



University of Bergamo

Department of Economics and Technology Management

PhD. in Economics and Management of the Technology

XXIV Cycle

**Industrial Organization and
Performance in the mutual fund
industry: the Italian case**

Doctoral Dissertation

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January 2012

Stefano Pedrini, “Industrial Organization and Performance in the mutual fund industry: the Italian case”, Doctoral Dissertation, January 2011

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To my parents, Chiara and Giovanni

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Acknowledgements

I wish to thank Prof. Luigi Buzzacchi for his supervision, for his advices and for his friendship. I am also grateful to Prof. Gianmaria Martini for his useful suggestions and support during my PhD. A big thanks goes to Prof.ssa Mariasole Brioschi.

I'm very grateful to my friends Francesco, Giovanni, Umberto and Andrea who supported me during these years. I wish to express my gratitude to Giordano and my classmates Alessandro, Annageldy, Clementina and Loredana, they made this experience very nice.

I would like to express my gratitude to my parents, to my brother Luca and to my grandparents for their kind and warm backing.

Finally, a very special thanks goes to Federica for her constant and loving support during this experience.

Of course, I assume all responsibility for the eventual errors, inaccuracies or oversights that unfortunately could be still in the dissertation.

Abstract

In the asset under management industry, the investors give a formal mandate to a third party intermediary to manage on their behalf a portfolio of financial instruments. The intermediary in charge purchases and sells assets in order to build a diversified investment portfolio, featuring a profile of risk / return consistent with the mandate of investor. The preferences of investors are heterogeneous (horizontal differentiated products) but the product “fund” shows also different quality (vertical differentiated products). A relevant bulk of literature studies the problem of quality/performance measurement (for a literature survey, Lehmann and Timmermann, 2008). But those differences inter products aren't common knowledge (experience or credence good). Some empirical evidences underline that investors are not always able to select the product with higher performance. This phenomenon could be due to distribution system which distorts the performance of mutual fund. Another issue in this sector is the role and the function of distribution channels. The industrial structure and the nature of the industrial relationship between parties (Christoffersen et al., 2006) shape the rules of the competition and agency problems. In Italy, as in many other European countries, we observe several configurations in distribution of mutual funds but vertical integration prevails in particular within banking groups where mutual funds are distributed at bank counters and/or by captive intermediaries. These channels treat the sale and placement of a wide variety of financial instruments, ranging from asset management products to securities issued by the banks themselves, through insurance policies and retirement funds. In this Vertical-integrated pattern, the production plays a subordinate role

compared to that of distribution. Distribution networks play a leading role in mutual funds; they are usually more focused on the sale of "pure" products than on the allocation of risk/reward of wealth of their customers. The production-distribution relationship is critical because it introduces a variety of conflicts of interest. (E.g. retailers are usually keener to sell assets products built by their captive SGR)

The dataset is based on data from Assoreti, the association of firms that offer financial products to the public using networks of financial advisors. These data consider both the stocks and the flows during a period of 5 years starting in 2005; Assoreti gives information on industry dimension, total net assets, net flow (purchases and redemptions) distinguishing in fund categories (stock fund, balanced fund, bond investment fund, monetary fund, flexible fund) and between Italian or foreign funds and own or not own products. Considering only the company with complete availability of data during the period of study (January 2005 to December 2009) the dataset contains 18 distributors of funds, which manage on average 81% of the stock invested in mutual funds. A relevant issue concerns the decision made by each distribution network on whether sell only products offered by SGR within the group or not. This choice shows different possibilities based on the nature of funds and origin (Italian or foreign). Data from Assoreti show that the paradigm of exclusiveness is becoming outdated. In fact the trend is to open the distribution channel also to funds not produced by group membership. The case of foreign mutual funds is quite similar. In 2005, 6 out of 18 distributors sold only owned product and only one company still maintains this choice at the end of 2009. Using a panel data model, I've considered as dependent variables respectively Gross flows, Net flows and Redemptions Flows. The

independent variables used in the model could be subdivided in three categories: structural/firm variables (variables which don't vary in short run significantly and have an individual effect such as stock under management, number of brokers, bank vs. insurance affiliation), environmental/market variables (variables which consider the dynamic of industry for instance aggregate flows for each period, Ftse Mib return) and quality ones (variables which try to show the different quality in term of performance between funds). The results of the models show a relevant impact of stock managed by company (dimensional effect); the impact of benchmark past performance in money collection is statistically significant for all regressions but using different temporal dimensions the relevance of the benchmark decreases. The effectiveness of promoter increases when the number of customers in his portfolio decreases and when his customers have a high level of turnover. A very significant effect is given by the "producer" of funds, the network which sells a greater percentage of funds by third-party improves the flows. The model tests also other measures, financial ones and marketing ones, but there are no evidences that the performance affected the flows. This phenomenon may reveal that the past performance and the persistency of performance don't influence the choices of the investors and so the inflows, in other words the quality of good doesn't affect the choice of consumers. The perceivable quality is different from the unbiased quality; this phenomenon could be also due to a low level of financial knowledge and to the nature of experience/credence good of mutual funds. This result is consistent with the study of Krahenen Schmidt and Theissen (2006) who evaluate the impact of cross-sectional differences in investment performance on market share of German open-end mutual funds from 1986 to 1998.

These results could suggest that the two-sided market configuration may fit the asset under management industry; in fact two-sided (or more generally multi-sided) markets are roughly defined as markets in which one or several platforms enable interactions between end-users, and try to get the two (or multiple) sides “on board” by appropriately charging each side. That is, platforms court each side while attempting to make, or at least not lose, money overall. Because all markets involve transactions between two (or more) parties and therefore are potentially two-sided markets, some scholars circumscribe the scope of two-sided-markets theory. Rochet and Tirole (2005) define a two-sided market as one in which the volume of transactions between end-users depends on the structure and not only on the overall level of the fees charged by the platform. Hagiu (2007) relies the definition of "two-sidedness" on the division of control between sellers and intermediaries, rather than on the effects of the pricing structure chosen by the intermediary, as is the case of former definition. He studies the dissimilarities between the classic form of market intermediaries (merchants) and two-sided platforms. He states that the difference is that pure merchants, by taking possession of sellers' goods, take full control over their sale to consumers. By contrast, pure two-sided platforms leave that control entirely to sellers and simply determine buyer and seller affiliation with a common marketplace.

The case of Italian mutual funds shows both platform and merchant features and therefore lie in-between these two extremes. Although a distributor does not take legal "possession" of the funds it distributes, independently if products offered by SGR within the group or not, it obtain the right to price them. But the definition of “two sidedness” doesn’t take into account that in distribution stage the network, beyond the sale of

"pure" products, provides professional advice on the allocation of the wealth of their customers and doesn't give information on the determinants which rule the choice of each distribution network to sell only products offered by SGR within the group or not.

In vertical integrated model the bargaining power is given by monopolistic power, but empirical evidences show that the networks sell also products made by different producers. This result leads to state that the guidelines proposed by Consob and Bank of Italy to limit the vertical integrated market power, splitting the production side from distribution side is at least ineffective. In fact, in this particular industry, the market power seems not to be related to vertical integration but to the complementary services. Even so the possibility to transform the Italian Mutual Funds Industry in a pure platform couldn't be the best solution given the nature of credence/experience good of funds and the fact that the quality of good is not easily measurable. A possible alternative could consider two different strategies, on the one hand the lawmaker could impose a separation between the distribution and consulting services, on the other hand all networks should sell all the products. The combination of these two strategies may give an incentive to producers to make high quality products and simultaneously may align the interests of consumers and advisors, reducing agency problems.

1. Introduction

The strong negative trend in the collection of the Italian Mutual funds Industry during the first decade of XXI century, has uncovered some weaknesses of the financial structure of this industry sector. The comparative analysis with the main European economies shows that the crisis is not attributable to the instrument "fund" (which is not, in itself, obsolete), rather appears to be the result of abnormalities typical of the Italian system. The collection of funds in major European countries is, in fact, characterized by positive trends.

The phenomenon could be due to the lack of independence in the strategic choices, result of the owners' structure concentrated in banking groups, to the vertical integration of production and distribution, to reduced capacity for innovation and to the presence of substitute products.

In Italy, as in many other European countries, the mutual funds are largely distributed by banks and intermediaries belonging to banking groups.

Distribution networks play a leading role in mutual funds; they are usually more focused on the sale of "pure" products than on the allocation of risk/reward of their customers' wealth. The production-distribution relationship is critical because it introduces a variety of conflicts of interest too.

In this context, the intervention of surveillance by Bank of Italy and Consob aimed at promoting the development of a competitive landscape, characterized by a range of products and services and extensively diversified, it is a prerequisite to the creation of market conditions likely to fully meet the different needs of customers.

The preferences of investors are heterogeneous (horizontal differentiated products) but the product “fund” shows also different quality (vertical differentiated products). A relevant bulk of literature studies the problem of quality/performance measurement (for a literature survey, Lehmann and Timmermann, 2008). But those differences inter products aren't common knowledge (experience or credence good). Some empirical evidences underline that investors are not always able to select the product with higher performance.

Based on a panel built on data from Assoreti, the study tests the impact on flows (gross, net and redemption) of structural/firm variables (variables which don't vary in short run significantly and have an individual effect), environmental/market variables (variables which consider the dynamic of industry) and quality ones (variables which try to show the different quality in term of performance between funds). Considering only the companies with complete availability of data during the period of study (January 2005 to December 2009) the dataset contains 18 distributors of funds, which manage on average 81% of the stock invested in mutual funds. The model tests also measures of quality, financial ones and marketing ones, but there are no evidences that the performance affected the flows, the quality of good doesn't affect the choice of consumers.

This result is consistent with the study of Krahenen Schmidt and Theissen (2006) based on German open-end mutual funds from 1986 to 1998.

