December 1998

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LINKING THE EUROPEAN MONETARY UNION AND THE INFORMATION SYSTEMS STRATEGY OF FINANCIAL INSTITUTIONS: A RESEARCH APPROACH TO UNDERSTAND THE CHANGEOVER

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1. INTRODUCTION

Over the past century, Europe as a geographical and political region faced many cultural, geographical, territorial, and growth changes. After two world wars, where the continent was devastated, the European Union (EU) is trying to create a powerful economic group in the world: the European Monetary Union (EMU). The economic benefits and costs (as well as risks) expected are indicated in the following topics (Taylor 1997). The expected economic benefits include:

- savings in transaction costs from removing the need to convert currencies in cross-border transaction within the EU.
- savings in search costs of acquiring information about prices normally quoted only in foreign currencies.
- elimination of exchange rate uncertainty in cross-border trade and investment.

The expected economic costs and risks include:

- direct costs incurred by banks, all of whose information and accounting systems will need to be changed and adapted to operate dual-currency systems during at least three years in which the national currencies will circulate alongside the new currency.
- psychological costs to individuals who will have to switch to a new monetary system and participate in the change process.
- management of the changeover phase in an uncoordinated way by national bodies, which could create difficulties for the banks and monetary authorities and, at worst, bring the financial system to a temporary halt.

Other researchers (Howdle 1996) indicate that the financial industry in EU will be significantly and negatively affected by EMU in the short and medium run. So, the study of information systems strategy in financial institutions assumes an important role in a microeconomic context in the paradigm shift to the EMU.

2. OBJECTIVES

The objective of this research project is to analyze the effectiveness of the information systems strategy (ISS) in the European financial industry during the changeover to the EMU. The initial focus of the research will be on the banking industry, followed

by smaller financial industries. In undertaking this study, a research program was designed involving five areas of research, in both strategy and information systems (IS) domains:

(a) establishing the structural and regulatory features of the EU banking sector highlighting the regulatory and business environment prior to the implementation of the EMU (strategy).

(b) selecting the indicators to assess the impacts of the EMU on the performance of banks and the effectiveness and impact of ISS on banks in the EU (strategy/IS).

(c) establishing the impact of the EMU on those selected indicators of banks (strategy/IS).

(d) establishing the effectiveness of ISS of the banking sector with the EMU (IS).

(e) designing a framework of ISS to enable an effective introduction of the EMU in banks in the EU (IS).

3. THE RESEARCH QUESTIONS

Based on the five areas of research described, the following research questions are formulated about the information systems strategy of financial organizations:

- What is the impact of EMU on
    — bank investment on IS/IT?
    — strategy of banks reacting to the EMU?
    — effectiveness of the ISS of banks?
    — IS as a support of functional banking activities?

The analysis of these research questions will motivate the creation of a framework to enable effective investments in IS/IT by banks with the EMU. Figure 1 indicates the European scope of the research.

4. THEORETICAL FOUNDATIONS

There is evidence that although there are efforts to introduce a complete single market program (SMP) by the European Commission, the retail banking market in EU is diverse (Lemaire and Ruffini 1993). According to this study, based on four criteria—degree of specialization, importance of state control, relative weight of the bank, and market intermediation—the banking systems can be grouped in three big "families":

(a) "la famille germanique," which includes Germany, Benelux, Switzerland, and Austria.
(b) "la famille anglo-saxonne," which includes the United Kingdom, Ireland, and Denmark.
(c) "la famille latine," which includes France, Spain, Portugal, and Italy.

Another recent research on the credit and banking sector in the EU (Economic Research Europe 1997) ordered by the European Commission (DG XV and DG II), indicates that IS/IT is having a great impact in the EU banking sector:

