30	0.31	0.38	0.42	0.37	0.26	0.21	0.25	0.06	-0.03	-0.18	0.09	0.03	0.12
<i>Germany</i>	0.53	0.60	0.72	0.83	0.81	0.60	0.73	0.70	0.63	0.58	0.47	0.55	0.54	0.51	0.49	0.41
<i>Greece</i>	0.43	0.41	0.43	0.34	0.44	0.37	0.29	0.34	0.65	1.45	0.97	0.91	1.23	1.07	0.57	0.75
<i>Ireland</i>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<i>Italy</i>	0.87	0.73	0.78	0.89	1.20	0.82	0.91	1.17	1.26	1.25	0.98	0.99	NA	NA	NA	NA
<i>Netherlands</i>	0.23	0.59	0.51	0.74	0.74	0.78	0.60	0.63	NA	NA	NA	NA	NA	NA	NA	NA
<i>Portugal</i>	0.64	0.42	0.34	0.33	0.29	0.56	0.75	1.02	NA	1.60	NA	0.98	0.71	0.65	0.69	0.78
<i>Spain</i>	0.58	0.65	0.59	0.72	0.81	1.00	1.36	1.58	1.53	1.56	1.12	0.01	0.68	0.73	0.73	0.79
<i>Sweden</i>	0.35	0.44	0.35	0.34	1.00	0.73	0.59	0.47	0.22	2.84	0.25	0.15	0.98	1.33	1.30	0.62
<i>UK</i>	NA	NA	0.88	1.09	1.19	0.19	1.46	0.18	0.70	0.40	0.31	0.76	1.15	1.17	1.15	1.15
<i>US</i>	0.88	0.84	0.84	0.90	0.80	0.28	1.14	0.77	0.70	0.77	1.33	1.76	1.73	1.81	1.85	1.93

Annex 8: Balance Sheet and Income Statement Structure of European Banking Sector (Fitch-IBCA Database)

Off-balance sheet items/total assets [%]

	1992	1993	1994	1995	1996	1997	1998	1999
Austria		0.09	8.91	13.86	13.26	14.41	10.93	14.17
Belgium	62.41	90.04	83.66	80.49	92.58	73.61	107.98	105.52
Denmark	205.14	133.25	143.10	127.49	173.47	183.21	71.35	16.10
Finland	18.52	15.76	15.04	16.88	15.59	16.63	17.50	19.24
France	23.66	24.70	23.33	24.47	27.97	31.79	27.27	17.41
Germany	5.90	8.99	11.35	11.11	11.88	15.23	13.45	18.21
Greece	3.03	9.16	15.38	11.11	11.36	11.20	17.36	22.78
Ireland	2.42	2.18	2.02	2.92	2.84	3.17	3.11	3.34
Italy	42.18	14.46	25.18	25.80	24.56	28.88	22.52	17.68
Netherlands	14.55	13.86	14.93	15.81	17.35	17.63	11.31	10.76
Portugal	6.53	9.94	15.14	32.68	64.04	70.09	38.40	6.51
Spain	4.27	5.44	5.75	6.10	5.88	6.63	6.95	6.62
Sweden	27.99	46.03	42.40	55.27	61.62	65.81	99.73	91.12
UK	12.67	23.22	22.79	22.47	19.25	21.03	20.98	23.08
EU countries	21.83	22.31	23.04	23.65	25.73	26.90	24.56	20.64
EMU countries	20.90	19.22	20.32	20.96	23.24	24.31	22.22	17.41
Japan	6.93	6.01	5.41	5.55	5.36	4.85	5.04	
US	0.01	43.16	44.26	49.05	52.63	54.40	58.82	68.72

Net Interest Income/Total Assets [%]

	1992	1993	1994	1995	1996	1997	1998	1999
Austria	1.92	1.73	1.46	1.69	1.63	1.52	1.54	1.58
Belgium	1.58	1.60	1.60	1.45	1.47	1.31	1.30	1.18
Denmark	3.17	2.40	2.73	2.39	2.06	1.80	1.75	1.62
Finland	1.69	1.79	1.78	1.48	1.81	1.84	1.96	1.82
France	2.00	1.89	1.82	1.68	1.48	1.37	1.30	1.13
Germany	1.94	2.11	2.13	1.94	1.81	1.47	1.34	0.88
Greece	1.84	1.07	1.55	1.96	2.14	2.25	2.42	2.56
Ireland	3.28	3.49	3.20	2.83	2.50	1.91	1.75	2.01
Italy	2.78	2.73	2.54	2.82	2.63	2.35	2.40	1.90
Netherlands	1.88	1.88	1.98	1.88	1.80	1.63	1.59	1.73
Portugal	3.50	3.51	3.11	2.61	2.34	2.36	2.40	2.14
Spain	3.22	2.87	2.66	2.61	2.57	2.60	2.74	2.60
Sweden	1.77	1.94	2.00	1.80	1.65	1.44	1.33	1.17
UK	2.14	2.29	2.17	2.11	2.10	1.95	1.97	1.89
EU countries	2.18	2.17	2.09	2.00	1.90	1.71	1.66	1.51
EMU countries	2.19	2.15	2.06	1.98	1.87	1.67	1.61	1.41
Switzerland	1.23	1.13	1.14	1.03	0.88	0.75	0.88	0.68
Japan	1.19	1.16	1.24	1.38	1.45	1.27	1.35	
US	2.90	3.25	2.97	2.90	3.00	3.00	2.86	3.09

Non-interest Income/Total Assets [%]

	1992	1993	1994	1995	1996	1997	1998	1999
Austria	0.47	1.06	0.67	0.79	0.82	0.83	0.95	0.81
Belgium	0.57	0.67	0.51	0.54	0.59	0.68	0.86	1.13
Denmark	0.64	0.48	0.57	0.48	0.53	0.54	0.53	0.60
Finland	1.05	1.16	1.08	0.97	1.39	1.12	1.33	1.26
France	0.80	0.99	0.79	0.85	0.90	0.95	1.13	1.38
Germany	0.40	0.57	0.64	0.62	0.61	0.62	0.64	0.86
Greece	2.02	1.61	1.97	1.57	1.67	1.90	2.12	3.48
Ireland	1.34	1.63	1.34	1.16	1.10	0.90	1.91	3.38
Italy	0.71	1.19	0.64	0.86	1.03	1.06	1.45	1.41
Luxembourg	0.66	0.65	0.41	0.54	0.57	0.62	0.90	1.17
Netherlands	0.79	0.90	0.82	0.95	0.99	1.01	0.96	1.15
Portugal	1.01	1.17	0.88	1.02	1.11	1.18	1.29	1.45
Spain	0.94	1.17	0.66	0.90	1.00	1.20	1.34	1.30
Sweden	0.54	0.57	0.56	0.67	0.66	0.51	0.61	0.69
UK	1.34	1.54	1.34	1.31	1.23	1.27	1.23	1.33
EU countries	0.82	1.01	0.79	0.85	0.90	0.92	1.03	1.20
EMU countries	0.72	0.92	0.71	0.78	0.85	0.87	1.01	1.20
Switzerland	1.87	2.54	1.76	1.71	1.64	1.79	1.70	2.28
Japan	0.31	0.39	0.39	0.49	0.41	0.56	0.58	
US	1.18	1.96	1.71	1.72	1.83	1.83	1.99	2.42

Non-interest Income Contribution [%]

	1992	1993	1994	1995	1996	1997	1998	1999
Austria	19.57	38.01	31.59	31.75	33.58	35.39	38.03	33.69
Belgium	26.38	29.50	24.31	27.20	28.63	34.09	39.84	49.04
Denmark	16.80	16.55	17.37	16.63	20.42	23.19	23.08	26.96
Finland	38.41	39.46	37.60	39.46	43.47	37.84	40.43	40.89
France	28.47	34.39	30.38	33.51	37.84	40.92	46.51	55.04
Germany	16.96	21.23	23.10	24.23	25.21	29.72	32.41	49.41
Greece	52.38	60.09	55.97	44.40	43.84	45.80	46.73	57.63
Ireland	28.99	31.87	29.47	29.06	30.59	31.96	52.14	62.72
Italy	20.32	30.32	20.12	23.29	28.26	31.11	37.62	42.55
Luxembourg	49.25	42.67	33.59	40.75	42.64	47.51	57.06	61.79
Netherlands	29.49	32.25	29.24	33.53	35.41	38.17	37.47	40.00
Portugal	22.49	25.05	22.01	28.18	32.27	33.34	34.98	40.33
Spain	22.58	29.02	19.90	25.70	27.99	31.60	32.85	33.32
Sweden	23.33	22.88	22.04	27.17	28.49	26.06	31.60	37.16
UK	38.49	40.21	38.21	38.28	37.04	39.51	38.51	41.30
EU countries	27.42	31.70	27.44	29.74	32.10	34.95	38.22	44.24
EMU countries	24.85	30.07	25.48	28.31	31.14	34.25	38.53	45.96
Switzerland	60.29	69.24	60.73	62.48	65.25	70.50	65.91	77.07
Japan	20.71	25.10	23.91	26.02	22.22	30.44	30.18	
US	28.99	37.63	36.54	37.25	37.91	37.86	41.07	43.93

Overheads/Total Assets [%]

