



ELSEVIER

Journal of Banking & Finance 24 (2000) 1243–1251

Journal of
BANKING &
FINANCE

www.elsevier.com/locate/econbase

A critique on the theory of financial intermediation

Bert Scholtens ^{a,*}, Dick van Wensveen ^{b,c}

^a Department of Finance, University of Groningen, P.O. Box 800, 9700 AV Groningen, Netherlands

^b Erasmus University, Rotterdam, Netherlands

^c University of Amsterdam, Amsterdam, Netherlands

Received 25 September 1998; accepted 22 April 1999

Abstract

This comment discusses the review by Franklin Allen and Anthony Santomero of the theory of financial intermediation in the 20th anniversary special issue of the Journal of Banking and Finance. We do not fully agree with their view that risk management is only of recent importance to the financial industry and with putting central the concept of participation costs. We suggest how the theory of financial intermediation might be developed further in order to understand present-day phenomena in the financial services sector. © 2000 Elsevier Science B.V. All rights reserved.

JEL classification: E51; G10; G20; L23

Keywords: Banks; Financial intermediation; Financial system; Risk management; Transformation

1. Introduction

In a recent paper, Allen and Santomero (1997) review the state of intermediation theory and attempt to reconcile it with the observed behavior of

* Corresponding author. Tel.: +31-50-363-7064; fax: +31-50-363-7207.

E-mail address: l.j.r.scholtens@eco.rug.nl (B. Scholtens).

institutions in modern capital markets. They argue that current theory of financial intermediation too heavily focuses on the functions of financial institutions that are no longer crucial in mature financial systems. They suggest that the emphasis on the role of intermediaries as reducing the frictions of transaction costs and asymmetric information is too strong; while these factors may once have been central to the role of intermediaries, they are increasingly less relevant. Allen and Santomero suggest a view on financial intermediaries that centers on two of their roles. First, they are the facilitators of risk transfer and deal with an increasingly complex maze of financial instruments and markets. The key area of intermediary activity therefore has become risk management, whereas traditional intermediation theory offers little to explain why institutions should perform this function. Second, financial intermediaries reduce participation costs – the costs of learning about effectively using markets as well as participating in them on a day-to-day basis – and this plays an important role in understanding the changes that have taken place.

We welcome their effort to bring the theory of financial intermediation further. We basically agree with Allen and Santomero but we think that their analysis is incomplete. In this comment, we go into some points which, in our opinion, are missing in their theory of financial intermediation. We question whether risk management is something that is undertaken only recently in the financial industry, we focus on their concept of participation costs, we argue that some of their critique on the existing literature goes too far and we argue that some of their critique does not go far enough. We hope to bring the fundamental discussion about financial intermediation a small step further by suggesting elements for a theory that is helpful in understanding and explaining the daily operations of financial institutions and markets and their function and significance in the real economy.

2. Do financial intermediaries face extinction?

We wholeheartedly agree with Allen and Santomero's (hereafter AS) analysis in terms of a functional perspective, rather than an institutional perspective. Countries use different definitions of various types of financial intermediaries. Furthermore, regulations in some countries still forbid the formation of certain types of financial institutions that are an essential part of the economy elsewhere.

The paradigm used in the current theory of financial intermediation is the famous classical idea of the perfect market, introduced by Marshall and Walras and since then the leading principle, the central point of reference in the theory of monopolistic competition and the neo-classical growth theory, the portfolio investment theory and the theory of financial intermediation. This paradigm is formalized in the traditional Arrow–Debreu model of resource allocation.