(1) on the ability of banks and financial institutions to reconfigure their operations, indulge in take-overs and cross-border acquisitions more effectively, and rationalize operations through cost-cutting by labor displacement.
(2) as entry barriers are overcome by non-banking competitors using financial systems devised for retail credit operations.
(3) on helping to raise the quality and diversity of financial service providers.
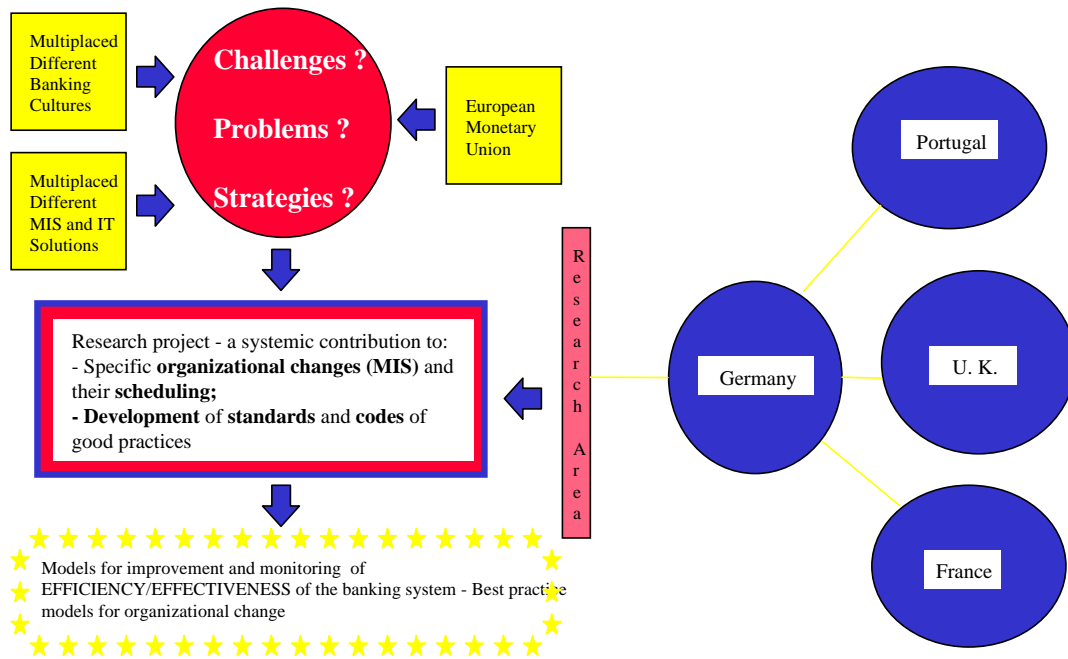(4) on continuing to yield high levels of efficiency gains and cost reductions.

Figure 1. European Scope of the Research

The study confirms previous research (Delloitte, Touch and Tohmatsu 1995; Pereira and Magalhães 1996) and concludes that IS/IT is a strategic issue in this sector. The importance of IS as a facilitator in the adoption of the EMU is also referred to by financial managers in previous research (Pereira and Magalhães 1996).

5. METHODOLOGY

In undertaking this study of the EMU impact on strategy and ISS of the banking sector, an integrated program of research was undertaken. Traditionally, information systems research has been developed and presented to the scientific community using quantitative methods (Galliers 1993; Orlikowski and Barondi 1991; Tavares 1987).

Several authors argue about the advantages of qualitative methods and advise pursuing practicality in IS research (Hess and Kemerer 1994; Lee et al. 1995; Yin 1994), particularly to explore the organizational behavior and social consequences of information systems planning development, adoption, and use (Orlikowski 1993; Walsham 1995). Other researchers (Gallivan 1997; Miles and Huberman 1994) discuss the process of combining both methods, qualitative and quantitative. As the scope of this study has both the dimensions of empirical research and the banker's perceptions on the impact of the EMU on the bank strategy and ISS, it is useful to avoid a dependence on any single source of information or any single analytical technique. The mixed (qualitative and quantitative) approach was selected.

The research methodology designed for this study includes, in summary:

(a) a study of the actual and emergent impacts of IS/IT on banking activities and bank strategy.
(b) exploratory interviews with 25 financial experts.
(c) two case studies of a bank in each country selected from the "Anglo-Saxon family" (Great Britain), "Germanic family" (Germany), and "Latin family" (France, Portugal). These case studies will be followed by further research of one case in banks and non-banking financial institutions in each of the EU member states in the countries selected to test the findings.

(d) two major mail surveys on banking organizations in each country of the EU before and after 1 January 1999 based on the previous 25 open exploratory interviews (Nachmias-Chava and Nachmias 1993) and complemented by the analysis of Web sites about the preparation for the changeover to the EMU by financial organizations (Mazzaferro 1997).