	1992	1993	1994	1995	1996	1997	1998	1999
Austria	1.72	1.69	1.47	1.67	1.65	1.52	1.64	1.44
Belgium	1.58	1.57	1.51	1.37	1.41	1.35	1.41	1.53
Denmark	2.54	1.65	1.93	1.81	1.67	1.54	1.51	1.50
Finland	2.06	2.08	2.00	1.85	2.10	1.79	1.94	1.79
France	1.99	2.01	2.01	1.89	1.81	1.71	1.78	1.76
Germany	1.57	1.67	1.68	1.64	1.55	1.34	1.34	1.24
Greece	2.11	1.85	2.35	2.47	2.63	2.71	2.86	2.63
Ireland	3.00	3.25	2.90	2.40	2.15	1.69	2.28	3.93
Italy	2.65	2.76	2.82	2.78	2.74	2.51	2.55	2.16
Luxembourg	0.59	0.59	0.61	0.60	0.62	0.62	0.69	0.89
Netherlands	1.85	1.90	1.91	1.94	1.92	1.91	1.91	2.08
Portugal	2.42	2.72	2.60	2.38	2.22	2.18	2.31	2.22
Spain	2.72	2.49	2.36	2.37	2.34	2.44	2.63	2.47
Sweden	1.23	1.22	1.35	1.23	1.10	1.11	1.18	1.23
UK	2.10	2.24	2.11	2.04	1.91	1.91	1.85	1.81
EU countries	2.01	2.04	2.00	1.92	1.87	1.74	1.77	1.76
EMU countries	2.01	2.04	2.00	1.93	1.89	1.73	1.77	1.77
Switzerland	2.17	2.39	2.13	1.96	1.78	1.81	2.04	2.24
Japan	1.00	1.01	1.07	1.05	1.18	1.14	1.21	
US	2.46	3.33	3.00	2.86	3.05	2.90	3.02	3.30

Overheads/Total Income [%]

	1992	1993	1994	1995	1996	1997	1998	1999
Austria	72.26	60.73	68.98	67.51	67.27	64.83	66.00	60.05
Belgium	73.34	69.31	71.54	68.79	68.79	67.62	65.35	66.06
Denmark	66.71	57.23	58.37	63.20	64.51	65.60	66.36	67.51
Finland	75.26	70.48	69.93	75.31	65.73	60.30	58.94	58.38
France	70.93	69.79	76.90	74.71	75.82	73.75	72.96	70.15
Germany	67.26	62.49	60.92	64.07	64.12	64.27	67.18	71.51
Greece	54.79	69.21	66.55	70.09	68.84	65.26	63.05	43.67
Ireland	65.02	63.33	63.93	60.10	59.74	60.01	62.43	72.85
Italy	75.92	70.67	88.54	75.62	74.87	73.39	66.37	65.23
Luxembourg	43.90	39.12	49.23	45.44	46.57	47.57	43.87	46.70
Netherlands	69.22	68.29	68.02	68.41	68.92	72.23	74.78	72.24
Portugal	53.71	58.18	65.15	65.56	66.08	61.46	62.63	61.87
Spain	65.47	61.40	71.12	67.54	65.58	64.18	64.47	63.23
Sweden	55.93	48.47	52.71	49.86	47.61	56.93	60.94	65.88
UK	60.26	58.49	60.06	59.79	57.28	59.37	57.74	56.10
EU countries	66.97	64.26	69.44	67.53	66.68	66.36	65.75	64.71
EMU countries	69.14	66.26	72.17	69.69	69.63	68.25	67.67	67.72
Switzerland	70.20	64.96	73.37	71.43	70.63	71.09	78.86	75.80
Japan	66.89	65.25	65.56	56.06	63.26	62.28	62.88	
US	60.24	63.96	64.08	61.99	63.17	59.95	62.30	59.80

Net Commission and Fee Revenue/Non-interest Income [%]

	1992	1993	1994	1995	1996	1997	1998	1999
Austria	93.70	50.56	70.19	60.23	59.95	58.23	60.57	85.63
Belgium	40.06	34.12	48.57	37.09	42.15	44.26	42.31	74.79
Denmark	68.54	75.35	91.92	93.16	87.34	84.70	92.40	82.22
Finland	57.04	55.41	57.54	60.81	54.11	59.27	55.51	62.02
France	56.17	56.70	72.18	64.05	59.32	61.03	59.92	58.53
Germany	95.80	71.79	72.43	66.88	68.20	69.55	68.65	66.38
Greece	66.93	52.49	61.93	64.46	64.71	54.77	50.54	42.45
Ireland	75.38	71.12	80.95	77.20	76.98	72.95	31.99	22.07
Italy	84.57	47.09	97.26	69.39	61.42	75.05	76.61	91.19
Luxembourg	5.78	51.28	84.48	58.79	62.46	66.00	55.28	67.22
Netherlands	65.51	62.76	71.31	63.28	63.11	65.43	69.89	67.71
Portugal	39.47	40.31	49.61	37.33	34.03	39.85	47.02	48.01
Spain	79.19	57.80	107.99	76.94	70.70	70.56	79.02	81.14
Sweden	100.00	100.00	100.00	61.77	60.14	83.87	73.04	81.47
UK	97.93	65.85	75.87	70.21	71.89	68.44	65.78	66.95
EU countries	67.01	59.30	77.52	66.26	64.37	66.53	65.56	66.75
EMU countries	65.51	56.09	77.31	64.99	61.94	65.52	65.13	66.12
Switzerland	52.91	46.44	64.40	58.53	59.99	64.80	80.61	60.51
Japan	35.66	30.52	31.39	27.65	47.04	35.22	41.30	
US	26.88	16.07	16.90	16.25	16.35	18.56	16.78	16.24

Net Trading Revenue/Non-interest Income [%]

	1992	1993	1994	1995	1996	1997	1998	1999
Austria		35.13	13.03	22.88	23.17	23.72	19.10	11.29
Belgium	41.50	49.99	30.34	45.28	45.08	43.69	47.47	18.66
Denmark	-43.20	165.46	-90.47	108.53	59.88	27.40	15.69	9.33
Finland	21.06	22.34	5.58	13.74	27.35	21.43	23.60	6.87
France	40.61	40.86	22.54	33.17	37.22	36.24	36.89	36.46
Germany			3.38	6.03	8.63	13.65	14.49	28.70
Greece	7.52	30.48	23.91	16.98	19.55	29.57	35.15	48.48
Ireland	14.91	12.57	3.07	8.27	6.77	7.48	5.04	2.10
Italy	15.43	52.91	1.77	29.41	37.38	23.96	22.05	8.80
Luxembourg	11.27	35.22	4.29	30.55	29.68	23.70	12.54	13.53
Netherlands	21.89	25.55	13.44	21.76	23.83	24.72	18.98	22.13
Portugal	46.46	42.38	26.89	35.24	43.42	39.11	30.21	30.31
Spain	15.70	37.17	-18.93	16.73	25.31	24.80	16.14	15.12
Sweden				38.23	39.86	16.13	26.96	18.53
UK	14.01	19.08	9.36	10.89	10.25	13.36	14.93	13.78
EU countries	21.54	31.98	8.82	22.02	24.95	23.24	22.69	22.17
EMU countries	26.17	35.67	10.33	23.71	28.64	26.03	24.45	25.18
Switzerland	41.66	48.05	25.19	32.26	32.05	31.96	16.53	38.67
Japan	5.46	3.33	1.85	0.95	0.88	6.67	5.83	
US	21.25	14.98	10.00	8.98	9.27	8.39	6.99	7.74

ROA [%]

	1992	1993	1994	1995	1996	1997	1998	1999
Austria	0.33	0.36	0.26	0.36	0.35	0.40	0.39	0.51
Belgium	0.32	0.45	0.46	0.46	0.50	0.64	0.73	0.75
Denmark	-1.10	0.72	0.10	1.17	1.00	0.89	0.88	0.75
Finland	-0.72	-1.09	-0.65	-0.06	0.49	0.98	0.70	1.20
France	0.22	0.26	0.20	0.37	0.31	0.41	0.49	0.64
Germany	0.49	0.65	0.61	0.62	0.58	0.46	0.51	0.39
Greece	1.59	0.66	0.96	1.07	1.00	0.95	1.24	2.93
Ireland	0.89	1.22	1.47	1.40	1.40	1.13	1.40	1.44
Italy	0.62	0.79	0.22	0.42	0.51	0.47	0.93	1.13
Luxembourg	0.46	0.72	0.67	0.67	0.71	0.74	0.83	0.87
Netherlands	0.55	0.62	0.65	0.68	0.70	0.69	0.55	0.78
Portugal	0.89	0.86	0.78	0.74	0.71	0.87	0.93	1.01
Spain	1.09	0.55	0.83	0.86	0.87	1.03	1.14	1.24
Sweden	-0.74	0.08	0.65	0.84	1.01	0.66	0.84	0.79
UK	0.55	0.94	1.21	1.21	1.22	1.10	1.16	1.18
EU countries	0.43	0.58	0.55	0.65	0.67	0.65	0.74	0.84
EMU countries	0.48	0.52	0.44	0.54	0.53	0.56	0.65	0.74
Switzerland	0.63	0.84	0.56	0.47	0.00	0.11	0.43	0.81
Japan	0.28	0.20	0.12	-0.21	0.06	-0.53	-0.85	
US	0.90	1.51	1.38	1.47	1.49	1.63	1.58	1.91

Personnel Expenses/Overheads [%]

	1992	1993	1994	1995	1996	1997	1998	1999
Austria	63.76	61.37	60.74	59.33	59.09	58.52	57.65	58.73
Belgium	59.68	59.92	60.11	58.17	55.07	55.59	5.86	46.02
Denmark	59.48	58.60	57.86	57.33	55.01	56.23	56.50	53.87
Finland	40.06	35.05	43.55	46.38	47.02	44.53	45.96	44.12
France	55.27	55.53	55.27	56.06	55.05	56.88	56.49	57.94
Germany	54.34	57.62	58.82	59.12	57.66	57.71	56.48	57.65
Greece	52.47	57.16	67.09	65.87	64.91	62.24	60.77	56.82
Ireland	58.04	56.86	57.38	59.12	58.54	55.12	34.23	24.35
Italy	59.97	50.84	56.27	57.79	58.68	58.48	57.66	57.47
Luxembourg	46.48	50.39	50.63	51.89	50.17	48.54	46.58	42.95
Netherlands	56.76	56.28	55.15	54.87	53.88	52.94	54.74	56.90
Portugal	56.87	54.43	54.97	55.78	54.89	55.52	53.01	50.85
Spain	59.58	59.76	60.40	60.29	60.01	58.64	57.21	57.37
Sweden	45.61	45.77	45.29	48.95	49.30	48.17	47.27	52.96
UK	51.37	51.98	53.35	52.44	49.80	50.29	49.11	52.64
EU countries	55.61	54.83	56.38	56.77	55.66	55.78	54.54	55.04
EMU countries	56.80	55.59	57.12	57.68	57.01	57.06	55.72	55.84
Switzerland	52.57	50.82	54.84	56.57	56.79	61.13	57.47	64.23
Japan	22.34	23.04	22.11	22.39	21.97	21.98	16.91	
US	47.22	41.14	40.99	41.90	40.28	41.48	40.02	41.59