In recent years the Bank of Italy, the Ministry of Economy and Finance, Consob and some manufacturers are studying regulatory action (and not) aimed at improving the industrial organization of this sector bringing it in line with other European Countries. A first step in this direction could be accomplished through the elimination of some imperfections "rules" that

impede the concrete development of distribution channels independent, such as telematics platforms.

The results could suggest that the two-sided market configuration may fit the asset under management industry. Hagiu (2007) relies the definition of "two-sidedness" on the division of control between sellers and intermediaries. He studies the dissimilarities between the classic form of market intermediaries (merchants) and two-sided platforms.

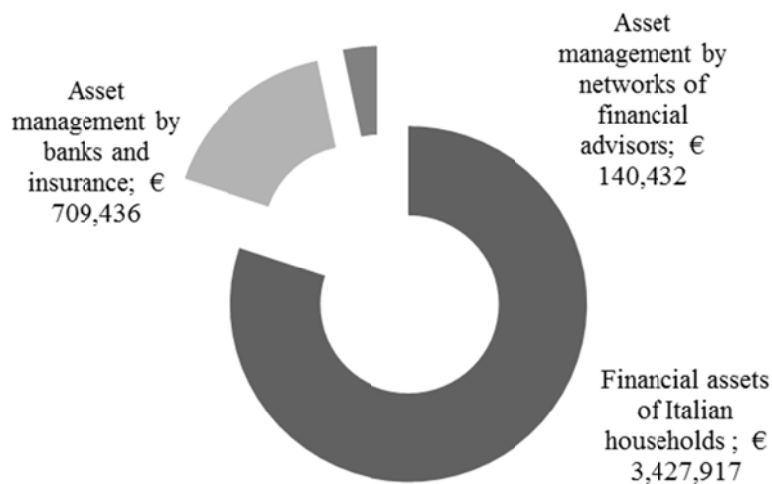
The Italian mutual funds industry shows both platform and merchant features and therefore lie in-between these two extremes. Although a distributor does not take legal "possession" of the funds it distributes, irrespective of whether products are offered by an SGR within the group or not, it obtain the right to price and advise.

The dissertation is organized as follow: the second chapter shows the trend and the industrial organization of the mutual funds market, the third section introduces the problem of the quality and measure of the performance, using a survey of literature in this field. The fourth chapter shows the data, the econometric model and discusses the main results. The fifth section introduces a new theoretical framework to investigate the industry, the two-sided market model. The last chapter concludes and discusses a possible strategy which could be adopted to improve the efficiency of this industry.

2. The Italian Mutual Funds Industry

In the asset under management industry, investors give a formal mandate to a third party intermediary to manage on their behalf a portfolio of financial instruments. The intermediary in charge purchases and sells assets in order to build a diversified investment portfolio, featuring a profile of risk / return consistent with the mandate of investor.

In 2008, the financial assets of Italian households equals 218% of GDP, or 3.428 billion. Of these, 25%, equivalent to 850 billion are products of the asset management (mutual funds, GPM/GPF, insurance products and retirement funds) distributed for the most part by banks and insurance companies through subsidiaries and agencies (source: Banca d'Italia, 2009).

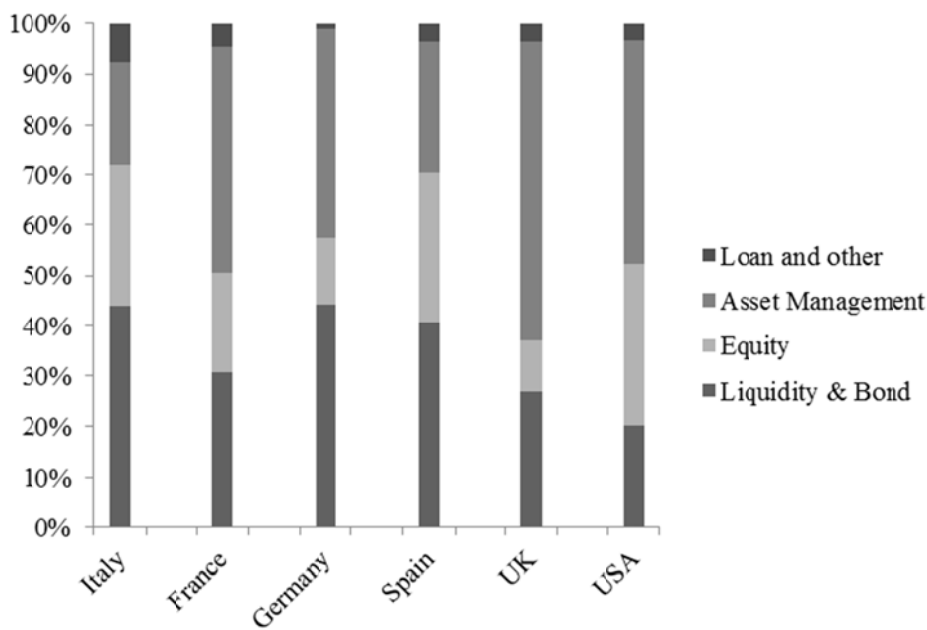


Source: Bank of Italy (2009)

Figure 2.1 Market share of Asset Management Industry

The networks of financial advisors are another important distribution channel with 140 billion of assets under management, equals to 16.5% of the total.

Compared to the main European countries and to the USA, Italy is one of the least penetrated countries by asset management, still dominated by do-it-yourself finance. Only the 20% of the wealth of Italian household is invested in funds. Spain reveals the same features.



Source: Banca d'Italia, Banque de France, Bundesbank, Banco de Espana, Blue Book, Several Reserve (2009)

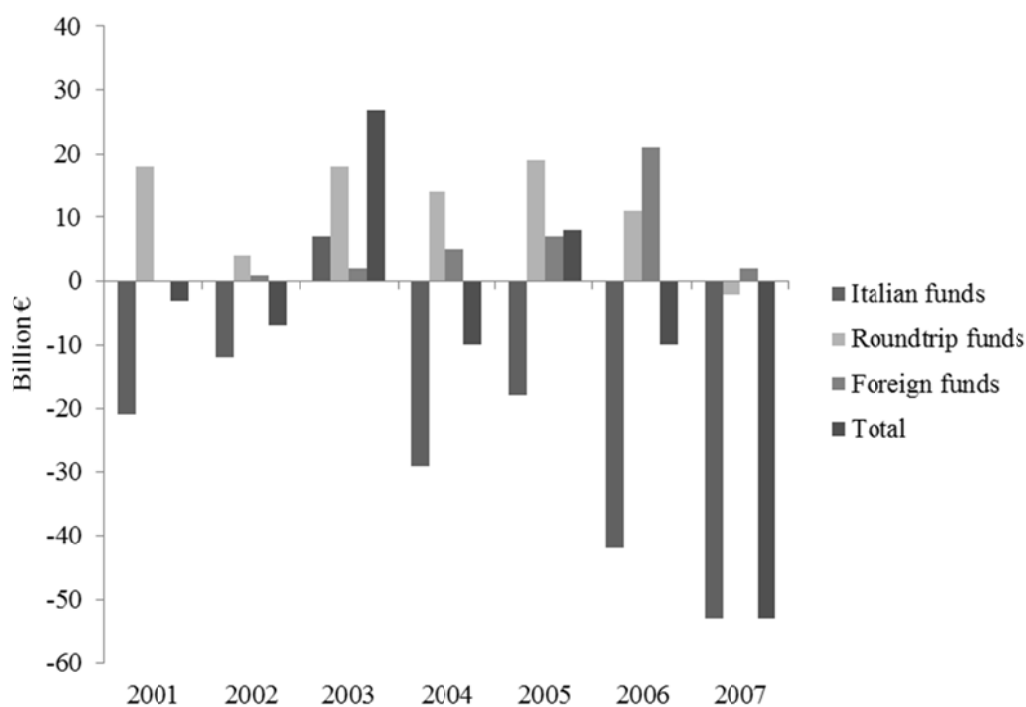
Figure 2.2 Allocation of wealth by category in 2008

ITALIAN MUTUAL FUND

Mutual funds have become an increasingly important component in household wealth and today they represent one of the most popular methods of asset management. These instruments were born in Britain in 1868 (Foreign & Colonial Investment Trust) “to give the investor of moderate means the same advantages as the large capitalists in diminishing

the risk of spreading the investment over a number of stocks”. They were introduced into Italian laws in 1983 and began operating in 1984. In those years, industry had only limited funds, all invested in the Italian market. The subsequent growth of the number of management companies and funds operating was rapid. In December 2009 the funds managed by Italian SGR amounted to 1.514 while funds managed by foreign companies were 1.963.

Since the beginning of the decade development of asset management in Italy was penalized by the progressive downsizing of mutual funds sector, which has shown a continued net outflow.



Source: Consob (2009)

Figure 2.3 Mutual Fund Net flow by type of fund

The negative trend recorded by Italian mutual funds in recent years, characterized by a sharp acceleration in 2006 and confirmed in 2007, is attributable to several causes related in part to the characteristics of the market asset management and in part to circumstances.

On supply side, it is possible to identify two main drivers of change. First, the change in strategy of the managers who increasingly tend to promote products characterized by investments in third party funds, mainly managed by foreign groups. Second the increasing availability of substitute products like ETFs and structured bond, characterized by a much lower cost than Italian funds with the same risk/return.

On demand side, the poor performances recorded by mutual fund, mainly due to higher fees on this type of product (compared for instance to a bond plain vanilla) have influenced the investors which have changed their preferences, moved their wealth towards other products.

The table below shows the tendency of the stock invested in mutual funds during the period 2005-2009: it is quite evident the shrinkage of total amount and the change in the presence of investors. Other types of funds, such as special funds and hedge funds, maintain a marginal position.