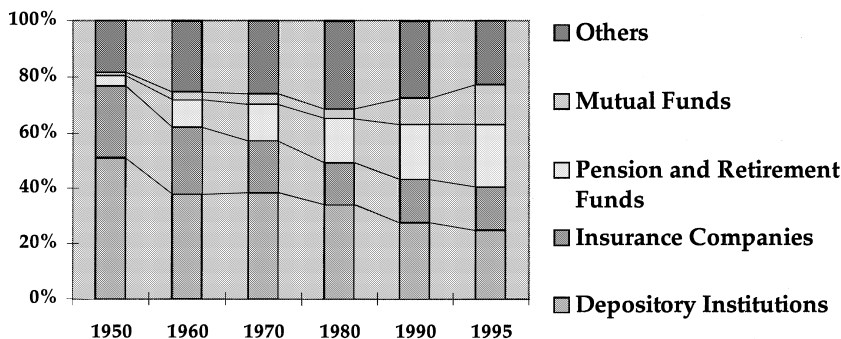


Fig. 1. Distribution of US financial assets by the main types of financial intermediaries (Source: Barth et al., 1997).

Financial intermediaries, according to that theory, have a function only because financial markets are not perfect. They exist by the grace of market imperfections. As long as there are market imperfections, there are intermediaries; as soon as markets are perfect, intermediaries are redundant: they lose their function as soon as savers and investors have the perfect information to find each other directly, immediately and without any impediments, so without costs. Thus, in a world with a tendency towards greater market transparency and efficiency, financial intermediaries are an endangered species.

However, despite globalization, the information revolution and a much more prominent role of public markets, financial intermediaries appear to survive. A tendency towards a relative reduction of certain activities of some financial intermediaries is going on, most clearly in the US. For example, Fig. 1 indicates that the relative size of depository institutions (commercial banks, savings institutions, credit unions) in the financial system diminishes. The same applies to insurance companies. In contrast, the relative size of pension funds (both private and government funds) as well as that of mutual funds (including money market funds) increases considerably.

The overall size of the assets held by US financial institutions in relation to gross domestic product is depicted in Fig. 2 (left-hand scale). It rose from 100% in 1950 to 120% in 1960, it remained 120% in 1970 but rose to 210% in 1980. In the eighties, it became somewhat smaller, namely 200% in 1990. However, in the nineties, the increase continued, and in 1995 the combined assets of the financial intermediaries in the US stood at 250% of GDP.¹ Banks, both universal and investment banks, are under pressure, not only from competition amongst themselves but increasingly also from other intermediaries such as life

¹ Based on Barth et al. (1997) and the IMF's international financial statistics.

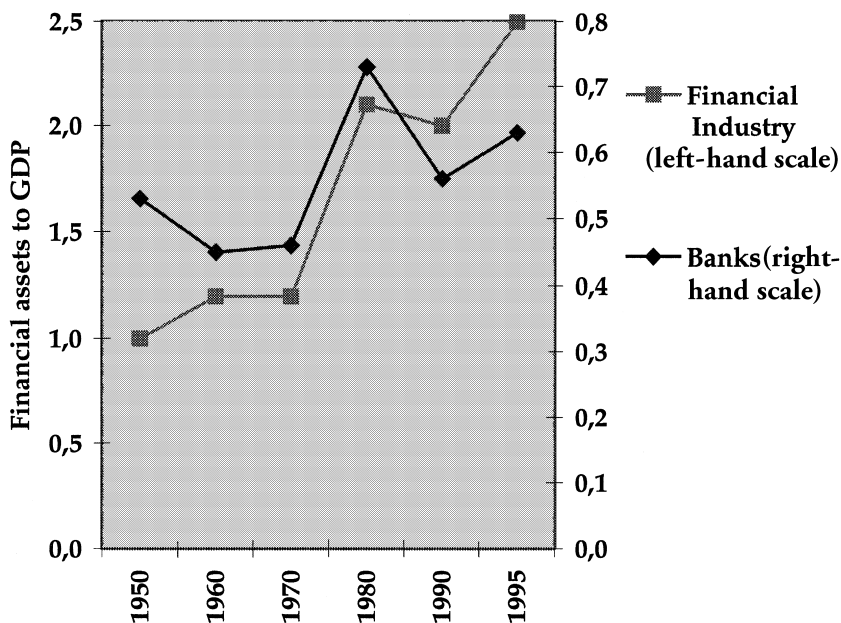


Fig. 2. Relative size of the US financial sector and the banking industry (Source: Barth et al., 1997).