Annex 9: Correlation Matrix for the several Types of Financial Institutions
(dependent variable NIM)

Commercial banks

	<i>nim</i>	<i>in. rat.</i>	<i>var. of int. rat.</i>	<i>funds gap</i>	<i>conc.</i>	<i>lnassets</i>
<i>Nim</i>	1.0000					
<i>In. rat.</i>	0.0826	1.0000				
<i>Var. of int. rat.</i>	0.0187	0.6274	1.0000			
<i>Funds gap</i>	0.1670	0.2572	0.0869	1.0000		
<i>Conc.</i>	0.0150	0.1261	0.1585	0.0323	1.0000	
<i>Lnassets</i>	-0.2600	0.1104	0.0338	-0.1437	0.0331	1.0000

Savings banks

	<i>nim</i>	<i>in. rat.</i>	<i>var. of int. rat.</i>	<i>funds gap</i>	<i>conc.</i>	<i>lnassets</i>
<i>Nim</i>	1.0000					
<i>In. rat.</i>	0.4156	1.0000				
<i>Var. of int. rat.</i>	0.3406	0.7616	1.0000			
<i>Funds gap</i>	0.5039	0.6219	0.4539	1.0000		
<i>Conc.</i>	0.4245	0.1770	0.1816	0.3261	1.0000	
<i>Lnassets</i>	-0.3939	0.1115	0.0774	-0.0900	-0.1733	1.0000

Co-operative banks

	<i>nim</i>	<i>in. rat.</i>	<i>var. of int. rat.</i>	<i>funds gap</i>	<i>conc.</i>	<i>lnassets</i>
<i>Nim</i>	1.0000					
<i>In. rat.</i>	0.5011	1.0000				
<i>Var. of int. rat.</i>	0.3450	0.7252	1.0000			
<i>Funds gap</i>	0.3127	0.5629	0.4678	1.0000		
<i>Conc.</i>	0.0007	0.1075	0.1971	0.2463	1.0000	
<i>Lnassets</i>	-0.4107	-0.2967	-0.1646	-0.1706	0.0819	1.0000

Mortgage banks

	<i>nim</i>	<i>in. rat.</i>	<i>var. of int. rat.</i>	<i>funds gap</i>	<i>conc.</i>	<i>lnassets</i>
<i>Nim</i>	1.0000					
<i>In. rat.</i>	0.1019	1.0000				
<i>Var. of int. rat.</i>	0.0250	0.4534	1.0000			
<i>Funds gap</i>	0.2484	0.3834	0.1583	1.0000		
<i>Conc.</i>	-0.0822	0.2092	0.1854	0.0281	1.0000	
<i>Lnassets</i>	-0.4957	-0.2924	-0.0186	-0.2759	0.0337	1.0000

Annex 10: OLS Estimates (independent variable: funds gap)

Dependent variable: <i>net interest margin</i>			
Sum of squared residuals = 23185.1		R-squared = 0.0367	
Variance of residuals = 1.9956		Adjusted R-squared = 0.0366	
Std. error of residuals = 1.4127			
<i>Variance</i>	<i>Estimated Coefficient</i>	<i>Standard Error</i>	<i>t-statistic</i>
Funds gap	0.8072	0.0384	21.0250
c	2.9008	0.0153	189.6530

Annex 11: Within (fixed effects) estimates (independent variables: level and variability of interest rates, funds gap)

Dependent variable: <i>net interest margin</i>			
Sum of squared residuals = 3488.10		R-squared = 0.8551	
Variance of residuals = 0.3753		Adjusted R-squared = 0.8188	
Std. error of residuals = 0.6127			
<i>Variance</i>	<i>Estimated Coefficient</i>	<i>Standard Error</i>	<i>t-statistic</i>
Int.	0.1978	0.0053	37.3703
var. of int. rat.	-0.1401	0.0093	-15.0163
Funds gap	-0.0043	0.0340	-0.1260
$F(2323, 9293) = 20.909, p\text{-value} = [.0000]$			
$Hausman\ test\ H_0: RE\ vs.\ FE: CHISQ(3) = 56.710, p\text{-value} = [.0000]$			

Annex 12: Within (fixed effects) estimates (independent variables: level and variability of interest rates, funds gap, concentration)

Dependent variable: <i>net interest margin</i>			
Sum of squared residuals = 3452.32		R-squared = 0.8566	
Variance of residuals = 0.3715		Adjusted R-squared = 0.8206	
Std. error of residuals = 0.6095			
<i>Variance</i>	<i>Estimated Coefficient</i>	<i>Standard Error</i>	<i>t-statistic</i>
int.	0.1644	0.0063	26.2018
var. of int. rat.	-0.1108	0.0098	-11.3536
funds gap	0.0018	0.0338	0.0542
conc.	-0.0293	0.0030	-9.8134
<i>F (2323, 9292) = 21.0150, p-value = [.0000]</i>			
<i>Hausman test H0: RE vs. FE: CHISQ (4) = 95.1470, p-value = [.0000]</i>			

Annex 13: Within (fixed effects) estimates of the several types of financial institutions (independent variables: funds gap)

Commercial Banks

Dependent variable: <i>net interest margin</i>			
Sum of squared residuals = 795.564		R-squared = 0.9252	
Variance of residuals = 0.3194		Adjusted R-squared = 0.9065	
Std. error of residuals = 0.5651			
<i>Variance</i>	<i>Estimated Coefficient</i>	<i>Standard Error</i>	<i>t-statistic</i>
funds gap	0.6663	0.0641	10.3955
$F(622, 2491) = 48.037, p\text{-value} = [.0000]$			
$Hausman\ test\ H_0: RE\ vs.\ FE: CHISQ(1) = 1.8448, p\text{-value} = [.1744]$			

Savings Banks

Dependent variable: <i>net interest margin</i>			
Sum of squared residuals = 259.333		R-squared = 0.8914	
Variance of residuals = 0.0932		Adjusted R-squared = 0.8642	
Std. error of residuals = 0.3053			
<i>Variance</i>	<i>Estimated Coefficient</i>	<i>Standard Error</i>	<i>t-statistic</i>
Funds gap	1.2913	0.0681	18.9599
$F(695, 2783) = 23.504, p\text{-value} = [.0000]$			
$Hausman\ test\ H_0: RE\ vs.\ FE: CHISQ(1) = 11.908, p\text{-value} = [.0006]$			

Co-operative Banks

Dependent variable: <i>net interest margin</i>			
Sum of squared residuals = 1967.94		R-squared = 0.7813	
Variance of residuals = 0.5042		Adjusted R-squared = 0.7266	
Std. error of residuals = 0.7101			
<i>Variance</i>	<i>Estimated Coefficient</i>	<i>Standard Error</i>	<i>t-statistic</i>
Funds gap	-0.0686	0.0748	-0.9169
<i>F (975, 3903) = 12.512, p-value = [.0000]</i>			
<i>Hausman test H0: RE vs. FE: CHISQ (1) = 139.28, p-value = [.0000]</i>			

Mortgage Banks

Dependent variable: <i>net interest margin</i>			
Sum of squared residuals = 34.3692		R-squared = 0.9331	
Variance of residuals = 0.0762		Adjusted R-squared = 0.9163	
Std. error of residuals = 0.2761			
<i>Variance</i>	<i>Estimated Coefficient</i>	<i>Standard Error</i>	<i>t-statistic</i>
Funds gap	0.1690	0.1146	1.4745
<i>F (112, 451) = 52.421, p-value = [.0000]</i>			
<i>Hausman test H0: RE vs. FE: CHISQ (1) = 5,6732, p-value = [.0172]</i>			

Annex 14: Within (fixed effects) estimates for the several types of financial institutions (independent variables: level and variability of interest rates, funds gap, their lagged values, concentration, and asset size)

Commercial Banks

Dependent variable: <i>net interest margin</i>			
Sum of squared residuals = 494.216		R-squared = 0.9403	
Variance of residuals = 0.2656		Adjusted R-squared = 0.9200	
Std. error of residuals = 0.5153			
<i>Variance</i>	<i>Estimated Coefficient</i>	<i>Standard Error</i>	<i>t-statistic</i>
int.	0.0610	0.0126	4.8510
int. (-1)	0.0661	0.0139	4.7679
var. of int. rat.	-0.0797	0.0396	-2.0124
var. of int. rat. (-1)	-0.0537	0.0141	-3.8171
funds gap	0.3218	0.0798	4.0307
funds gap (-1)	-0.0876	0.0798	-1.0984
conc.	-0.0031	0.0050	-0.6217
lnassets	-0.4707	0.0512	-9.1987
$F(622, 1861) = 42.163, p\text{-value} = [.0000]$			
$Hausman\ test\ H_0: RE\ vs.\ FE: CHISQ(8) = 40.869, p\text{-value} = [.0000]$			