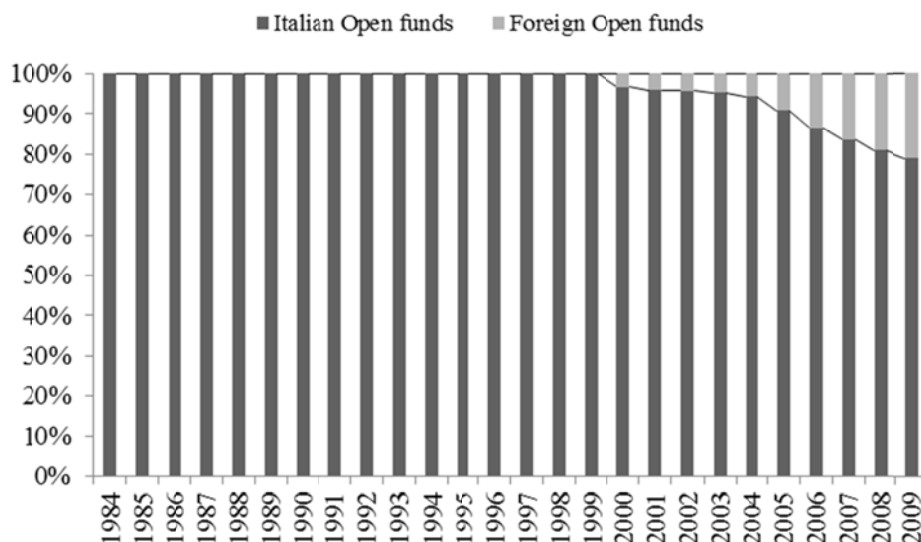
Table 2.1 Value of stock invested in Mutual Funds

Asset under management (M€)	Dec-05	Dec-06	Dec-07	Dec-08	Dec-09
Mutual funds	620.919	609.634	578.078	375.975	421.393
Special Funds ¹	3.527	2.764	2.398	1.194	1.479
Hedge Funds	19.331	28.295	35.886	21.201	15.279
Italian Groups	571.442	554.263	485.922	322.05	346.553
Foreign Groups	72.336	86.431	130.44	76.319	91.598
% Italian Groups	88,8%	86,5%	78,8%	80,8%	79,1%
% Foreign Groups	11,2%	13,5%	21,2%	19,2%	20,9%

Source: Assogestioni (2010)

¹ Italian equivalent fondi riservati

During the past decade, the importance of mutual funds managed by foreign companies increased, reaching a market share of 20% of the asset under management in 2009.



Source: Assogestioni (2010)

Figure 2.4 Italian funds Market share vs foreign funds Market share

This phenomenon could be the consequence of a different fiscal system applied to foreign mutual funds; in fact, the Italian tax system penalizes the Italian mutual funds which are taxed annually on performance. The tax law provides for the application of tax to the extent of 12,5% on the operating income in each tax period; the operating income is calculated as the difference between the beginning value and ending value of the asset of mutual funds for each tax year.

On the other hand, foreign funds were taxed only on income distribution and on the gains realized at the time of divestment.

On February 16th, 2011 the Senate approved the ddl converting the Decree Law of 29th December 2010, No 225, entitled “Proroga di termini previsti da disposizioni legislative ed interventi urgenti in materia tributaria e di

sostegno alle imprese e alle famiglie (Decreto Milleproroghe)” within which it is planned a reform of the taxation of Italian Mutual Funds. To date the taxation is aligned with that of foreign funds.

From a legal point of view, a mutual fund belongs to the category OICRs (organismi di investimento collettivo del risparmio), in conformity with art. 1, paragraph 1, Lett. m of the TUIF (testo unico in materia di intermediazione finanziaria).

A mutual fund is an entity that, by signing special fees, collects funds from savers in order to manage them through their collective investment in transferable securities or other goods.

Possible criteria for the classification of mutual funds are the mode of operation or structure (open-end funds, closed-end funds, hedge funds), the type of assets in which to invest (securities, real values, first rise buildings, units of other mutual funds), membership (or not) of potential subscribers to specific categories.

Considering only the category useful for our scope, we have:

- Open funds, which are characterized by a variable capital and the continuous entry and exit of participants in the fund by signing new quote participation or redemption of shares;
- Closed funds, which are regulated by the Law 344, 14/08/1993 (amended by Legislative Decree no. 58/98) and are characterized by a fixed capital and by a maximum number of shares subscribed by investors; if the management company intends to increase the volume of the mass of financial resources available to the fund, it has to issue new shares, according to a procedure in a certain way comparable to that provided for capital increases of the Corporation; the establishment of closed funds are permitted to asset management

companies and each closed fund must have its own regulation, approved by the Bank of Italy, identifying characteristics of the fund and establishes the procedures by which the management company is authorized to operate²;

- Hedge fund, which are regulated by the Ministry of the Treasury with the regulation n° 228/99; these funds are not harmonized with minimum threshold of subscription equals to half a million euros; most hedge fund investment strategies aim to achieve a positive return on investment whether markets are rising or falling; to do it, the administrator of fund employs sophisticated investment techniques, such as short selling and leverage, trying to improve performance and protecting the portfolio from any declines in the market.

The econometric model shows in chapter 4 is based only on open mutual funds

INDUSTRY STRUCTURE

In Italy, as in many other European countries, the mutual funds are largely distributed by banks and intermediaries belonging to banking groups. These channels place a wide range of financial instruments, ranging from asset management products to securities issued by banks themselves, through insurance policies and retirement funds.

The industrial structure and the nature of the industrial relationship between parties (Christoffersen et al., 2006) shape the rules of the competition and agency problems.

² This category doesn't include the real estate closed funds which are regulated by Law No. 86 of 25/01/1994

The figure below outlines the phases which characterized the Italian mutual funds Industry. After the production stage, where good is “built”, the fund arrives in distribution stage.

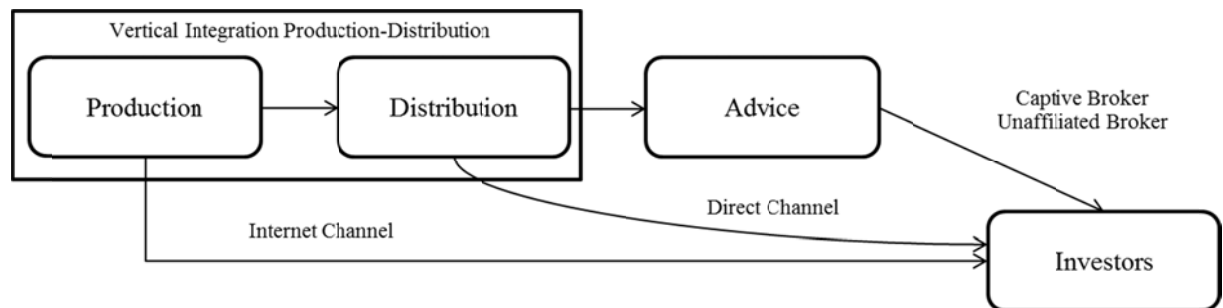


Figure 2.5 Industrial Structure of Italian Funds Industry

In Italy we observe several configurations in distribution: sometimes the product is directly sold by Internet channel; however, yet vertical integration still prevails, in particular within bank groups where mutual funds are distributed through bank counters and captive intermediaries.

In this vertical-integrated pattern, the production should play a subordinate role compared to the role played by distribution.

Distribution networks play a leading role in mutual funds. They are usually more focused on the sale of “pure” products than on the allocation of the wealth of their customers.

The production-distribution relationship is critical because it introduces a variety of interest conflicts (e.g. retailers are usually more incentivized to sell assets products with highest margin rather than the best quality products).

Another focal point in distribution channels is the role of brokers (Bergstresser et al., 2004): where the presence of asymmetric information, brokers could have an incentive to moral hazard (Stracca, 2006).

According to definition proposed by Nelson (1970) goods could be classified in two categories search good and experience good. A search good is a product whose features and characteristics are easily evaluated by consumers before purchase. On the other hand, an experience good is a product or service where the quality is difficult to observe in advance, but could be ascertained upon consumption.

Darby and Karni (1973) added a third type of good to Nelson's classification, the post-experience or credence good.

A post-experience or credence good is a product or service whose quality is difficult or impossible for the consumer to ascertain. The presence of credence good is due to the asymmetric information between seller (agent) and buyer (principal). Literature in this field proposed several examples, like medical treatment, mechanic consultation and computer specialists (Dullek and Kerschbamer, 2006)

In other words a credence good is a product or services where an expert knows more about the quality a consumer needs than the consumer himself. In this definition falls the advice activity made by brokers, in fact in general they know the quality of goods sold to investors better than the consumers.

The industrial structure of the firms could enhance the agency problem of the brokerage. The function of brokers should be to reduce this problem of asymmetric information about quality of funds.

Bergstresser, Chalmers, Tufano (2004) analyzed the benefits given by brokers to take out a mutual fund for the consumers. Investors engage and pay professional brokers or advisors. The underlying idea is that presumably, consumers must perceive that they receive incremental benefits from using a broker because, compared with direct distribution,

brokered distribution is labor-intensive and consequently more costly to consumers.

The scholars analyze four possible benefits that consumers of brokered fund distribution might enjoy: assistance selecting funds that are harder to find or harder to evaluate; access to funds with lower costs excluding distribution costs; access to higher performing funds; attenuation of behavioral investor biases.

Along these dimensions, they don't find the tangible benefits delivered by brokers. While brokerage customers are directed toward funds that are harder to find and evaluate, they pay substantially higher fees and the funds they buy underperform compared to directly-placed funds. Furthermore, brokered clients demonstrate more performance sensitivity, responding much more strongly to very short term performance. While there may be benefits of being a brokerage customer, they are not easily captured by these tangible measures.