insurance companies, investment funds, leasing companies and other finance companies, such as specialized daughters of big industrial or trade companies, merger and acquisition specialists and advice departments of auditor or lawyer firms. And large companies are entering the money market directly instead of dealing with a bank. The growth of securitized assets reflects the upcoming role of stock exchanges at the expense of traditional banking. But it is a misconception to interpret the relative declining role of banks in Fig. 1 as a general process of disintermediation. Fig. 2 (right-hand scale) shows that the ratio of depository institutions' assets to GDP was 0.53 in 1950. Thereafter, it fell to 0.45 in 1960 and it was 0.46 in 1970. The 1970s saw a huge increase in the growth of bank assets and in 1980 the ratio had become 0.73. The savings and loans crisis of the 1980s was very much responsible for a decline to 0.56 in 1990. In the 1990s we witnessed a renewed increase in the ratio of bank assets to GDP as it was 0.63 in 1995. Thus, the relative size of depository institutions in the US in the mid-1990s was more than one third larger than that in the mid-1960s. Note that Fig. 2 does not take into account the rise in off-balance sheet items that took place in the banking industry in the 1980s and 1990s. From Fig. 2, we conclude that financial intermediaries are not fading away. Neither is the banking industry. Only an institutional perspective might conclude (on the basis of Fig. 1) to disintermediation of the banking industry. The functional

view, however, reveals that financial intermediaries are of increasing importance to the modern economy.

Why is it that the relative importance of financial intermediaries increases? Financial intermediaries perform gradually more sophisticated functions in the modern – more and more complex – economy. Despite the ongoing perfection, indicating a declining price of information, asymmetric information and transaction costs seem to be still important elements in intermediation processes. This suggests that there is something extra that is relevant for financial intermediation. But what is that ‘extra’? We agree with AS that risk management has become a prominent function of financial intermediation. However, in our opinion, it is not the only factor that can be held responsible for the seemingly steady rise of the financial industry within the modern economy.

In the next section, we evaluate AS’s suggestion of risk management as responsible for modern financial intermediation. In Section 4, we put forward ideas that may complement the justification of the growth of the financial industry as given by AS.

3. Risk management and participation costs

In our opinion, AS are right in suggesting a central role of *risk* in the intermediation process and proposing that risk management become the main item in the research agenda. Risk analysis is, since the emergence of the modern portfolio theory, fully incorporated on the micro level in pricing models and plays the central role in the research on securities and derivatives. But the risk/reward relation has not yet been analyzed on an industry level or on a macro-economic level. What is the remuneration of the industry for its risk transforming activity? How is the relation of this part of its revenues to total revenues? Is the remuneration adequate in view of risk losses (bad debtors, interest rate fluctuations, stock price movements, mortality)? Is risk well paid for at the industry level?

Furthermore, is risk management really a new phenomenon? Something that emerged in the 1960s or 1970s as AS argue? We very much doubt it. Risk management has not become important only in the recent past. In contrast, we see risk as the root of financial intermediation and as its main *raison d’être*. The origins of banking and insurance lie in their risk transforming and risk managing functions. The merchant bankers in the Italian Renaissance already managed the financial risks not only of kings and popes but also of merchants. Insurers took over the risks of merchants sending their goods overseas. In the Dutch Republic in the eighteenth century, true investment bankers emerged who not passively managed assets but actively assumed underwriting risk themselves. And even the seemingly dull business of savings and loans associations and credit unions in the US in the 1950s and 1960s is risk management,