Savings Banks

Dependent variable: <i>net interest margin</i>			
Sum of squared residuals = 87.7947		R-squared = 0.9518	
Variance of residuals = 0.0422		Adjusted R-squared = 0.9355	
Std. error of residuals = 0.2054			
<i>Variance</i>	<i>Estimated Coefficient</i>	<i>Standard Error</i>	<i>t-statistic</i>
int.	-0.0260	0.0084	-3.0831
int. (-1)	0.1898	0.0139	13.6036
var. of int. rat.	-0.0394	0.0411	-0.9595
var. of int. rat. (-1)	-0.2384	0.0648	-3.6807
funds gap	0.8650	0.0719	12.0235
funds gap (-1)	-0.3745	0.0693	-5.4023
conc.	-0.0171	0.0030	-5.7129
lnassets	-0.9457	0.0613	-15.4168
<i>F (695, 2080) = 27.674, p-value = [.0000]</i>			
<i>Hausman test H0: RE vs. FE: CHISQ (8) = 430.06, p-value = [.0000]</i>			

Co-operative Banks

Dependent variable: <i>net interest margin</i>			
Sum of squared residuals = 908.119		R-squared = 0.8593	
Variance of residuals = 0.3110		Adjusted R-squared = 0.8120	
Std. error of residuals = 0.5577			
<i>Variance</i>	<i>Estimated Coefficient</i>	<i>Standard Error</i>	<i>t-statistic</i>
int.	0.0858	0.0184	4.6612
int. (-1)	0.1684	0.0360	4.6815
var. of int. rat.	-0.0158	0.0745	-0.2121
var. of int. rat. (-1)	-0.7128	0.1595	-4.4679
funds gap	-0.1420	0.0757	-1.8765
funds gap (-1)	-0.3943	0.0759	-5.1924
conc.	-0.0360	0.0072	-4.9946
lnassets	-0.5977	0.1076	-5.5540
<i>F (975, 2920) = 10.606, p-value = [.0000]</i>			
<i>Hausman test H0: RE vs. FE: CHISQ (8) = 101.13, p-value = [.0000]</i>			

Mortgage Banks

Dependent variable: <i>net interest margin</i>			
Sum of squared residuals = 19.5487		R-squared = 0.9516	
Variance of residuals = 0.0591		Adjusted R-squared = 0.9341	
Std. error of residuals = 0.2430			
<i>Variance</i>	<i>Estimated Coefficient</i>	<i>Standard Error</i>	<i>t-statistic</i>
int.	0.0636	0.0241	2.6323
int. (-1)	-0.0209	0.0329	-0.6359
var. of int. rat.	-0.0321	0.0881	-0.3649
var. of int. rat. (-1)	-0.0006	0.0883	-0.0072
funds gap	0.0539	0.1548	0.3485
funds gap (-1)	-0.0527	0.1378	-0.3827
conc.	-0.0120	0.0095	-1.2585
lnassets	-0.5058	0.0737	-6.8645
<i>F (112, 331) = 40.633, p-value = [.0000]</i>			
<i>Hausman test H0: RE vs. FE: CHISQ (8) = 17.201, p-value = [.0281]</i>			

Annex 15: Main types of financial institutions for each EU country

<i>Country</i>	<i>Type of financial institution</i>
Austria	Commercial banks “Aktienbanken”
	Savings banks “Sparkassen”
	Rural co-operative banks “Raiffeisenkassen”
	Industrial co-operative banks “Volksbanken”
	Mortgage credit institutions “Landes-Hypothekenbanken”
Belgium	Commercial banks “Banques Commerciales”
	Private savings banks “Caisse d’ epargne privees/prive-spaarkassen
Denmark	Commercial banks “Banker”
	Savings banks “Sparekasser”
	Mortgage credit institutions “Realkreditinstitutter”
	Co-operative credit institutions “Andelskasser”
Germany	Credit institutions “Kreditbanken”
	Savings banks “Sparkassensektor”
	Co-operative banks “Genossenschaftssektor”
France	Commercial banks “Banques”
	Savings banks “Caisses d’ epargne et de prevoyance”
	Co-operative banks “Banques mutualistes au cooperatives”
Italy	Commercial banks (private) “Societa per azioni ed altre”
	Commercial banks (public) “Banque popolari”
	Savings banks “Casse di Risparmio e Monti di credito su pegno”

Finland	Commercial banks “Liikepankit, Affarsbanken”
	Savings banks “Saastopankit, Sparbanken”
	Cooperative banks “Osuuspankit, Andelsbanker”
Sweden	Commercial banks “Affarsbanken”
	Savings banks “Sparbanker”
	Mortgage banks “Hypoteksinstitution”
Spain	Commercial banks “Bancos comerciales de tipo universal”
	Savings banks “Cajas de ahorros”
	Credit co-operatives “Entidades de credito co-operative”
	Mortgage banks “Sociedales de credito hipotecario”
Greece	Commercial banks “Εμπορικές Τράπεζες”
Netherlands	Commercial banks “Algemene banken”
	Savings banks “Sparbanken”
	Co-operative banks “Cooperatief georganisserde banken”
	Mortgage banks “Hypotheekbanken”
Luxembourg	Commercial banks “Banques commerciales de type universel”
	Co-operative banks “Societes cooperatives”
	Mortgage institutions “Instituts specialises dans le credit hypothecaire”
UK	Commercial banks
	Building societies
Portugal	Commercial banks “Bancos comerciais”
Ireland	Commercial banks “Licensed banks”
	Savings banks “Trustee savings banks”

Source: Fitch-IBCA Bankscope database

Annex 16: Unbalanced results for non-interest income

<u>Country</u>	<u>Year</u>	<u>$r_{NII, NonII}$</u>	<u>$\frac{-0.5}{\sigma_{NonII}/\sigma_{NII}}$</u>	<u>Country</u>	<u>Year</u>	<u>$r_{NII, NonII}$</u>	<u>$\frac{-0.5}{\sigma_{NonII}/\sigma_{NII}}$</u>
Austria	1992	-0.1585	-0.2992	Finland	1992	-0.0149	-0.3124
	1993	-0.2522	-2.4063		1993	-0.8161	-0.7035
	1994	-0.3706	-2.2632		1994	0.5786	-0.3450
	1995	-0.1345	-1.4898		1995	0.3184	-0.3873
	1996	-0.2714	-1.4358		1996	0.4537	-0.4287
	1997	-0.4642	-1.3161		1997	0.8306	-0.4100
	1998	0.0897	-1.3039		1998	0.2372	-0.4318
	1999	0.5115	-0.7005		1999	-0.2884	-1.0168
Belgium	1992	0.1362	-0.5535	France	1992	0.1286	-1.0257
	1993	0.3618	-0.4495		1993	-0.0754	-1.0874
	1994	-0.0476	-0.4177		1994	-0.8167	-2.1485
	1995	0.0591	-0.3734		1995	-0.2047	-0.3659
	1996	-0.0828	-0.6083		1996	-0.0542	-0.9648
	1997	0.0207	-0.6632		1997	0.0479	-0.8319
	1998	0.0455	-0.6137		1998	-0.0208	-0.5218
	1999	-0.6912	-1.5975		1999	0.0062	-2.3078

Denmark	1992	0.0914	-0.1103	Germany	1992	0.1573	-0.5768
	1993	0.1554	-0.1459		1993	0.0567	-1.0383
	1994	0.3078	-0.1569		1994	0.0527	-0.7331
	1995	0.1514	-0.1512		1995	-0.1197	-0.7777
	1996	0.2438	-0.1492		1996	-0.0087	-0.9088
	1997	0.2029	-0.1650		1997	-0.1126	-1.0372
	1998	0.1051	-0.2804		1998	-0.0477	-1.5226
	1999	0.5038	-0.1518		1999	0.1746	-0.4059
Greece	1992	-0.5753	-0.3771	Ireland	1992	-0.2747	-0.3112
	1993	0.1142	-0.2943		1993	-0.0208	-0.2836
	1994	0.2773	-0.3759		1994	0.3426	-0.3098
	1995	0.4938	-0.3204		1995	0.6079	-0.2198
	1996	0.0808	-0.2796		1996	0.3323	-0.3064
	1997	0.1363	-0.3890		1997	0.3922	-0.3408
	1998	0.3732	-0.4878		1998	0.0807	-0.8550
	1999	0.0938	-0.5506		1999	-0.3151	-1.3017

Italy	1992	0.3165	-0.1870	Luxembourg	1992	-0.5391	-0.4273
	1993	0.0710	-0.2390		1993	0.0684	-0.8980
	1994	0.0747	-0.0909		1994	0.2009	-1.4293
	1995	0.6607	-0.1477		1995	0.2989	-1.4264
	1996	0.2928	-0.7818		1996	0.2360	-1.0477
	1997	-0.0672	-0.6388		1997	0.4470	-0.8469
	1998	0.0723	-0.7928		1998	-0.8330	-2.8470
	1999	0.4103	-0.2542		1999	0.6820	-0.9911
Netherlands	1992	0.0470	-1.0160	Portugal	1992	-0.1109	-0.2365
	1993	-0.0396	-0.4498		1993	-0.3113	-0.3097
	1994	0.9315	-0.0123		1994	-0.1528	-0.2112
	1995	0.7438	-0.0077		1995	-0.3438	-0.3727
	1996	0.9437	-0.0182		1996	0.1942	-0.4142
	1997	0.1532	-1.5553		1997	0.1812	-0.4922
	1998	0.0937	-1.7133		1998	0.2818	-0.3532
	1999	-0.1448	-1.6859		1999	0.0059	-0.4882
Spain	1992	0.4367	-0.1877	Sweden	1992	0.1970	-0.0359
	1993	-0.3509	-0.2048		1993	0.1367	-0.0725
	1994	-0.0900	-0.2318		1994	0.6512	-0.3757
	1995	-0.1885	-0.3715		1995	0.5854	-0.3071
	1996	-0.1089	-0.2956		1996	0.6202	-0.3536
	1997	0.0940	-0.6976		1997	0.6649	-0.2927
	1998	-0.2219	-0.3555		1998	0.5766	-0.3691
	1999	-0.2052	-0.4250		1999	0.4322	-0.6259