Others scholars studied different aspects of the mutual fund supply chain regarding the different channels used to money flow in and out. These channels represent different amounts and types of intermediation and advice.

Christoffersen, Evans and Musto (2006) studied the three main channels used by investors to take out a mutual fund which are captive brokers, unaffiliated brokers and the direct channel to see what drives these flows, and what they provide for consumers.

They found that investors pay more to invest through unaffiliated brokers than captive brokers, and while unaffiliated brokers add more value to redemptions, captive brokers add more value to inflows. No-load investors are less likely to sell their poor-performing funds and more likely to sell

their winning funds, consistent with a disposition effect (Shefrin and Statman, 1985).

EVIDENCE FROM LITERATURE ON INDUSTRIAL ORGANIZATION OF INDUSTRY AND ACCESS

Industrial Organization literature on access has focused on the need for regulatory intervention in primary markets, where a vertically-integrated firm controls the bottleneck input that a rival must have in order to compete in a complementary market.

Willig (1979), Baumol and Sidak (1994), and Ordober and Willig (1999) espouse the efficient-component-pricing rule which sets the access price of the input at the direct cost of providing the input plus the opportunity cost to the supplier of doing so. However, excepted for Brito and Pereira (2005) and Dewenter and Haucap (2006), this literature has not considered the case where multiple incumbents compete, no incumbent has exclusive control over the necessary input, and an entrant seeks access.

Ordober and Shaffer (2007) studied a model in which multiple vertically-integrated firms-potential access providers-compete, applicable for example to the Italian mobile market (e.g. Poste Mobile). They found that whether access is provided depends on whether the firms' inputs are homogeneous or differentiated, whether diversion to the entrant's product impacts incumbent firms proportionally or differentially, and whether the entrant can commit to the positioning of its product ex-ante.

MODIFICATIONS IN ACT

Up to 2010, the Italian tax system penalized Italian mutual funds which were taxed annually on performance matured. In opposite foreign funds were taxed only on income distribution and on gains realized at the time of

disinvestment. This difference, which could create a detriment, has been solved. Nevertheless remain critical elements connected to the distribution stage. It has alerted the relevant bodies to undertake a study to amend the existing regulations and improve the distribution channels.

In recent years the Bank of Italy, the Ministry of Finance, Consob and some manufacturers are studying regulatory action improving the industrial organization of this sector and bring it into line with other European states.

A first identified intervention is about the governance of bank groups: the intervention is aimed at enhancing the autonomy of the SGR compared to the banking group membership.

The steps identified concern, in particular: the regime of incompatibility between SGR administrators and representatives of their group and the presence and role of independent directors, the guidelines limit and rule with which they have exercised the powers of direction and coordination of the parental company.

In 2010, the Bank of Italy and Consob have proposed a “Protocollo di Autonomia per la gestione dei conflitti di interessi” in which the production side has been given some guidelines on how to manage the problem.

The “Protocollo di Autonomia” shows a series of functional recommendations for proper application of the rules regarding conflicts of interest. The document classifies conflicts of interest into three categories:

- disputes related to investment selection criteria
- conflicts connected with the selection of counterparties
- conflicts related to the exercise of voting rights.

The recommendations identify both organizational and procedural measures.

3. Quality and performance

The mutual funds industry has been deeply studied in the economic literature. This stream of research has focused on the measure of the quality of the good fund; in particular, a possible measure of the quality is the performance (e.g. gross performance).

The literature about the performance of mutual funds industry starts from the seminal papers of Sharpe (1966) and Jensen (1967) and it had many contributions both empirical and theoretical to date (for a literature survey, Lehmann and Timmermann, 2008).

It is commonly believed that mutual fund investment performance is consistent with the original version of the so-called efficient market theory, that it means that securities prices already include all available information, implying that returns across active and passive portfolios are equal before subtracting trading and investment expenses, hence that active trading is wasteful. But this theorem has undergone modifications “moving with the times”. Another version of this EMT states that securities prices include all available information after a set of active investors expend resources to ensure this result. A subsequent version (EMT-modified) means that, in equilibrium, investments in active and passive portfolios are equal after netting out all expenses.

The theory predicts that institutions that efficiently expend money to develop and act on new information ought to evince alphas, net of expenses, that are statistically indistinguishable from zero. In its original form EMT predicts that active investors will evince alphas equal to the negative of the expenses they incur (as a percentage of assets) to develop information.

This feeling is mainly due to two well-known studies carried out in the 1960s, which showed that mutual funds underperformed common market indexes (Sharpe, 1966, Jensen, 1967).

Sharpe calculated the so called reward to volatility ratios taking into consideration a 34-mutual-fund sample. He found that the ratio for his sample was 40 basis points lower than the ratio calculated for the Dow Jones Index over the same period.

Sharpe also compared his ratios among funds, according to their levels of investment fees. He found that the better performing funds tended to be the ones with the lower expenses.

Jensen used the so-called market equation (Capital Asset Pricing Model) to calculate “alphas” for his funds. First, he found the average alpha in his funds to be minus 110 basis points. Second, he discovered a statistically important number of funds with negative alphas.

Another important seminal paper in this field was written by Treynor and Mazuy (1966). They did not measure alphas in their study, but they tested whether any of the mutual funds in their sample evinced market-timing abilities over the 1953-62 period. The study introduced a nonlinear version of CAPM used by many later studies to test for market timing. The authors argued that, if funds could anticipate swings in the market, they could increase their portfolio risk on the upside and decrease it on the downside, thereby altering the linear securities line in CAPM to a nonlinear function. Using F-tests, they concluded that there was no evidence of market timing in their sample. Both Sharpe’s and Jensen’s studies find strong and statistically reliable results and show that mutual fund investment returns fall short of available returns from risk-adjusted index portfolios.

The thrust of Sharpe's and Jensen's results began to be reversed almost as soon as their papers were published: Jensen's alpha, which measures the deviation of a portfolio from the securities market line, has been the focus of most of the controversy because it is the most widely used in academic empirical studies. One criticism of the Jensen measure is that it is based on an upwardly biased estimate of systematic risk for a market-timing investment strategy (Admati and Ross, 1985; Dybvig and Ross, 1985).

Since 1970 some studies (e.g. Friend and Blume, 1970) have shown that the results do not support Sharpe's and Jensen's findings which state that there is a negative correlation between fund performance and management expense ratios.

Most of the other empirical studies performed over the next 30 years contradict these two seminal studies.

Their results are inconsistent with the hypothesis that funds fees and research expenses are wasted. They are generally consistent with the hypothesis that mutual funds are sufficiently successful in finding and implementing new information in order to offset their expenses.

More recently, Ippolito (1992) showed that the test they employed is inefficient. Instead of enquiring whether all their data taken together were consistent with successful timing, they tried to find out whether each fund individually evinced success in a statistically significant way.

Grossman and Stiglitz (1980) provide an alternative. They do not discard the elements of efficient market theory, but rather add a dynamic element in order to explain how information gets embedded in prices. They introduce the simple proposition that gathering information is costly.

Market participants that do nothing to enhance their knowledge of the financial conditions and prospects of firms can expect to be on the

unprofitable side of trades. Informed investors thus earn higher gross returns, adjusted for risk, although they also have to face greater expenses. In equilibrium, informed and uninformed investors can expect to earn the same return, net of expenses.

PERSISTENCY OF PERFORMANCE

More recently, literature on mutual funds has concentrated his attention on the topic of the persistency of performance, in other words the new challenge is becoming to distinguish skill from luck. Given the multitude of funds, many have extreme returns by chance. And if it is true, the past performance doesn't affect the future income. A common approach to this problem is to test the persistence in fund returns, that is whether past winners continue to produce high returns and losers continue to underperform (Grinblatt and Titman 1993; Goetzmann and Ibbotson, 1994).

Hendricks, Patel, and Zeckhauser (1993) examined quarterly returns date over 1974 - 1988 on a dataset of open funds and they found that the superior persistency of performance proves to be significant, although it is a short-run phenomenon, peaking at roughly four quarter.

Carhart (1997) using a 4-factor model ("momentum", Carhart, 1995) showed short-term persistence in equity mutual funds. The funds that perform best during the last 12 months are likely to hold more of the best performing stocks of that period, and the funds that have done poorly are likely to hold more of the stocks that have done poorly

Fama and French (2007) tested the persistence on different terms and they found that mutual fund industry realizes returns close to market returns,

before fees and expenses. Their findings support the conclusion that fund performances, good and bad, is due to chance rather than skill.

MUTUAL FUND PERFORMANCE AND FLOW

Another common topic related to mutual funds is the relation between past performances and flows. The literature has long recognized that investors respond to mutual fund performance: the non-linear relation between mutual fund performance and subsequent net flows is one of the best documented empirical regularities in mutual fund researches (Ippolito, 1992; Sirri and Tufano, 1998; Del Guercio and Tkac 2002).

Net flows are typically found to be positively correlated with past fund performance but only for funds at the high end of the performance rankings spectrum: conversely, no association or a very weak association is found for medium and low performing funds (Chevalier and Ellison, 1997).

Recent researches propose two main frameworks for understanding the non-linearity between mutual fund performance and flows.

The first framework motivates asymmetry by arguing that existing fund investors have different behavior in relation to poor performance (Gruber, 1996; Lynch and Musto, 2003; Ivkovic and Weisbenner 2006, 2009). Investors may respond or not respond to poor performance for several possible reasons, such as trading frictions, expectations of a change in management, or behavioral biases.

This stream of research motivates non-linearity by arguing that existing investors do not respond to poor performance.