Mathematical models are under development to determine the outputs (quantitative and qualitative) of investments in IS for the EMU project based on research by Willcocks (1996). This research methodology, complementing interviews with postal survey and case studies, will help to understand the view of bankers on their perceptions as to how the EMU has influenced their business and the IS/IT strategy. The postal surveys and case studies will be organized and carried out with the help of country experts (one in Great Britain, one in Germany, one in France, and one in Portugal) ensuring high quality case studies and responses to the questionnaires.

6. CURRENT STATUS OF THE RESEARCH

In Portugal, the two case studies selected are Banco Comercial Português Group (BCP) and Banco Totta e Açores Group. BCP, an innovation case study (Dutta and Doz 1995), had 17.1% of market share in 1997. BTA had 16.5% of market share in 1997. They are the second and third biggest groups in Portugal following the state-owned leader Caixa Geral de Depósitos (23.7% market share in 1997). The field work is almost finished in these two banks and the analysis of the case studies already started. The Barclays Bank and Deutsch Bank cases have already been started as well. The European case studies will be researched until the end of 1998.

Other European banks operating in Portugal (Crédit Lyonnais, Banque National de Paris and ABN-Amro) were also invited to participate. Open exploratory interviews have already been executed with 25 managers of European banks. The open questions used to support the interviews are indicated in Table 1.

This data is being analyzed to create the survey questionnaire and a set of "key issues" to be analyzed in the explanatory case studies (Yin 1994) that will follow. The preliminary findings from this analysis indicate the issues presented in Table 2 as relevant issues to the survey.

From the analysis of interviews and case studies, the following topics are seen as relevant to the success of the IS/IT investments during the EMU changeover:

(a) Degree of flexibility to deal with change of the actual IS/IT of the financial organizations.
(b) "Know-how" of the users about the EMU and its impact on their activities.

Table 1. Summary of Questions for Exploratory Interviews

1. What were the motivations to start the EMU project in IS/IT?
2. When and how did it happen?
3. What is the organizational structure of this project?
4. Who (from the organization or from external companies) is involved? Doing what type of work?
5. What is the amount of money invested each year and how is it spent?
6. How is the project management executed (number of people, planning, training, etc.)?
7. What are the main changes in the IS/IT environment? How critical are those changes to the success of the change-over?
8. What are the main problems faced up to now? Why did they happen? What are the main risks and concerns about the IS/IT future after the changeover?
9. How will the new applications of IS support innovative solutions to the business?
10. Other important facts to the case that he/she would like to add.

Table 2. Preliminary Issues from Exploratory Interviews

Direct Costs	Indirect Costs
• Euro changeover team (resource allocation) • Changes in IS applications: Accounting/Current accounts/Term deposits / Financial investments/Credit scoring /Historical records /Long term financial contracts/ Portfolio management/Dual EURO-National currency accounts/ Reporting to clients • Marketing EMU • Internal formation for employees • External explanation of changes to clients (families, organizations) • Target adoption and links to European Central Bank (where all European financial consolidation will take place daily) • "SWIFT" changes • European global banks • FOREX costs lost • Commerce of notes • Revenue losses as correspondent banking	• Training of employees for new applications • European networks ("one account in Euro with all services in each country") • Introduction of target and changes in operating hours of financial institutions • Clear relative national vs. other European financial performance • Increase external competition by other banks and non-banks • Lower interest rates • Corporate banking • Customer mobility (loyalty of clients) • Market risks • Quality assessment • Changes in non-Euro areas

(c) Global European positioning of each financial group, i.e., number of branches and number of European countries covered by the distribution network.

(d) Date when the project started i.e. amount of time before the changeover available to the project.

(e) External events happening in the financial group such as mergers, take-overs and Year 2000.

These topics need to be complemented and quantitatively proved in the continuation of the research.

7. MAIN ASPECTS PRESENTED

During the Conference presentation, the following findings of the research project to date will be presented.

• The analysis of open interviews, including the perceptions of the "key issues" described by the European banking managers.

• The final structure of the questionnaire of the postal survey and the target banks.

• The discussion of qualitative and quantitative questions addressed by the case studies analyzed.

• The analysis of the case study research in Portugal, Germany, France, and Great Britain.

• Relevant remarks about preliminary findings of the study and about future research directions.

The complete findings of this research are scheduled for year 2000.

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