UK	1992	0.2708	-0.3793	EU	1992	0.8486	-0.2553
	1993	0.3196	-0.4455		1993	0.8803	-0.3088
	1994	0.4542	-0.4692		1994	0.8420	-0.2855
	1995	0.2598	-0.9230		1995	0.8573	-0.3014
	1996	0.2133	-0.9604		1996	0.8895	-0.3282
	1997	0.3510	-0.6329		1997	0.9254	-0.3503
	1998	0.4862	-0.2604		1998	0.9141	-0.3810
	1999	0.7887	-0.5644		1999	0.8841	-0.4748

Large banks	1992	-0.0984	-0.2764	Small banks	1992	0.0977	-0.5607
	1993	0.1443	-0.2836		1993	0.1322	-0.9722
	1994	0.1900	-0.2966		1994	0.0568	-0.1165
	1995	0.1157	-0.2469		1995	0.1269	-0.0445
	1996	0.1191	-0.2879		1996	0.2582	-0.0688
	1997	0.2948	-0.2924		1997	0.0098	-0.1923
	1998	0.1223	-0.4229		1998	-0.0530	-0.8691
	1999	0.2246	-0.6469		1999	0.0701	-0.9914

Commercial banks	1992	0.1257	-0.6193	Savings banks	1992	0.1860	-0.1478
	1993	0.0357	-1.8375		1993	0.2096	-0.2464
	1994	0.0560	-0.1166		1994	0.1687	-0.1443
	1995	0.1202	-0.0441		1995	0.2192	-0.1581
	1996	0.2624	-0.0651		1996	0.0132	-0.8244
	1997	0.0204	-0.1815		1997	-0.0448	-1.0565
	1998	-0.0795	-0.9242		1998	0.3104	-0.2415
	1999	0.1098	-1.3975		1999	0.1956	-0.1482
Co-operative banks	1992	0.9743	-0.1199	Mortgage banks	1992	0.1920	-0.2616
	1993	0.9853	-0.1586		1993	0.1265	-0.2292
	1994	0.9496	-0.1509		1994	0.0442	-0.3699
	1995	0.9566	-0.1830		1995	-0.0808	-0.2874
	1996	0.8996	-0.2358		1996	-0.0843	-0.2587
	1997	0.9612	-0.2791		1997	-0.2926	-0.2177
	1998	0.8802	-0.3691		1998	-0.0570	-2.1897
	1999	0.9774	-0.3690		1999	0.4422	-0.0993

Annex 17: Several Categories of Non-Interest Income

Deposit account fees

Retail

Commercial

Credit card fees

Membership and Other

Trust fees

Corporate and employee benefit

Personal and other

Other fees and commissions

Loan fees and charges

Income from credit card securitisation

Off balance sheet credit related instrument fees

Financial services fees

Mutual fund and annuity commissions

Other

Trading Income

Interest exposures, Foreign exchange exposures, Debt instruments

Other non-interest income

Venture capital activities

Net gains on sale of loans, premises, equipment, and certain other assets

Net gains on sale of subsidiaries and operations

Source: Radecki, L., 1999, "Banks' Payments-Driven Revenues", FRBNY, Economic Policy Review, July, pp. 53-69.

Annex 18: Bank Performance (Determinants – Measures – Method)

Author (s)	Sample	Determinants of Bank Performance	Measure of Bank Performance	Method
Arshadi and Lawrence (1987)	438 new commercial banks (1980-1984)	<ul style="list-style-type: none"> • Structure • Bank Costs • Deposit Composition • Credit Composition • Size • Demographic Factors • Economic Conditions 	<ul style="list-style-type: none"> • ROA • Interest and Fees on Loans/Total Loans • Interest on Time and Savings Deposits/Total Time and Savings Deposits • Total Loans of Sample Banks/Total Loans in Market Area 	Canonical Correlation Analysis (CCA)
Barry (1988)	Eighth District Commercial Banks (1985-1987)	<ul style="list-style-type: none"> • Financial Condition • Regulation Compliance • Operating Soundness 	<ul style="list-style-type: none"> • ROA • ROE • Net Interest Margin • Net Non-interest Margin • Non performing Loan Rate • Net Charge-offs/Total Loans • Bank Capital Ratios 	Descriptive Analysis
Berger (1995)	Thirty separate cross section data (ten years of the 1908s)	<ul style="list-style-type: none"> • Concentration Ratio • Bank's Share of Market Deposits • Scale Economy • Scale Economy Efficiency • Scale Diseconomy Efficiency 	<ul style="list-style-type: none"> • ROA • ROE 	Regression Analysis

		<ul style="list-style-type: none"> • Real Growth of Deposits • Dummy Variables 		
Berger and Hannan (1988)	470 banks from 195 local banking markets (1983-1985)	<ul style="list-style-type: none"> • Market Share • Growth Rate in Deposits • Number of Bank Branches • Per Capita Income in Local Markets • Location • Bank Size 	<ul style="list-style-type: none"> • Money Market Deposit Account Rate 	Cross Sectional Regression Analysis
Bond (1971)	295 member banks in Ohio (1963-1966)	<ul style="list-style-type: none"> • Deposit Composition 	<ul style="list-style-type: none"> • Net Revenue/Total Liabilities 	Multiple Regression Analysis
Boorman (1974)	17 minority banks with assets < \$50 million (all minority banks before 1968)	<ul style="list-style-type: none"> • Ownership Status (minority-owned banks) • Comparative (over years) Analysis 	<ul style="list-style-type: none"> • Assets and Liabilities Allocation • Costs and Revenues Analysis • Profitability Analysis ⇒ Loan Losses ⇒ Net Income/Current Operating Income ⇒ Accumulated Capital Accounts ⇒ ROA ⇒ ROC ⇒ Net Current Operating Income/Current Operating Income 	Descriptive Analysis

			⇒ Net Securities Gains and Losses/Securities	
Bourke (1989)	90 banks in twelve countries or territories (1972-1981)	<ul style="list-style-type: none"> • Staff Expenses • Capital Ratios • Liquidity Ratios • Concentration Ratio • Government Ownership • Interest Rates • Market Growth • Inflation 	<ul style="list-style-type: none"> • ROC • ROA • Value Added Return on Total Assets <p>⇒ Net Income before Taxes+Staff Expenses/Total Assets</p> <p>⇒ Net Income before Taxes+Staff Expenses+Loan Losses/Total Assets</p>	Regression Analysis
Boyd and Runkle (1993)	122 banking holding companies (1971-1990)	<ul style="list-style-type: none"> • Bank Size 	<ul style="list-style-type: none"> • ROA • Tobin's q 	Regression Analysis
Brimmer (1978)	19 Black banks (until December 1969)	<ul style="list-style-type: none"> • External Environment • Capital Adequacy • Asset Quality • Management Personnel 	<ul style="list-style-type: none"> • Current Operating Income as per cent of Total Assets (or Capital Accounts) • Rate of Return on Selected Assets • ROA • ROC 	Descriptive Analysis
Clark (1986)	1,857 banks located in 152 SMSAs (1973-1982)	<ul style="list-style-type: none"> • Concentration Ratio • Total Deposits of the Bank • Time and Savings Deposits/Total Deposits • Retail Sales in the Market/Total Retail Sales 	<ul style="list-style-type: none"> • ROA • ROE 	2SLS and OLS Estimating Processes

		<ul style="list-style-type: none"> • Per Capita Income • Management Preferences • Regulatory and Organisational Structures 		
Cole (1981)	12,735 small banks (total assets < \$100 million) (1977-1980)	<ul style="list-style-type: none"> • Interest Rate • Balance-Sheet Composition 	<ul style="list-style-type: none"> • ROA • Capital Ratios • Asset Quality ⇒ Loan-Loss Provisions • Net Loan Losses 	Descriptive Analysis
Curry and Rose (1984)	34 (1972) and 52 (1978) smaller metropolitan markets (population < 500,000)	<ul style="list-style-type: none"> • Bank Holding Company Presence • Parent's Location • Market Size • Market Growth • Market Concentration 	<ul style="list-style-type: none"> • Portfolio Composition • Bank Capital • Operating Efficiency • Prices of Bank Services • Bank Profitability ⇒ ROA ⇒ ROE ⇒ Net Operating Income/Total Assets 	Regression Analysis
Davis, Gouzouli, Spence, and Star (1993)	25 leading European banks (1987-1992)	<ul style="list-style-type: none"> • Management Preferences 	<ul style="list-style-type: none"> • Rents (or Added Value/Inputs) • ROE 	Descriptive Analysis
DeYoung and Hassan (1998)	16,282 observations on 5,435 small, urban commercial banks	<ul style="list-style-type: none"> • De Novo Commercial Banks • Bank Holding Company Affiliation • Chartered Location • Concentration 	<ul style="list-style-type: none"> • Operating Efficiency • Bank Capital ⇒ Equity/Assets • Portfolio Composition 	Descriptive Analysis

	(1980-1994)		<ul style="list-style-type: none"> • Profitability <p>⇒ ROA</p>	
Edwards and Heggstad (1973)	Sixty-six of the largest hundred banks in 1960 from SMSA's	<ul style="list-style-type: none"> • Market Structure • Size Effects • Geographic Diversification • Stability of Demand Conditions 	<ul style="list-style-type: none"> • ROA 	Log-Linear Regression Analysis
Elliott (1972)	88 firms (1964-1967)	<ul style="list-style-type: none"> • Management Control • Firm Growth 	<ul style="list-style-type: none"> • Liquidity • Growth • Owner Earnings • Management Profit Performance • Leverage • Capital Investment 	Regression Analysis
Emery (1971)	980 banks from all fifty states (1962-1968)	<ul style="list-style-type: none"> • Regulation • Bank Size • Branching • Geographic Location • Rent Criterion 	<ul style="list-style-type: none"> • ROE 	Single Estimation Procedure
Flannery (1981)	15 large banks from Compustat (1959-1978)	<ul style="list-style-type: none"> • Market Interest Rates <p>⇒ Level of Interest Rates</p> <p>⇒ Variability of Rates</p>	<ul style="list-style-type: none"> • Gross Operating Income/Total Assets 	
Flannery (1983)	Sixty smaller banks (1960-1978)	<ul style="list-style-type: none"> • Market Interest Rates • Interest Rate Variability 	<ul style="list-style-type: none"> • Net Income 	