Gruber (1996) argued that it is possible subdivided the investors in mutual funds in two categories: sophisticated investors and disadvantaged investors. Disadvantaged investors are not able to respond to poor

performance because either they are influenced by external factors more than performance (such as advertising or advice from brokers) or they suffer some sort of friction that makes response costly. The heterogeneity in existing investors produces an asymmetric response to fund performance.

Lynch and Musto (2003) suggested that investors believe that following poor performance fund administrator will either change the portfolio management strategy and/or the management team. Because investors expect the fund sponsor to change either the management strategy and/or the management team, they have no reason to believe that the poor performance will persist.

Ivkovic and Weisbenner (2006, 2009) in contrast with investors behavior in regard to common stocks, found that there is a strong negative relation between probability of sale and past mutual fund performance (a sort of reverse of the disposition effect proposed by Kahneman and Tversky (1979), and Shefrin and Statman (1985) for stock market). Specifically, individual investors are reluctant to sell mutual funds that have appreciated in value and are willing to sell losers.

The second theoretical framework focuses on the reactions of new investors to top performance. Although this new field of research is less developed, it studies the new investors entering the funds in response to good performance, as opposed to incumbent investors not leaving following poor performance. For example Huang, Wei, and Yan (2007) argued that asymmetry in the performance-flow relation is not due to the lack of reaction of existing investors to poor performance, but rather, to differences in participation costs for new investors. They stated that more investors that are new to the fund are able to overcome their participation

costs as performance increases. This, in turn, leads to a greater sensitivity to performance as fund performance improves.

4. Data and Methodology

The aim of this study is to identify the determinants which rule the collection in this market. The results of the study could improve the understanding of the nature of relationship in the industry and highlight the issues connected to the industrial organization.

The dataset is based on data from Assoreti, the association of firms that offer financial (in broad sense) products to the public using networks of financial advisors; the dataset include only information on open mutual funds, the most common form of fund used in this field of investment. This class is characterized by variable capital, which varies continuously (both in composition and in value) in relation to purchases and sales on the market made by managers and to the progress of the net balance between new collection (inflows) and redemptions (outflows) requested by investors.

These data consider both the stocks and the flows during a period of 5 years starting in 2005; Assoreti gives information on industry dimension, total net assets, net flow (purchases and redemptions) distinguishing in fund categories (stock fund, balanced fund, bond investment fund, monetary fund, flexible fund) and between Italian or foreign fund and own or not own product.

Considering only the company with complete availability of data during the period of study (from January 2005 to December 2009) the sample contains 18 distributors of funds, which manage in average the 80% of the stock invested in mutual funds. Assoreti collected data on stock and flows with different frequency, quarterly for stock and monthly for flows.

The dataset contains information on distributors of fund about gross flows, net flows, redemption flow, stock, number of promoters, number of customers and market share.

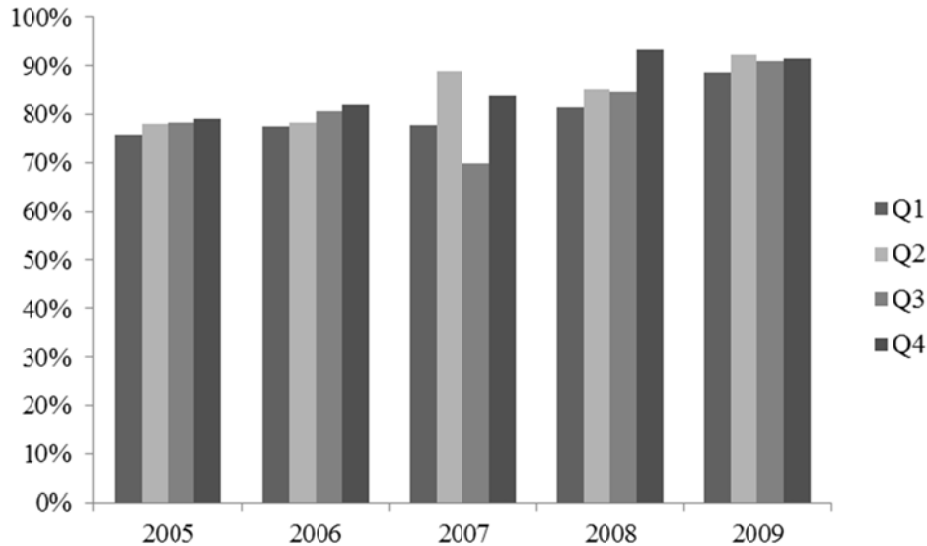


Figure 4.1 Market share of the sample

The table below contains some descriptive statistics on the companies in the sample. The chart, sorted by average market share in the period of analysis, underlines how this industry is characterized by a high market concentration: the sum of the average market share (during the period 2005-2009) of the four bigger distributors covers almost the 50% of the market. Another focal matter concerns the negative performances in average monthly net flow registered by some networks, it underlines the trouble faced by the industry.

Table 4.1 Descriptive statistics of dataset

ID Dist	Distributor	Average monthly Netflow (k€)	Average monthly Grossflow (k€)	Average Market share (%)
4001	BANCA FIDEURAM S.p.A.	48336	319102	21
4019	AZIMUT S.p.A.	56319	172467	10.3
4002	RASBANK S.p.A.	-22376	242576	9.8
4005	BANCA MEDIOLANUM S.p.A.	11886	50249	8.1
4041	FINECOBANK S.p.A.	26779	70087	6.7
4087	BANCA GENERALI S.p.A.	-44068	79932	6.0
4012	FINANZA & FUTURO BANCA S.p.A.	16033	36744	4.8
4013	SANPAOLO INVEST SIM S.p.A.	26786	31806	4.2
4036	MPS BANCA PERSONALE S.p.A.	19813	25003	1.8
4065	CREDEM S.p.A.	14760	39279	1.7
4077	BANCA SARA BANCA DELLA RETE S.p.A.	14961	11729	1.6
4014	BANCA BIPIELLE NETWORK S.p.A.	-654	24847	1.5
4097	INTRA PRIVATE BANK S.p.A.	2229	2992	0.7
4044	HYPO ALPE-ADRIA-BANK S.p.A.	-352	4930	0.6
4025	BANCA SAI S.p.A.	-1915	7611	0.4
4047	ALPI SIM S.p.A.	1771	3121	0.3
4078	BANCA NUOVA S.p.A.	2073	5300	0.2
4076	BANCAPULIA S.p.A.	233	732	0.2

DISTRIBUTOR'S CHOICES IN THE SAMPLE

A relevant issue emerging from dataset concerns the decision of each distribution network to sell only products offered by SGR within the group or not.

This choice shows different possibilities linked to the nature of funds, Italian or foreign ones. The data from Assoreti show that the sole selling is becoming outdated. In fact the trend is to open the distribution channel also to funds not produced by groups affiliates.

In 2005, 7 distributors out of the 18-company sample (> 50% market share) sold only Italian mutual funds managed by their own SGR. At the end of 2009 only one of these distributors confirmed this strategic choice (Banca Mediolanum), while the other ones started selling also not-owned products.

The case of foreign mutual funds is quite similar. In 2005, 6 out of 18 distributors sold only owned product and only Banca Mediolanum still maintains the choice at the end of 2009.

MILESTONES IN ITALIAN ASSET UNDER MANAGEMENT 2005 - 2009

This paragraph summarizes the main trend in the asset management industry, happened in the years under investigation.

The years 2005 and 2006 were periods of growth and change both for the Industry and for the Italian financial system in general. On one hand there was a significant development of the industry, but on the other side the asset under management industry went through times of great change and uncertainty, due to the dynamics of collection and the reforms that have affected the system. The most relevant fact was most likely the impressive growth of foreign funds sold in our country. Industry seemed to have shifted the focus towards Europe, thanks to benefit resulting from a more competitive taxation and less restrictive legislation.

The 2007 was a year of profound change and uncertainty for the Italian asset management industry. In Europe the industry was also affected by the impact of the international credit crunch and by the phase of extreme volatility crossed by the financial markets. This has resulted in a growing risk aversion and in an increased competition of bank deposits and of bond.

In 2007, in Italy there was the pension reform, while it was recorded an increase in subscriptions to open pension funds and to real estate funds, supported by new regulation and by the positive performance of the real estate market. Regarding the industry regulation, the implementation of the MiFID EU directive has fostered the development of a unique financial market in Europe.

The year 2008 has been a bad year for the Italian asset under management industry. It has been marked by an industry in crisis, affected by the negative impacts generated by the U.S. subprime mortgages, the collapse of the stock market and the consequent bankruptcy of several banks and insurance companies and of many firms around the world. Against this background, stock prices dropped below the 2002's levels, seriously influencing the funds' performance causing a change in the investment choices of savers, resulting in an overall increase in risk aversion and in the outflow of resources from the asset management industry.

In 2009, the Italian asset management industry has shown several important signals of recovery: an initial slowdown of redemption followed by a turnaround with the return to the growth both in terms of collecting and in terms of assets. The flows of investment continued to reward more the products not within group than the own funds. In order to make lasting the industry recovery the operators and the supervisory authorities introduced the UCITS IV Directive, which entered into force on July 1, 2011, with the aim of helping investors to better understand operators, products and services and to make informed investment decision.

THE MODEL

The basic unobserved effects model can be written, for a randomly drawn cross section observation i , as (using the notation proposed by Manuel Arellano, 2003):

$$y_{it} = x_{it}'\beta + u_{it};$$

$$u_{it} = \eta_i + v_{it};$$

where $i = 1, \dots, n$ and $t = 1, \dots, T$ denotes the time dimension.

The term x_{it}' is $1 \times k$ and can contain observable variables that change across t but not with i , variables that change across i but not across t , and variables that change across i and t . The term η_i is the unobserved time-invariant heterogeneity component, while v_{it} is the idiosyncratic error. Finally, β is a $k \times 1$ vector of unknown parameters.