as they manage interest rate risk, credit risk, and liquidity risk. Therefore, dealing with risk is – and always has been – the bread and butter of financial intermediaries. By specializing in information production and processing, and by diversifying individual credit and term risks, they have been able to absorb risk. AS associate the risk management function of financial intermediaries with the growing importance of *new* financial instruments and markets (futures, options, swaps) and characterize their role as facilitators of risk transfer as a *new* role (p. 1462). As such, AS appear to overlook the traditional role of banks in the process of risk transfer, taking deposits from savers and extending credit to borrowers with risky business. We agree with AS that intermediation theory has offered little to explain why institutions should perform this function (pp. 1462, 1465), the more so because risk management, contrary to what AS say, has always been ‘a key area of intermediary activity’. Informational asymmetries and transaction costs do not fully explain why savers deposit money in banks and do not select investors themselves.

A second key concept in AS’s theory of financial intermediation is ‘participation cost’. This is the cost of participation in a financial market. AS argue that participation costs are crucial to understanding the current activities of intermediaries and in particular to their focus on risk management. Trading costs have fallen dramatically in the 1980s and mid-1990s which would have encouraged the direct participation of households and reduced the role of mutual funds. However, AS argue, the value of people’s time has increased significantly in the last 15 years (p. 1482), which promoted the role of mutual funds, whose participation costs are low and thus are an efficient means to invest for individuals whose costs of direct participation have risen. Furthermore, there has been a spreading of the income distribution and a resulting increase in the value of time at the high end of this distribution. This argument is rather weak as we find that the growth of wages was much higher in the 1970s than in the 1980s and 1990s.² And not only has the size of mutual funds risen rapidly (see Fig. 1), but also the direct participation of the public in the stock market has increased substantially. In all, AS’s explanation on the basis of lower participation costs is not very convincing. AS also point to the fact that the use of derivatives by financial institutions for risk management has increased enormously. AS argue that the concept of participation costs suggests that intermediaries create products with a relatively stable distribution of returns. However, this also happened before the widespread and intense use of

² For example, the average increase in the unit labor costs in the business sector in the US in the 1970s was 7.0% per year. In the 1980s it fell to 4.0% per year, and for the years 1991–1997 it averaged 2.5% per year. Furthermore, the compensation per employee in the business sector stood at 7.9% in the 1970s. In the 1980s, it was 5.1%. For 1991–1997 it was 3.4% per year (OECD, Economic Outlook 63, 1998, 236–237).

financial derivatives, as it is an important rationale for savers to put their money into a bank (see Bryant, 1980). Therefore, we conclude that although participation cost can be relevant in understanding new roles of the financial intermediary, it does not seem to be able to explain drastic changes in the financial industry such as the dramatic rise of mutual funds and the widespread use of financial derivatives. The key word for their growth is again ‘risk’.

AS discuss the current rationales for the interest in risk management that is evident in the market. They can be divided into four cases: (1) managerial self-interest, (2) the non-linearity of taxes, (3) the costs of financial distress, and (4) the existence of capital market imperfections. The plausibility of these four explanations varies especially if not only the benefits of hedging but also the costs of risk management are taken into account, as AS rightly state. It should be clear that the bankruptcy costs as discussed by AS should be viewed as the total economic costs of the financial distress and/or bankruptcy. We think that the most important rationale of financial risk management is the prevention of bankruptcy of a company induced by monetary and financial factors. Financial risk management aims to protect the company’s balance sheet against severe losses of a monetary nature (e.g. exchange rate shocks) and the company’s operational cash flow against serious financial uncertainties (interest rate and exchange rate fluctuations, credit risk).

4. How further?

How must we move further in constructing a theory of financial intermediation that can understand and explain the day-to-day operations of financial institutions and markets and their role within the real economy? It will be obvious that ‘risk’ will need to get a central place in that theory. But there is more. In order to place risk transfer as an entrepreneurial activity in its proper context, the theory of financial intermediation should move beyond its present borders. It should leave its paradigm of static perfect markets and assume a more dynamic concept in which new markets are developed for new products, where financial institutions do not act as ‘agents’ who intermediate between savers and investors and thus alleviate ‘market imperfections’ like asymmetric information and participation costs, but are independent market parties that create financial products and whose value added to their clients is the transformation of financial risk, term, scale, location, and liquidity. Table 1 gives in key words an overview of how the stylized present theory might be amended to come nearer to this goal.

