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Financial development and household portfolios – Evidence from Spain, the U.K. and the U.S.

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A B S T R A C T

We examine the impact of financial development on the composition of household portfolios in Spain, the U.K. and the U.S., three countries whose financial systems underwent profound changes over the past two decades and for which relevant data exist for sufficiently long time periods. We find a 'division of labour' between the indices measuring financial development and asset returns, the first affecting mainly the long-run dynamics of household portfolios and the second the short-run dynamics; both, however, in an economically reasonable way. Among the notable results pertaining to long-run dynamics, more competitive financial intermediaries are associated with a higher share of *currency and deposits* and a lower share of equity. For the short-run dynamics, the most important driver is stock market returns.

1. Introduction

The extensive and rapidly growing literature on financial development has so far addressed several issues that are of great interest to academics, policy makers and market participants. Prominent among them is the relationship between financial development, on the one hand, and asset returns, economic growth and financial system structure, on the other. Indicatively, Dellas and Hess (2005) find that a deeper and more liquid banking system is associated with lower stock market volatility and greater synchronization between domestic and world stock market returns. Also, the voluminous research surveyed in Levine (2004) supports the view that causality runs from financial development to economic growth. Pertaining to financial system structure, Rajan and Zingales (2003) and Allen and

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Santomero (2001), among others, document that over the past two decades – when the financial systems underwent profound changes all over the world – the role of traditional bank intermediation decreased, while that of capital markets increased. In addition, other forms of intermediaries, such as, pension funds and mutual funds, grew significantly, responding to a shift towards institutionalized management of savings.

An important implication of this literature is that financial development may affect the composition of household portfolios. Yet, this implication, which touches upon several issues of interest to academics, policy makers and market participants, has received scant attention so far. The available evidence, owing, perhaps, to the difficulty of obtaining relevant data, is mostly anecdotal (see, for example, Trace and Schneider, 2001; Babeau and Sbano, 2002; and the papers in Guiso et al., 2000). But the relevant channels abound: less severe borrowing constraints, lower information and transaction costs, more efficient financial markets, better investor protection, more investment options... Over the past two decades, these channels were driven by the revolution in information technology (Allen and Santomero, 2001; Mishkin and Strahan, 1999); and by financial liberalization and the attendant integration of world financial markets, plus major institutional developments that changed the rules of the game towards a more competitive and more market-oriented (as opposed to bank-centered) financial system.

Thus motivated, this paper examines the effect of financial development on household portfolios in three countries, Spain, the U.K. and the U.S., for which relevant data exist at quarterly intervals, since the 1980s or earlier. In greater detail, Section 2 argues that, for countries undergoing significant changes in their financial systems, the textbook portfolio theory, which stresses the importance of expected returns and their variance/covariance matrix in asset allocation, should be augmented to account for these changes.

Section 3 presents the data, paying particular attention to the indices measuring the development of financial intermediaries (shorthand notation FIs), the stock market (SM), the bond market (BM), and the insurance and pension funds industry (IPF), the main – from the households' point of view – segments of the financial system. These indices come from the literature on finance and growth (see, for example Levine, 2002, 2004). Compared to other papers, however, this one uses an extensive set of indices that cover all major segments of the financial system, ten for FIs, three for the stock market, two for the bond market and two for IPF industry, in an effort to overcome the objective difficulty that no measurable index can adequately capture the quantitative and qualitative aspects of financial development.

Section 4 examines some pertinent econometric issues. One of them is the use of principal components analysis in order to reduce the number of potential explanatory variables related to FIs and the stock market. As it turns out, the first principal components not only explain a very high proportion of the variance of the respective indices, but, most importantly, have a clear economic meaning. The latter is very helpful for the analysis of the empirical results.

Section 5, which presents the interesting and economically reasonable empirical results, documents what appears to be a 'division of labor' between the indices measuring financial development and asset returns, the first affecting mainly the long-run dynamics of household portfolios and the second the short-run dynamics. As usual, these dynamics are captured by the estimated co-integrating and error-correction equations. Among the notable results pertaining to long-run dynamics, more competitive financial intermediaries are associated with a higher share of *currency and deposits* and a lower share of equity. But expanding stock market, bond market and insurance and pension funds industry are associated with the opposite results. For the short-run dynamics, the main driver appears to be stock market returns.

To put the results into perspective, the existing literature has identified several factors that affect household portfolio decisions, besides the expected returns and variances/covariances. Among them are demographic factors, the aging of population and the resulting disequilibrium of the "pay as you go" retirement schemes, the saving incentives in the different countries, such as the (401)K plans in the US, and the attitude towards housing ownership. This paper identifies another such factor that affects household portfolio decisions: financial development. Market participants and policy makers should take note, the latter especially in the design of, among other things, the regulatory system and private pension systems.