In the case under discussion, we suppose the presence of an individual level effect given by the different features which characterize the company involving in the sample. (e.g. ability to sell)

The table below summarize some descriptive statistics about variables in the sample; we can see that the main component of variance for gross flow, redemption flows, stock under management and number of brokers is due to the variance “between” groups; this suggests that there is a strong individual component in the sample.

Table 4.2 Descriptive statistics of panel

Variable		Mean	Std. Dev.	Min	Max	Observations
netflow	overall	9628.824	69294.9	-491222.8	762902.8	N = 1080
	between		22965.39	-44068.34	56319.31	n = 18
	within		65598.88	-515799	724195.6	T = 60
grossf-w	overall	172182.3	244495.2	88.11	2014482	N = 1080
	between		226296.3	732.1742	868039.5	n = 18
	within		106621.1	-324454.9	1318625	T = 60
redemp-w	overall	162553.5	230067.6	27.34	1251579	N = 1080
	between		214805.4	499.6637	819703.4	n = 18
	within		96502.65	-273903.6	863637.6	T = 60
stock	overall	3434457	4425212	2475	1.86e+07	N = 1065
	between		4427834	11063.11	1.62e+07	n = 18
	within		942790	236478	8264587	T-bar = 59.1667
numprom	overall	1208.036	1229.585	24	5203	N = 1080
	between		1236.056	42.91667	4483.35	n = 18
	within		259.9763	416.7753	2244.392	T = 60

Using a panel data model with T equals to 60 (monthly observations for 5 years) and n equals to 18 (with complete availability of data), the model assumes as dependent variables respectively:

- Gross flows: sum of subscriptions by check, bank transfers and switches, include incoming transfers of positions in mutual funds under Italian law by another operator and online subscriptions; they do not include funds of funds.
- Net flows: difference between gross flows and the sum of the liquidation, net of any exit fees and transfers out of positions in mutual funds under Italian law to another operator
- Redemptions Flows: difference between Gross flows and Net Flows

The independent variables used in the model could be subdivided in three categories:

- Structural/firm variables: they are variables which don't vary significantly in short run and have an individual effect (e.g. stock under management, number of brokers)

Table 4.3 Firm Variables tested

Covariate	Description
Stock	Stock under management in month t
% netflow by third party	= $\text{abs}(\text{netflow by third party}) / (\text{abs}(\text{own netflow}) + \text{abs}(\text{netflow by third party}))$ in month t
% netflow to foreign funds	= $\text{abs}(\text{netflow to foreign funds}) / (\text{abs}(\text{netflow to italian funds}) + \text{abs}(\text{netflow to foreign funds}))$ in month t
Average stock per promoter	= $\text{stock} / \text{number of promoters}$ in month t
Average grossflow per promoter	= $\text{grossflow} / \text{number of promoters}$ in month t
Average grossflow per customer	= $\text{grossflow} / \text{number of customers}$ in month t
Customers per promoter	= $\text{number of customers} / \text{number of promoters}$ in month t
% netflow stock fund	= $\text{netflow stock fund} / \text{total netflow}$ in month t
Dummy variable	Description
Bank group	=1 if the distributor belongs to a bank group
Insurance group ³	=1 if the distributor belongs to an Insurance group

- Environmental/market variables: they are variables which consider the dynamic of industry (e.g. aggregate flows for each period, Ftse Mib return)

Table 4.4 Market Variables tested

Covariate	Description
Ftse return monthly	= $(\text{FTSEMIB}_{t+1} / \text{FTSEMIB}_t) - 1$
Ftse return quarterly	= $(\text{FTSEMIB}_{t+3} / \text{FTSEMIB}_t) - 1$
Ftse return yearly	= $(\text{FTSEMIB}_{t+12} / \text{FTSEMIB}_t) - 1$
Euribor 1m	= $(\text{Euribor1m}_{t+1} / \text{Euribor1m}_t) - 1$
Dummy variable	Description
posreturnM	=1 if the $\text{FTSEMIB}_t > \text{FTSEMIB}_{t-1}$

³ almost complementary of bank group.

- Quality variables: they are variables which try to show the different quality in term of performance between individuals

METHODOLOGY

The methodology used to test the relationships and to find the best model between Fixed Effect Model and Random Effect Model follows these steps for each explained variable:

- Estimate the model with the Fixed Effects and Random Effects;
- Perform the Hausman test:
 $H_0 : E (\mu_i | x_{i1}, x_{i2}, \dots x_{it}) = E (\mu_i) = 0$ vs. $H_1 : E (\mu_i | x_{i1}, x_{i2}, \dots x_{it}) = E(\mu_i) \neq 0$;
- If the difference between the estimates is statistically significant (H_0 is rejected), Fixed Effects Model is appropriate.
- Otherwise perform Breusch-Pagan Lagrange Multiplier test and verify the hypothesis:
 $H_0: \sigma_\mu = 0$ vs. $H_1: \sigma_\mu \neq 0$; (negligibility of the individual effects).
- If H_0 is rejected, Random Effects Model is an appropriate model otherwise a Pooled ordinary Least Square Model fits the data, and the hypothesis of strong individual effects is wrong.

NET FLOW

The table below shows the result of the two regressions (FE vs RE) on net flow: the fixed effect model seems to be appropriated (running an Hausman test, we reject the null hypothesis with $P > 95\%$ **, $\lambda = 0.72$ and $\theta = 0.07$) and so is that the individual specific effect is correlated with the independent variables, as assumed.

Table 4.5 Fixed Effects Model - Net Flow

Fixed-effects (within) regression	Number of obs	=	902
Group variable: id	Number of groups	=	16
R-sq: within = 0.2154	Obs per group: min	=	37
between = 0.0065	avg	=	56.4
overall = 0.0716	max	=	59
corr(u_i, Xb) = -0.7360	F(5, 15)	=	6.62
	Prob > F	=	0.0019

(Std. Err. adjusted for 16 clusters in id)

netflow	Coef.	Robust Std. Err.	t	P> t	[95% Conf. Interval]	
stock	-.0096387	.0042763	-2.25	0.040	-.0187535	-.0005239
flowx100te~s	30951.63	11877.23	2.61	0.020	5635.912	56267.35
grossflowm~e	311.9274	96.41722	3.24	0.006	106.4189	517.4358
clientiper~e	-267.4236	86.31887	-3.10	0.007	-451.4079	-83.4393
euri borM						
L1.	-1585099	471748.4	-3.36	0.004	-2590607	-579591
_cons	67713.35	22171.74	3.05	0.008	20455.41	114971.3
sigma_u	54127.116					
sigma_e	63812.199					
rho	.41843086	(fraction of variance due to u_i)				

Table 4.6 Random Effects model - Net Flow

Random-effects GLS regression	Number of obs	=	902
Group variable: id	Number of groups	=	16
R-sq: within = 0.2071	Obs per group: min	=	37
between = 0.3393	avg	=	56.4
overall = 0.2005	max	=	59
Random effects u_i ~ Gaussian	Wald chi 2(5)	=	80.25
corr(u_i, X) = 0 (assumed)	Prob > chi 2	=	0.0000

(Std. Err. adjusted for clustering on id)

netflow	Coef.	Robust Std. Err.	z	P> z	[95% Conf. Interval]	
stock	-.0023258	.001976	-1.18	0.239	-.0061987	.0015472
flowx100te~s	19301.33	9296.072	2.08	0.038	1081.36	37521.29
grossflowm~e	265.3964	45.65456	5.81	0.000	175.9151	354.8777
clientiper~e	-50.65143	72.90345	-0.69	0.487	-193.5396	92.2367
euri borM						
L1.	-1596008	206865.6	-7.72	0.000	-2001457	-1190559
_cons	23658.21	15229.17	1.55	0.120	-6190.41	53506.84
sigma_u	20015.472					
sigma_e	63812.199					
rho	.08957155	(fraction of variance due to u_i)				

The net collection of money has a positive correlation with the variable which considers the flows to funds managed by third-party, this confirms that the new strategy of the openness of the network gives a competitive

advantage to the distributors. Also the variable correlated to the ability of the promoter to boost the average turnover (gross flow per promoter) increases the net flows.

A greater closeness with the customers in the selling process could improve the net flows: a high number of customers per promoter have a negative impact on the net flows as well as the Euribor monthly rate with 1 lag.

GROSS FLOW

Also considering the Gross flows as dependent variable, the Hausman test rejects the null hypothesis and so the fixed effects model is preferred.

Table 4.7 Fixed Effects Model - Gross Flow

Fixed-effects (within) regression	Number of obs	=	902
Group variable: id	Number of groups	=	16
R-sq: within	Obs per group: min	=	37
between	avg	=	56.4
overall	max	=	59
corr(u_i, Xb) = 0.0102	F(5, 15)	=	73.87
	Prob > F	=	0.0000

(Std. Err. adjusted for 16 clusters in id)

grossflow	Coef.	Robust Std. Err.	t	P> t	[95% Conf. Interval]	
stock	.0258987	.0045039	5.75	0.000	.0162988	.0354985
flowx100te~s	1739.897	12928.89	0.13	0.895	-25817.37	29297.17
grossflowm~e	1019.023	157.1139	6.49	0.000	684.1427	1353.904
clientiper~e	-460.7806	151.4324	-3.04	0.008	-783.5512	-138.01
euriborM						
L1.	-617557.1	347766.7	-1.78	0.096	-1358804	123690.1
_cons	23700.1	26174.2	0.91	0.380	-32088.88	79489.08
sigma_u	103785.32					
sigma_e	55658.241					
rho	.77663941	(fraction of variance due to u_i)				

Table 4.8 Random Effects model - Gross Flow

Random-effects GLS regression	Number of obs =	902
Group variable: id	Number of groups =	16
R-sq: within = 0.7643	Obs per group: min =	37
between = 0.8709	avg =	56.4
overall = 0.8505	max =	59
Random effects u_i ~ Gaussian	Wald chi2(5) =	760.29
corr(u_i, X) = 0 (assumed)	Prob > chi2 =	0.0000

(Std. Err. adjusted for clustering on id)

grossflow	Coef.	Robust Std. Err.	z	P> z	[95% Conf. Interval]	
stock	.0319056	.0031501	10.13	0.000	.0257316	.0380797
flowx100te-s	344.4551	9692.383	0.04	0.972	-18652.27	19341.18
grossflowm-e	973.9254	47.51195	20.50	0.000	880.8037	1067.047
clientiper-e	-254.4106	67.3249	-3.78	0.000	-386.365	-122.4563
euriborM						
L1.	-616593.6	199940.1	-3.08	0.002	-1008469	-224718.2
_cons	-20853.99	15816.43	-1.32	0.187	-51853.63	10145.65
sigma_u	43657.175					
sigma_e	55658.241					
rho	.38090116	(fraction of variance due to u_i)				

The main explanatory variable in this case is the dimension of the network (stock under management). The impact of the percentage of flows due to third-party lose significant to determine the gross flow.