Francis (1978)	68 large banks, 198 medium banks, and 603 small banks (1966-1971)	<ul style="list-style-type: none"> • Portfolio Analysis (Asset and Liability Management) • Size 	<ul style="list-style-type: none"> • ROE 	Risk and Return Statistics
Fraser and Rose (1971)	193 insured commercial banks in 78 cities of Texas (1966-1967)	<ul style="list-style-type: none"> • Market Structure • Demand for Bank services • Importance of Non-bank Financial Institutions • Bank Costs • Loan Composition • Bank Size 	<ul style="list-style-type: none"> • ROA • ROC • The Average Rate Charged on all Loans or on a Specific Category of Loans • Average Rates Paid on Savings Deposits or on Specific Types of Savings Deposits • Relative Proportion of Time to Total Deposits in a Bank's Portfolio • Ratio of Loans to Total Deposits or Assets • Relative Level of Service Charges on Deposits 	Cross-Sectional Regression Analysis
Fraser and Rose (1972)	124 new banks in the Eleventh Federal Reserve Districts (1960-1961)	<ul style="list-style-type: none"> • Market Structure (number and size of the banks) • Changes in the Community's economic base (level of growth of population, level of income) • Demand of banking services • Bank Operations 	<ul style="list-style-type: none"> • Profitability • Revenues • Expenses • Composition of assets, Liabilities, Loans 	Descriptive Analysis

		<ul style="list-style-type: none"> • Monetary Policy • Nature of non-bank Competition 		
Fraser, Phillips and Rose (1974)	1206 Texas banks (1969-1970)	<ul style="list-style-type: none"> • Market Structure • Bank Costs • Demographic Factors • Composition of Bank Credit • Composition of Bank Deposits • Economic Conditions 	<ul style="list-style-type: none"> • Interest and Fees on Loans/Total Loans (Loan Rate) • Total Bank Loans/Total Assets • ROC • Service Charges on Checking Accounts / Demand Deposits • Interest on Time and Saving Deposits/Total Time and Savings Deposits (Time Deposit Rate) 	Canonical Correlation Analysis (CCA)
Gilbert and Peterson (1975)	376 banks that entered or withdrew from the Federal Reserve System	<ul style="list-style-type: none"> • Federal Reserve System Membership 	<ul style="list-style-type: none"> • ROA • ROC 	Statistical Analysis

Graddy and Kyle (1979)	463 U.S. insured commercial banks located in unit and limited area branching states (1974)	<ul style="list-style-type: none"> • Endogenous Variables 1. Output Related Variables 2. Input Related Variables • Exogenous Variables 1. Geographic Markets 2. Product Markets 3. Regulatory Factors 4. Holding Company Affiliation 	<ul style="list-style-type: none"> • Liquidity Measures • Lending Measures • Investment Measures • Capital adequacy 	Regression Analysis
Graddy and Kyle (1980)	463 banks (1974)	<ul style="list-style-type: none"> • Holding Company Structure • Market Size • Bank Size • Market Growth • Income Level • Branching Restriction • Bank Concentration 	<ul style="list-style-type: none"> • Demand Composition • Loan Structure • Asset Allocation 	Three Stage Least Squares (3SLS) Estimating Procedures
Gup and Walter (1989)	All small U.S. banks (assets < \$100 million) (1982-1987)	<ul style="list-style-type: none"> • Size • Location 	<ul style="list-style-type: none"> • ROA • Balance Sheet Composition • Capital Adequacy • Operational Efficiency 	Descriptive Analysis
Hannan (1991)	Banking Firm	<ul style="list-style-type: none"> • Balance-Sheet Composition • Capital – Asset Ratio 	<ul style="list-style-type: none"> • ROA • ROC 	Theoretical Explicit Model of the Banking Firm
Haslem	333 (1963)	<ul style="list-style-type: none"> • Management Effects 	<ul style="list-style-type: none"> • Funds-use Ratios 	Regression

(1968)	and 338 (1964) banks	<ul style="list-style-type: none"> • Size (Deposit) Effects • Location Effects • Time Effects 	<ul style="list-style-type: none"> • Funds-source Ratios • Expense Ratios • Non-operating Ratios • Profitability Ratios (ROC) 	Analysis
Haslem (1969)	All member banks with sixty four ratios (1963,1964)	<ul style="list-style-type: none"> • Location • Operating Ratio Variable • Bank Size 	<ul style="list-style-type: none"> • Twenty Seven Bank Operating Ratios 	<ol style="list-style-type: none"> 1. Wherry-Doolittle 2. Linear Regression
Heggestad (1977)	238 individual banks operating in 60 medium size metropolitan areas (1960- 1970)	<ul style="list-style-type: none"> • Deposit Composition • Retail Sales (1970) / Retail Sales (1960) • Concentration Structure • Per Capita Income in the Bank's Market 	<ul style="list-style-type: none"> • ROA 	Regression Analysis
Heggestad and Mingo (1976)	Telephone survey of 332 banks in 69 SMSAs (1973)	<ul style="list-style-type: none"> • Bank Concentration • Liability Composition • Location • Total Deposits • Personal Income • Market Share 	<ul style="list-style-type: none"> • Interest Rate on Passbook Savings • Service Charges • Interest Rate on one year \$1,000 CD • Weekly Office Hours 	Regression Analysis
Hester and Zoellner (1966)	300 banks from the 750 Tenth District member	<ul style="list-style-type: none"> • Composition of Bank's Portfolio • Number of Branches 	<ul style="list-style-type: none"> • ROA • Net Current Operating Income • Net Profit before Taxes 	Least Squares Regression (Statistical Cost

	banks			Accounting Method)
Hoggarth, Milne, and Wood (1999)	Banking Performance in the UK and Germany (1990-1993)	<ul style="list-style-type: none"> • Regulation • Ownership Characteristics • Macroeconomic Conditions • Difference in Risk Management • Differences in Financing properties 	<ul style="list-style-type: none"> • ROA • Income Statement Analysis 	Descriptive Analysis
Jayarathne and Strahan (1998)	Data from Quarterly Reports of Income and Condition (Call Reports)	<ul style="list-style-type: none"> • Regulation • Growth Rate of Personal Income 	<ul style="list-style-type: none"> • ROA • ROE • Non-Interest Expenses • Non-Performing Loans • Net Charge-Offs • Loan Loss Provisions 	Regression Analysis
Karna (1979)	109 bank holding companies (1976)	<ul style="list-style-type: none"> • Nonbank subsidiaries of bank holding companies 	<ul style="list-style-type: none"> • ROE • ROC 	Descriptive Analysis
Kaufman (1965)	656 Iowa banks (1959-1960)	<ul style="list-style-type: none"> • Market Structure <ul style="list-style-type: none"> ⇒ Distance from Nearest Financial Centre ⇒ Number of Banks ⇒ Balance-Sheet Composition • Level and Change in Population • Level and Change in Income • Industrial Mix of Region 	<ul style="list-style-type: none"> • Price Measures <ul style="list-style-type: none"> ⇒ Gross Interest Rate Charged on Loans ⇒ Interest Rate Paid on Time and Savings Deposits • Activity Measures <ul style="list-style-type: none"> ⇒ Loans/Total Assets ⇒ Time Deposits/Total Deposits 	Linear Cross-Section Regression

			<ul style="list-style-type: none"> • Profit Measures <p>⇒ Pre-Tax Earnings/Total Assets</p>	
Kimball (1997)	Banking Firm	Autonomous Business Units	<ul style="list-style-type: none"> • Funds Transfer Pricing System • Activity-Based Costing (ABC) 	Descriptive Analysis
Kwast and Rose (1982)	328 high-profit-bank and 312 low-profit-bank observations (1970-1977)	<ul style="list-style-type: none"> • Market Concentration • Local and Regional Influences <p>⇒ Per Capita Income</p> <p>⇒ Rate of Economic Growth</p> <p>⇒ Cost of Non-Financial Factor Inputs</p> <ul style="list-style-type: none"> • National Economic Environment 	<ul style="list-style-type: none"> • ROA 	Statistical Cost Accounting Technique
Lloyd-Williams, Molyneux and Thornton (1994)	92 (1988) and 56 (1986, 1987) Spanish banks	<ul style="list-style-type: none"> • Concentration Ratio • Market Share Measure • Capital/Asset Ratio • Loan/Deposit Ratio • Bank Assets • Ownership Status 	<ul style="list-style-type: none"> • ROA 	Regression Analysis
Magnan and St-Onge (1997)	300 largest U.S. commercial banks (1984-1987)	<ul style="list-style-type: none"> • Bank Executive Compensation • Firm Size • Managerial Discretion 	<ul style="list-style-type: none"> • ROA • Stock Market Return 	Descriptive Analysis Regression Analysis
Maisel and	978 (1961-	<ul style="list-style-type: none"> • Interest Rate Changes 	<ul style="list-style-type: none"> • Rate of Income 	1. OLS

Jacobsen (1978)	1968) and 980 (1969-1975) banks respectively		<ul style="list-style-type: none"> • Rate of Costs 	2. Zellner's Seemingly Unrelated Equation Estimation
Mayne (1976)	656 banks from 28 states (1969-1972)	<ul style="list-style-type: none"> • Holding Company Structure • Geographic Region • Bank Regulatory Authority • Bank Size 	<ul style="list-style-type: none"> • Asset Allocation • Deposit Management • Capital Structure • Pricing Measures • Operating Efficiency (Expenses) • Profitability <p>⇒ Operating Profit (After Tax)/Total Assets</p> <p>⇒ ROC</p>	Multi-Variate Statistical Analysis
McCall and Peterson (1977)	31 banks in unit bank entry markets and 11 banks in branch entry markets	<ul style="list-style-type: none"> • Unit Entry • Branch Entry 	<ul style="list-style-type: none"> • Asset and Liability Composition • Revenue • Service Prices • Expenses • Profitability <p>⇒ ROA</p> <p>⇒ ROC</p> <p>⇒ Net Current Operating Earnings/Assets</p> <p>⇒ Net Current Operating Earnings/Capital</p>	Regression Analysis
Meinster and	719 banks	<ul style="list-style-type: none"> • Ownership Status (minority, 	<ul style="list-style-type: none"> • Asset Management 	3SLS