Stylized present theory, as already clearly summarized by AS, has the perfect market as its benchmark. Financial intermediaries emerge to make do with the market imperfections that mainly stem from informational asymmetries. They may reduce the information and transaction costs within the economy, but

Table 1
Stylized and amended theory of financial intermediation

Stylized (present) theory	Amended theory
Static: perfect market	Dynamic: market differentiation
Market imperfections	Product innovation
Financial intermediary is an agent between savers and investors	Financial intermediary is an entrepreneurial provider of financial services
Efficient allocation of savings	Financial transformation
Costs	Value
Asymmetric information	Customer orientation, both to borrowers and savers
Adverse selection, moral hazard, credit rationing	Risk/reward optimization and risk management
Disintermediation	Dynamics of intermediation (new markets, new products)

they still have to make do with agency problems and with moral hazard and adverse selection. In all, the financial intermediary is a more or less passive agent who intermediates between ultimate savers and investors. The process of disintermediation threatens the agent, as public financial markets promote a more efficient and transparent handling of the allocation of scarce resources in the economy, thanks to deregulation and information technology.

In line with AS, we think the traditional approach should be amended. The right-hand column of Table 1 shows the main elements that the theory of financial intermediation, in our opinion, should include to explain the present-day financial industry. Instead of the static case of the perfect market that is hampered by incidental imperfections, the theory of financial intermediation needs to have the dynamic process of financial innovation and market differentiation at its basis. We need to explain changes instead of describing comparative statics. Furthermore, as in our vision, the financial intermediary provides consumer and business households with a variety of services that fulfill their different needs, the financial intermediary is involved in a complex process of financial transformation. In the course of qualitative asset transformation – with respect to maturity, liquidity, risk, scale, and location – it adds value for ultimate savers and investors. This active role contrasts sharply with the passive intermediating of savings to investments within the economy, a thought that prevails in the traditional theory of financial intermediation. Value-addition appears to be a major drive of the modern financial intermediary. Therefore, value-addition should be the focus of intermediation theory. This may be accomplished through participation cost reduction as AS suggest, and/or through an expansion of the set of services in the financial sector. This means that though asymmetric information is relevant in understanding certain policies of the financial intermediary, customer orientation is his general device. His business is selling financial services to customers and making a profit

on it. Reducing costs and informational asymmetries may be part of this process, but it occurs as a by-effect. We suggest that the analysis of policies of optimization of risks and rewards by financial intermediaries helps to better understand the essence of its business than does paying attention to the potential effects of asymmetric information, i.e. adverse selection, moral hazard, credit rationing. As an illustration, the modern financial intermediation theory would see the rise of the mutual fund industry not as disintermediation, but as the involvement of a new type of financial intermediary in providing financial transformation services.

Of course, we cannot present here a complete modern theory of financial intermediation yet. The aim of our critique was only to illuminate some issues not dealt with by AS and some suggestions on how to proceed further. We hope the discussion started by AS will result in a better understanding of the financial world.

Acknowledgements

The authors wish to thank one anonymous referee for helpful comments and suggestions on a previous version of this paper.

References

- Allen, F., Santomero, A.M., 1997. The theory of financial intermediation. *Journal of Banking and Finance* 21, 1461–1485.
- Barth, J.R., Nolle, D.E., Rice, T.N., 1997. Commercial banking structure, regulation, and performance: An international comparison. Working Paper 97-6, March, Comptroller of the Currency Economic, Washington, DC.
- Bryant, J., 1980. A model of reserves, bank runs, and deposit insurance. *Journal of Banking and Finance* 4, 335–344.