The other covariates show the same sign as the case of the regression on net flow.

REDEMPTION FLOW

The Fixed Effects model employed (H_0 is rejected with $P > 99\%^{***}$, $\lambda = 0.77$ and $\theta = 0.05$) to shape the relationship between redemptions and the covariates shows the relevant impact of a new variable, the percentage of net flow to stock fund which is not significant for the previous cases. In particular, a greater exposure on the stock market induces higher redemption flows.

As in the case of gross flow the redemptions show dimensional effect.

If the network sells also not own products, it gives some benefits because it seems to reduce the redemption flows.

Table 4.9 Fixed Effects Model – Redemption Flow

Fixed-effects (within) regression	Number of obs	=	902
Group variable: id	Number of groups	=	16
R-sq: within	=	0.6051	
between	=	0.9040	
overall	=	0.8483	
	Obs per group: min	=	37
	avg	=	56.4
	max	=	59
corr(u_i, Xb)	=	-0.1823	
	F(7, 15)	=	29.16
	Prob > F	=	0.0000

(Std. Err. adjusted for 16 clusters in id)

redemption-w	Coef.	Robust Std. Err.	t	P> t	[95% Conf. Interval]	
stock	.0354492	.0059139	5.99	0.000	.0228441	.0480543
flowx100te-s	-29076.39	12074.67	-2.41	0.029	-54812.93	-3339.85
grossflowm-e	707.387	86.92385	8.14	0.000	522.1132	892.6608
clientiper-e	-198.0972	119.7291	-1.65	0.119	-453.2938	57.09944
euriborM						
L1.	965252.4	323975.9	2.98	0.009	274714.1	1655791
percaz	112.7029	39.90516	2.82	0.013	27.64709	197.7588
posreturnM	-474.9375	2140.857	-0.22	0.827	-5038.066	4088.191
_cons	-42957.86	30374.4	-1.41	0.178	-107699.4	21783.64
sigma_u	69650.387					
sigma_e	66128.407					
rho	.52592166	(fraction of variance due to u_i)				

Table 4.10 Random Effects Model – Redemption Flow

Random-effects GLS regression	Number of obs	=	902
Group variable: id	Number of groups	=	16
R-sq: within	=	0.6038	
between	=	0.9254	
overall	=	0.8644	
	Obs per group: min	=	37
	avg	=	56.4
	max	=	59
Random effects u_i ~ Gaussian	Wald chi2(7)	=	754.43
corr(u_i, X) = 0 (assumed)	Prob > chi2	=	0.0000

(Std. Err. adjusted for clustering on id)

redemption-w	Coef.	Robust Std. Err.	z	P> z	[95% Conf. Interval]	
stock	.0375896	.0027941	13.45	0.000	.0321133	.043066
flowx100te-s	-20716.36	10327.18	-2.01	0.045	-40957.25	-475.4626
grossflowm-e	658.436	42.52091	15.48	0.000	575.0966	741.7755
clientiper-e	-79.68124	84.96742	-0.94	0.348	-246.2143	86.85184
euriborM						
L1.	978800.3	196449.2	4.98	0.000	593766.9	1363834
percaz	104.4532	46.68947	2.24	0.025	12.94351	195.9629
posreturnM	-677.3175	4835.474	-0.14	0.889	-10154.67	8800.038
_cons	-64901.31	16754.98	-3.87	0.000	-97740.47	-32062.16
sigma_u	35695.298					
sigma_e	66128.407					
rho	.22562903	(fraction of variance due to u_i)				

GROUP OF MEMBERSHIP

Using a Least Square Dummy Variables model (LSDV), the study tries to investigate the impact of the membership in the market. Considering the data, the discrimination is between bank group and insurance group. The table below reports the result of regression on the net flows using the same covariates presented above (table 4.5) and introducing a dummy variable which takes into consideration the membership. As expected by the econometric theory, the coefficients of the covariates remains the same.

Table 4.11 Least Square Dummy Variables Model –Net Flow

Linear regression

Number of obs = 902
 F(20, 881) = 14.71
 Prob > F = 0.0000
 R-squared = 0.2952
 Root MSE = 63812

netflow	Coef.	Robust Std. Err.	t	P> t	[95% Conf. Interval]
assicurativo	-89639.96	41998.51	-2.13	0.033	-172068.8 -7211.163
stock	-.0096387	.0050419	-1.91	0.056	-.0195342 .0002569
flowx100te-s	30951.63	10517.2	2.94	0.003	10309.94 51593.32
clientiper-e	-267.4236	206.4614	-1.30	0.196	-672.6373 137.79
grossflow-re	311.9274	55.32861	5.64	0.000	203.3361 420.5187
euriborM					
L1.	-1585099	204808.5	-7.74	0.000	-1987068 -1183129
mu1	(dropped)				
mu3	-50706.19	57141.04	-0.89	0.375	-162854.6 61442.26
mu4	-144225.6	65632.88	-2.20	0.028	-273040.7 -15410.58
mu5	-120676.6	78059.79	-1.55	0.122	-273881.5 32528.22
mu6	-139963.6	79537.92	-1.76	0.079	-296069.6 16142.29
mu7	-127324.2	52190.41	-2.44	0.015	-229756.2 -24892.15
mu8	-66509.04	63946.44	-1.04	0.299	-192014.2 58996.09
mu9	-140237.9	82989.15	-1.69	0.091	-303117.4 22641.6
mu10	-65488.47	55515.66	-1.18	0.238	-174446.9 43469.91
mu11	-197187.6	86508.13	-2.28	0.023	-366973.7 -27401.53
mu12	-181566.5	103515.7	-1.75	0.080	-384732.6 21599.74
mu13	-150572.8	94816.3	-1.59	0.113	-336665 35519.34
mu15	-190362.6	96422.16	-1.97	0.049	-379606.6 -1118.664
mu16	-173953.9	97271.19	-1.79	0.074	-364864.2 16956.36
mu17	-65099.85	26879.9	-2.42	0.016	-117856 -12343.74
_cons	196324.5	108952	1.80	0.072	-17511.18 410160.2

The dummy variable insurance group is almost complementary of bank group with the exception of case of Azimut, an independent network.

The group of membership of the networks influences the net flows: the collecting has a benefit if the network belongs to a bank group compared to an insurance group

SUMMARY OF THE MAIN RESULTS

The results of the models show a very significant individual component: the Fixed Effects model performs better compared to the Random Effects model for all the considered dependent variables: the individual specific effect is correlated with the covariates.

The results of the models show a relevant impact of stock managed by company, that reveals a dimensional effect of the network for all the dependent variables.

The effect of benchmark past performance in money collection is statistically significant for all regressions but the relevance of the this benchmark decreases, using different temporal dimensions.

The effectiveness of promoter increases when the number of customers in his portfolio decreases and when his customers have a high level of turnover.

There are no evidences that the “dimension” of customer and the percentage of flow to foreign funds influence the collection.

On the other hand, a very significant effect is given by the “producer” of fund: the network which sell a greater percentage of fund by third-party improves the flows and mitigates the redemptions.

Another relevant factor joins the group of membership: if a network belongs to a bank group, it has a benefit compared to an insurance group.

QUALITY VARIABLES

As showed in the previous chapter, literature suggests that a possible measure of the quality is the performance (e.g. gross performance).

The models tests some measures, financial and marketing ones. However we have to take into account the problems of aggregation which affects the sample and the different frequency of two time series, quarterly for stock and monthly for flows.

Compared to the measures proposed by the literature, this data sample doesn't contain information on the pure funds but it considers the flows of

funds in the network; they unite products with dissimilar features (e.g. stock fund vs bond funds), produced and managed by different companies.

Table 4.12 Quality Variables tested

Covariate	Description
Gross Performance	$= (\text{stock}_{t+3} - \text{stock}_t) / \text{stock}_t$
Pure Gross Performance	$= (\text{stock}_{t+3} - \text{netflow}_{t+3} - \text{netflow}_{t+2} - \text{netflow}_{t+1} - \text{stock}_t) / \text{stock}_t$
Abnormal Return	$= [(\text{stock}_{t+3} - \text{netflow}_{t+3} - \text{netflow}_{t+2} - \text{netflow}_{t+1} - \text{stock}_t) / \text{stock}_t] - \text{Ftse return quarterly}$
Dummy variable	Description
Best Gross Performance	=1 if the network has showed the best pure gross performance in previous period
Best fund awards (for each year)	=1 if the SGR within group (vertical integration hypothesis) win the award
Persistency	=1 if the network shows positive abnormal return for two or more month in a row

Among the tested covariates, it is included a dummy variable which considers the best fund awards (for each year). The “Premio Alto Rendimento” is a recognition given by “Il Sole 24 ORE” to SGRs that stand out for their performances. The allocation of awards is based on analytical criteria, which take into account different elements and are inspired by protection of investors.