Elyasiani (1988)	from FRS- FDIC tapes and 234 holding company owned banks and 240 non- attribute from all Federal Reserve districts	foreign, or holding company) <ul style="list-style-type: none"> • Location (Geographic Region) • Regulatory Authority • Quantitative Control Variables <ol style="list-style-type: none"> 1. Deposit Composition 2. Number of Branches 3. Salaries/Employees 	Performance <ul style="list-style-type: none"> • Funds Management and Capital Management Measures • Pricing Measures • Expense and Profit Measures <p>⇒ ROE</p> <p>⇒ Dividend Payout Ratio</p> <p>⇒ Loan Losses</p> <p>⇒ Total Operating Expenses over Total Assets</p>	Equation Model
Miller and Noulas (1997)	243 large U.S. banks (assets >= \$1 billion) (1984-1990)	<ul style="list-style-type: none"> • Asset Management • Liability Management • Productivity and Efficiency • Quality of Assets 	<ul style="list-style-type: none"> • ROA 	Regression Analysis
Mingo (1975)	167 banks from Eight Unit Banking States (Total Deposits < \$70 million) (1967)	<ul style="list-style-type: none"> • Holding Company Banks • Bank Size • Concentration • Manufacturing Wage Rate • Importance of Business Investment 	<ul style="list-style-type: none"> • Capital-Asset Ratio • ROC • ROA 	Multiple Regression Analysis (OLS)
Molyneux (1993)	759 (1986), 1201 (1987), 1341 (1988), and 1268 (1989) banks from	<ul style="list-style-type: none"> • Concentration • Market Share • Money Supply Growth • Loan/Asset Ratio 	<ul style="list-style-type: none"> • ROA 	Regression Analysis

	nineteen countries (1986-1989)	<ul style="list-style-type: none"> • Equity/Asset Ratio • Staff Expenses • Ownership Status • Interest Paid/Total Funds 		
Molyneux and Thornton (1992)	671 (1986), 1,063 (1987), 1,371 (1988), and 1,108 (1989) European banks across eighteen countries (1986-1989)	<ul style="list-style-type: none"> • Government Ownership • Bank Concentration • Market Growth • Interest Rates • Staff Expenses/Total Assets • Inflation • Capital+Reserves/Total Assets • Cash + Bank Deposits + Investment Securities / Total Assets 	<ul style="list-style-type: none"> • ROA • NPBT/Capital+Reserves • NPAT/Capital and Reserves • NPBT/Capital+Reserves +Total Borrowings • NPBT+Staff Expenses/Total Assets • NPAT+Staff Expenses+Provision for Loan Losses/Total Assets 	Linear Regression
Moore (1998)	US banks (1986-87 and 1996-97)	<ul style="list-style-type: none"> • Concentration • Size of the market • Regulation • Per Capita Personal Income • Deposit Growth • Non-Performing Loans / Total Loans • Portfolio Composition 	<ul style="list-style-type: none"> • ROA 	Regression Analysis
Nelly and Wheelock (1997)	Overview of the US commercial banks (1946-1995)	<ul style="list-style-type: none"> • Geographic Diversification • Regulation (Government Bank Charter Policy) • Interstate Bank Holding 	<ul style="list-style-type: none"> • ROA • ROE 	Descriptive Analysis

		<p>Companies</p> <ul style="list-style-type: none"> • State Economic Activity • Provisions for Loan Losses • Limited Purpose and Non-Bank Institutions 		
Opper (1981)	All insured commercial banks (1978-1980)	<ul style="list-style-type: none"> • Interest Rate Level 	<ul style="list-style-type: none"> • Net Interest Margin • Loan Loss Provisions • ROA • ROE 	Descriptive Analysis
Peek, Rosengren, Kasirye (1998)	US banks that merged in the period 1984-1997	<ul style="list-style-type: none"> • Ownership Structure • Geographic Location • Time Effects • Bank-Specific Variables <p>⇒ Size</p> <p>⇒ Shares of Lines of Business</p> <p>⇒ Performance</p>	<ul style="list-style-type: none"> • ROA 	Regression Analysis
Peristiani (1997)	4,900 U.S. mergers (1980-1990)	<ul style="list-style-type: none"> • Mergers • Regional Economic Conditions • Growth of Deposits • Growth in Concentration • Bank Growth in Market Share • Credit Risk • Balance Sheet Composition • Growth in Bank Employment 	<ul style="list-style-type: none"> • X-efficiency • Scale Efficiency • ROA • Change in Non-Interest Expenses 	Regression Analysis
Rhoades and	6,500 unit	<ul style="list-style-type: none"> • Concentration 	<ul style="list-style-type: none"> • ROA 	Regression

Rutz (1982)	banks (1969-1978)	<ul style="list-style-type: none"> • Regulation • Bank Size • Market Size • Market Growth • Time Deposits/Total Time and Savings Deposits • Bank Holding Company Affiliation 		Analysis
Ruthenberg and Elias (1996)	15 EC countries (1989-1990)	<ul style="list-style-type: none"> • Concentration • Competition (Entry Barriers) • Market Share • Non-interest Income • Overall Risk 	<ul style="list-style-type: none"> • Net-interest Margin 	Regression Analysis
Samolyk (1997)	U.S. commercial banks that filled call reports) (1984-1992)	<ul style="list-style-type: none"> • Size • Location • Bank Holding Company Affiliation • Macroeconomic Environment • Growth Rate of Personal Income • State Bank Assets/State Personal Income 	<ul style="list-style-type: none"> • Profitability ⇒ ROA • Asset Quality ⇒ Non-Performing Assets/Total Assets ⇒ Net Charge-offs for Loan Losses/Total Loans • Capitalisation • Lending Distribution 	Descriptive Analysis Regression Analysis
Santoni (1986)	Quarterly Data from New York City (1962-1984)	<ul style="list-style-type: none"> • Inflation • Interest Rates 	<ul style="list-style-type: none"> • Stock Prices 	Descriptive Analysis

Schranz (1993)	714 (1979) and 1,241 (1987) banks	<ul style="list-style-type: none"> • Takeovers • Equity Ownership • Management Ownership of Stock • Size • Competitiveness of Output Market • Investment Riskiness • Age of the Banks • Economic Environment • Rate of Return of Common Stock 	<ul style="list-style-type: none"> • Pretax Income/Total Revenue (Profit Margin) 	<p>Descriptive Analysis</p> <p>Regression Analysis</p>
Schuster (1984)	Switzerland, West Germany, New York, and England banks	<ul style="list-style-type: none"> • Market Share • Market Power • Quality of Management • Economies of Scale 	<ul style="list-style-type: none"> • ROA 	Regression Analysis
Short (1979)	Sixty banks from Canada, Western Europe, and Japan (1972-1974)	<ul style="list-style-type: none"> • Concentration • Growth of Assets • Central Bank Discount Rate • Long -Term Bond Rates • Bank Size • Ownership Status • Leverage (Total Assets/Funds) 	<ul style="list-style-type: none"> • After Tax Profits to Total Shareholders' Funds (included Retained Earnings and General Reserves) 	Regression Analysis
Sinkey (1983)	First Pennsylvania Bank	<ul style="list-style-type: none"> • Loan Portfolio • Investment Portfolio 	<ul style="list-style-type: none"> • ROE 	Descriptive Analysis

	(1970-1978)	<ul style="list-style-type: none"> • Use of Purchased Funds • Expense Control 		
Smirlock (1985)	Over 2,700 unit state banks operating in the seven-state area of Kansas City (1973 and 1978)	<ul style="list-style-type: none"> • Market Share • Market Concentration • Total Market Deposits • Percentage Growth in Market Deposits • Demand Deposits/Total Deposits • Total Bank Assets • Effects of Holding Company Affiliation • State Law (Regulation) 	<ul style="list-style-type: none"> • ROA • ROE • ROC 	Regression Analysis
Smirlock, Gilligan, Marchall (1984)	231 firms listed in the Fortune Directory (1961-1969)	<ul style="list-style-type: none"> • Market Share • Market Concentration • Market Share Growth • Entry Barriers 	<ul style="list-style-type: none"> • Tobin's q (Market Value/Replacement Cost of the Firm) 	Multiple Regression
Vennet (1996)	492 takeovers between EC credit institutions	<ul style="list-style-type: none"> • Mergers and Acquisitions • Labor Cost • Capital Risk • Credit Risk • Liquidity Risk 	<ul style="list-style-type: none"> • ROA • ROE • Interest Margin • Net Margin • Operating Expense Ratio 	Regression Analysis
Vennet (1998)	2375 EU banks from 17 countries	<ul style="list-style-type: none"> • Concentration • Efficiency • Market Share • Type of Bank 	<ul style="list-style-type: none"> • ROA • ROE • Net Interest Margin / Total Assets 	Regression Analysis

		<ul style="list-style-type: none"> • Capital / Assets • Equity / Total Net Loans • Demand and Savings Deposits / Total Deposits 		
Wall (1985)	114 banks ($\$50$ million < assets < $\$500$ million) (1972-1981)	<ul style="list-style-type: none"> • Concentration Ratio • Bank Size • Branches • Changes in Bank Portfolio through Time 	<ul style="list-style-type: none"> • ROA • ROE • Equity/Total Assets • Interest Expenses • Non-interest Expenses 	Regression Analysis
Whalen (1988)	159 banks from non-metropolitan statistic area countries in Ohio (1979-1981)	<ul style="list-style-type: none"> • Competition • Market Share • Risk <p>⇒ Bank Characteristics ⇒ Economic Conditions ⇒ Regulatory Environment</p>	<ul style="list-style-type: none"> • ROE 	Regression Analysis
Williams (1998)	Foreign banks in Australia (1987-1993)	<ul style="list-style-type: none"> • Foreign Banks • Bank License • Parent Size • Market Growth • Years of Entry • Scale Fee Based Income • Investment • Net Interest Margins 	<ul style="list-style-type: none"> • Profits <p>⇒ ROA</p> <ul style="list-style-type: none"> • Size 	Regression Analysis
Woosley and Baer (1995)	Commercial Banks in US		<ul style="list-style-type: none"> • ROA • ROE 	Descriptive Analysis

	(1994)		<ul style="list-style-type: none"> Adjusted Net Interest Margin 	
Yeats (1974)	Markets in the States of Louisiana and Tennessee (1970)	<ul style="list-style-type: none"> Concentration Ratio Change in Market Structure Demand Changes ⇒ Percentage Change in Population ⇒ Percentage Change in Disposable Income 	<ul style="list-style-type: none"> Profitability Measures ⇒ ROC ⇒ ROA Price Measures ⇒ Interest Rate Paid to Time Deposits ⇒ Interest Rate Charged on Loans Loan/Deposit Ratio 	Regression Analysis
Zimmerman (1996)	California banks with less than \$300 million in assets (1990-1994)	<ul style="list-style-type: none"> Geographic Location Local and Regional Economic Factors Management Decisions ⇒ Concentration of Assets in Real Estate Lending ⇒ Mix of Real Estate Loans (Residential-Commercial) Control Variables ⇒ Bank Size ⇒ Growth Rate of Assets ⇒ Capital/Asset Ratio ⇒ Loan/Asset Ratio ⇒ Bank Holding Company ⇒ Number of Branches 	<ul style="list-style-type: none"> ROA Problem Real Estate Loans/Total Loans 	Descriptive Analysis Regression Analysis

Annex 19: Total (plain) OLS estimates (independent variables: Gap, EA, LLP/TL)

Dependent variable: <i>return on assets</i>				
Sum of squared residuals 3606.52		R-squared 0.3516		
Variance of residuals 1.0543		Adjusted R-squared 0.3510		
Standard error of regression 1.0268		LM heteroscedasticity test 60.2577 [.000]		
		Durbin-Watson test 0.9380 [.000,.000]		
<i>Variance</i>	<i>Estimated Coefficient</i>	<i>Standard error</i>	<i>t-statistic</i>	<i>p-value</i>
Gap	2.7350	0.5032	5.4350	[.000]
EA	0.1037	0.0062	16.6516	[.000]
LLP/TL	-0.2093	0.0066	-31.5423	[.000]
C	0.2026	0.0397	5.1048	[.000]

Annex 20: Total (plain) OLS estimates (independent variables: Gap, EA, LLP/TL, MSH, H)

Dependent variable: <i>return on assets</i>				
Sum of squared residuals 3581.28		R-squared 0.3562		
Variance of residuals 1.0475		Adjusted R-squared 0.3552		
Standard error of regression 1.0235		LM heteroscedasticity test 60.3551 [.000]		
		Durbin-Watson test 0.9442 [.000,.000]		
<i>Variance</i>	<i>Estimated Coefficient</i>	<i>Standard error</i>	<i>t-statistic</i>	<i>p-value</i>
Gap	2.6026	0.5051	5.1525	[.000]
EA	0.1065	0.0063	16.7939	[.000]
LLP/TL	-0.2076	0.0066	-31.3379	[.000]
MSH	0.0050	0.0016	3.0723	[.002]
H	0.0001	0.0000	3.4366	[.001]
C	0.0819	0.0477	1.7157	[.086]

Annex 21: Total (plain) OLS estimates (independent variables: Inassets, LA, OA, Gap, EA, LLP/TL, MSH, H)

Dependent variable: <i>return on assets</i>				
Sum of squared residuals 3474.53		R-squared 0.3753		
Variance of residuals 1.0183		Adjusted R-squared 0.3731		
Standard error of regression 1.0091		LM heteroscedasticity test 48.1189 [.000]		
		Durbin-Watson test 0.9454 [.000,.000]		
<i>Variance</i>	<i>Estimated Coefficient</i>	<i>Standard error</i>	<i>t-statistic</i>	<i>p-value</i>
Inassets	0.0159	0.0123	1.2869	[.198]
LA	0.0041	0.0009	4.3906	[.000]
GAP	2.8538	0.5254	5.4317	[.000]
EA	0.0961	0.0077	12.4265	[.000]
OA	0.0501	0.0146	3.4457	[.001]
LLP/TL	-0.2050	0.0067	-30.6902	[.000]
MSH	0.0039	0.0018	2.2091	[.027]
H	0.0001	0.0000	3.8122	[.000]
INT	0.0186	0.0099	1.8748	[.061]
DEV	-0.0052	0.0195	-0.2679	[.789]
dGDP	-0.0079	0.0011	-7.1601	[.000]
dGPI	0.0436	0.0106	4.1255	[.000]
C	-0.7543	0.2278	-3.3117	[.001]

Annex 22: Total (plain) OLS estimates for large and small banks (independent variables: Gap, EA, LLP/TL)

Dependent variable: <i>return on assets</i>				
Sum of squared residuals 203.397 3313.40		R-squared 0.2666 0.3716		
Variance of residuals 0.2965 1.2133		Adjusted R-squared 0.2634 0.3709		
Standard error of regression 0.5445 1.1015		LM heteroscedasticity test 407.392 [.000] 34.6289 [.000]		
		Durbin-Watson test 0.4395 [.000,.000] 0.9328 [.000, .000]		
<i>Variance</i>	<i>Estimated Coefficient</i>	<i>Standard error</i>	<i>t-statistic</i>	<i>p-value</i>
Gap	0.9993 <i>3.3472</i>	0.5529 <i>0.6261</i>	1.8074 <i>5.3461</i>	[.071] <i>[.000]</i>
EA	0.1273 <i>0.1006</i>	0.0095 <i>0.0078</i>	13.4256 <i>12.8903</i>	[.000] <i>[.000]</i>
LLP/TL	-0.0300 <i>-0.2263</i>	0.0118 <i>0.0075</i>	-2.5508 <i>-30.1883</i>	[.011] <i>[.000]</i>
C	0.1128 <i>0.1880</i>	0.0514 <i>0.0508</i>	2.1924 <i>3.7058</i>	[.029] <i>[.000]</i>

Note: Fonts with italics refer to small banks; otherwise, large banks.

Annex 23: Total (plain) OLS estimates for the different types of financial institutions (independent variables: Gap, EA, LLP/TL)

Dependent variable: <i>return on assets</i>				
Sum of squared residuals		R-squared		
3477.07		0.4072		
165.336		0.5906		
346.247		0.2986		
Variance of residuals		Adjusted R-squared		
1.9578		0.4062		
0.2202		0.5889		
0.5160		0.2955		
Standard error of regression		LM heteroscedasticity test		
1.3992		117.715 [.000]		
0.4692		63.0192 [.000]		
0.7183		33.7420 [.000]		
		Durbin-Watson test		
		0.9808 [.000, .000]		
		0.6216 [.000, .000])		
		0.9612 [.000, .000]		
Variance	Estimated Coefficient	Standard error	t-statistic	p-value
Gap	4.5346	0.7765	5.8397	[.000]
	5.0041	1.1042	4.5319	[.000]
	-1.5577	0.9438	-1.6506	[.099]
EA	0.1135	0.0111	10.2321	[.000]
	0.0726	0.0080	9.0303	[.000]
	0.1379	0.0122	11.3121	[.000]
LLP/TL	-0.2930	0.0106	-27.5448	[.000]
	-0.3233	0.0198	-16.3034	[.000]
	-0.1563	0.0283	-5.5249	[.000]
C	0.1099	0.0715	1.5366	[.125]
	0.4156	0.0446	9.3225	[.000]
	0.1539	0.0716	2.1505	[.032]

Annex 24: The variance components (random effects) estimates for cooperative banks (independent variables: Gap, EA, LLP/TL)

Dependent variable: <i>return on assets</i>				
Sum of squared residuals 165.574		R-squared 0.5903		
Variance of residuals 0.2205		Adjusted R-squared 0.5887		
Standard error of regression 0.4695		LM heteroscedasticity test 60.7389 [.000]		
		Durbin-Watson test 0.6170 [.000,.000]		
<i>Variance</i>	<i>Estimated Coefficient</i>	<i>Standard error</i>	<i>t-statistic</i>	<i>p-value</i>
Gap	4.7963	0.8950	5.3588	[.000]
EA	0.0682	0.0102	6.6852	[.000]
LLP/TL	-0.3061	0.0209	-14.6288	[.000]
C	0.4203	0.0668	6.2924	[.000]

Annex 25: The variance components (random effects) estimates for cooperative banks (independent variables: Lnassets, LA, OA, MSH, H, Gap, EA, LLP/TL)

Dependent variable: <i>return on assets</i>				
Sum of squared residuals 154.517		R-squared 0.6177		
Variance of residuals 0.2071		Adjusted R-squared 0.6136		
Standard error of regression 0.4551		LM heteroscedasticity test 52.0698 [.000]		
		Durbin-Watson test 0.6633 [.000,.000]		
<i>Variance</i>	<i>Estimated Coefficient</i>	<i>Standard error</i>	<i>t-statistic</i>	<i>p-value</i>
Lnassets	0.0077	0.0247	0.3124	[.755]
LA	-0.0004	0.0017	-0.2648	[.791]
Gap	6.4857	0.9508	6.8213	[.000]
EA	0.0529	0.0116	4.5572	[.000]
OA	0.0829	0.0325	2.5235	[.012]
LLP/TL	-0.3178	0.0208	-15.2572	[.000]
MSH	0.0119	0.0211	0.5629	[.574]
H	-0.0006	0.0002	-2.9047	[.004]
C	0.3950	0.4438	0.8901	[.373]