The choice to introduce a marketing variable is related to the Vertical integrated model, and tries to test a correlation between the flows and the production side.

The results of the model reveal that the past performance and the persistency of performance don’t influence the choices of the investors and so the inflows, in other words the quality of good doesn’t affect the choice of consumers.

The perceivable quality is different from the unbiased quality, this phenomenon could be also due to a low level of financial knowledge and to the nature of experience/credence good of mutual funds.

This result is consistent with the study of Krahenen Schmidt and Theissen (2006) who evaluate the impact of cross-sectional differences in investment performance on market share of German open-end mutual funds from 1986 to 1998.

Using a model based on a Kalman filter they found that the rigid distribution system in place in Germany at the time may have caused retail performance and investment performance to uncouple. In fact, although they observe differences in investment performance across mutual funds (and over time), there is no evidence that cross-sectional performance differences affect the market shares of these funds.

5. Two-Sided Market

In recent years the Bank of Italy, the Ministry of Economy and Consob are studying regulatory improving of the industrial organization of this industry. In particular the guideline seems to be related to the separation between production and distribution and so the abandon of the vertical integrated pattern. The development of electronic platforms should be viewed as the first step in this direction. They allow a diversification in the distribution channel.

The data from Assoreti prove that the paradigm of exclusiveness, a cornerstone of the vertical integrated model, is becoming outdated: in fact the distribution channels begin to sell also funds not produced by group membership. Also the absence of correlation between flows and performance showed in the econometric model induces to think that the conceptual framework proposed to summarize the economic relationship in this market lose “a piece of the story” linked to the distribution side.

In this context the development of develop a new framework which analyzes the role of distribution network could provide policy recommendations. This new theoretical configuration deals with two-sided market theory.

Two-sided markets are economic platforms having two distinct user groups that provide each other with externality. A two-sided market is one in which two sets of agents interact through an intermediary or platform the decisions of each set of agents affects the outcomes of the other set of agents, typically through an externality. This definition of a two-sided market may seem very broad, or overly inclusive. According to Rysman (2009) the interesting question is often not whether a market can be defined

as two-sided - virtually each market might be two-sided to some extent - but how important two-sided issues are in determining outcomes of interest.

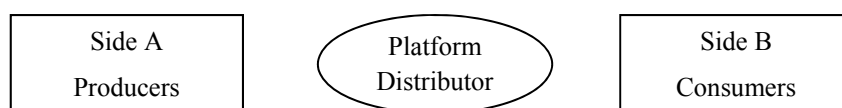


Figure 5.1 Two sided-market configuration

In the case of Italian mutual fund industry the two sides of the market are the production stage and the consumers and the distribution plays the role of network. The larger is the number of funds sold, the better is the externality for consumers because it increases the probability to find a product with high quality.

DEFINITION OF TWO-SIDED MARKETS

Conceptually, the theory of two-sided markets is related to the theories of network externalities and of (market or regulated) multi-product pricing. From the former, initiated by Katz-Shapiro (1985, 1986) and Farrell-Saloner (1985, 1986), it uses the notion that there are non-internalized externalities among end-users. From the latter, it sets the focus on price structure and the idea that price structures are less likely to be distorted by market power than price levels.

The economics of two-sided markets differ from the economics of one-sided markets in important aspects. First, the individual prices charged on either side of the market do not track costs or demand on that side of the market. Indeed, the fact that benefits and costs arise jointly in the two sides of the market means that there is no meaningful economic relationship

between benefits and costs on either side of the market considered by itself. Second, any change in demand or cost on either side of the market will necessarily affect both prices along with the sum of those prices. Third, products in two-sided markets cannot come into existence and cannot remain in existence unless firms in those markets get both sides on board; this gives rise to pricing and investment strategies that differ from those undertaken in one-sided markets and seems odd unless considered in the context of competition in a two-sided market. Fourth, any analysis of social welfare must account for the pricing level, the pricing structure, and the feasible alternatives for “getting both sides on board”.

Because all markets involve transactions between two (or more) parties and therefore are potentially two-sided markets, the literature circumscribe the scope of two-sided-markets theory. The market is one-sided if the end-users negotiate away the actual allocation of the burden (i.e., the Coase theorem applies); it is also one-sided in the presence of asymmetric information between buyer and seller, if the transaction between buyer and seller involves a price determined through bargaining or monopoly price-setting, provided that there are no membership externalities.

This field of economics research is recent and pioneered by Armstrong (2006), Caillaud and Jullien (2003) and Rochet and Tirole (2002, 2004). A market is said to be two-sided if firms serve two distinct types of customers, who depend on each other in some important way, and whose joint participation makes platforms more valuable to each. In other words, there are indirect network externalities between the two different customer groups.

In particular, Rochet and Tirole (2005) define a two-sided market as one in which the volume of transactions between end-users depends on the

structure and not only on the overall level of the fees charged by the platform.

Hagiu (2007) relies the definition of “two-sidedness” on the division of control between sellers and intermediaries, rather than on the effects of the pricing structure chosen by the intermediary, as is the case with the definition proposed by Rochet and Tirole. He studies the dissimilarities between the classic form of market intermediaries - which he calls merchants - and two-sided platforms. He states that the difference is that pure merchants, by taking possession of sellers’ goods, take full control over their sale to consumers. By contrast, pure two-sided platforms leave that control entirely to sellers and simply determine buyer and seller affiliation with a common marketplace.

For instances, pure retailers like Media World are (mostly) merchants. On the other hand, eBay is a pure two-sided platform. Interesting are intermediaries, such as Apple’s iTunes digital music store, which exhibit both platform and merchant features. Although Apple does not take physical or full legal “possession” of the songs it distributes (the rights remain with music publishers), it does obtain the right to repackage and price them as it sees fit on iTunes. This intermediate stage seems to be similar to Italian mutual fund industry where, the distributors even if they don’t have the ownership of funds they hold the right to price and advice products to investors.

Hagiu formalizes the economic tradeoffs between the pure (one-sided) merchant “mode” and the pure two-sided platform “mode”.



Figure 5.2 Pure merchant "mode" (one-sided) vs pure platform "mode" (two-sided)

The study shows that, unlike the pure merchant mode, the pure two-sided platform mode exhibits indirect network externalities between sellers and consumers. As a consequence, sellers might be unwilling to affiliate with the platform because they anticipate other sellers will not do so, leading to low consumer demand for the platform, which ex-post justifies a non-affiliation decision. In such cases, the merchant model helps “break” these unfavorable seller expectations by eliminating indirect network effects and achieves higher total profits. On the other hand however, the merchant model may involve higher costs per seller so that a platform model is more desirable when one wants to achieve higher product variety (and the risk that seller hold unfavorable expectations is not too high).

TWO-SIDED MARKET FOCUS AND ISSUE

Up to now, the literature on two-sided markets is mainly focusing on how the intermediary (or “the platform”) sets prices for both sides of the market simultaneously. Less studied are focused on other important issues, like the choice over how open to be, or how many sides of the market to allow.

Most of the two-sided markets literature up to now has either focused on individual industries such as credit cards (Rochet and Tirole, 2002 and 2003; Schmalensee, 2002, Wright, 2003), Internet intermediaries (Caillaud and Jullien, 2003; Baye and Morgan, 2001), Yellow Page directories (Rysman, 2003) and broadcasting (Anderson and Coate, 2005).

Table 5.1 Examples of two sided markets

Industry	Two sided platform	Side 1	Side 2	Subsidized Side	
Payment System	Credit Card	Merchants	Consumers	2	More than 80% of revenues come from Merchants
Real Estate	Real estate agency	Buyers	Sellers	1	Commission on sales
Software	Operating system	Developers	Users	1	Most revenues from license-holder
Advertising	Network Tv / yellow pages	Advertisers	Viewers/ readers	2	Most income for commercial television come from advertising
Video game	console	Developers	Players	Neither	Both sides generate revenues

The literature on two-sided markets is distinguished by its focus on the actions of the market intermediary. Generally speaking, research in two-sided markets explores choices by market intermediaries, particularly pricing, when there is some kind of interdependence or externality (usage or membership) between groups of agents that the intermediary serves.

The two most important choices that a platform firm faces refer to price and openness; these two strategy have been topics of research in economics of two-sided markets although the openness to the lesser extent.

Pricing in two-sided markets has been the main topic in this steam of economic research. The main result is that pricing to one side of the market depends not only on the demand and costs that those consumers bring but also on how their participation affects participation on the other side and the profit that is extracted from that participation. In a one-sided market, the price-cost mark-up in terms of elasticity of demand and the marginal cost. But in a two-sided market pricing decisions will also include the elasticity of the response on the other side and the mark-up charged to the other side. Since the platform faces a similar computation on the other side,

prices on both sides of the market depend on the joint set of demand elasticities and marginal costs on each side (Rochet and Tirole, 2003, 2006; Weyl, 2009). This result has important implications for prices. For instance, in a one-sided market, prices typically fall if the price elasticity of demand increases, but in a two-sided market the effect can be even larger: the low price on one side not only attracts elastic consumers on that side but also, as a result, leads to higher prices or more participation on the other side. The increased value extracted from the other side magnifies the value of having consumers on the first side, which leads to a yet bigger price decrease and quantity increase for the side that experiences the increase in elasticity (Rysman, 2009).

If there are multiple competing market intermediaries, the effect of participation of one side on the other has more evident. Consider two competing platforms pricing to consumers and sellers. As without competition, the consumer price depends on consumer demand, consumer cost, and the mark-up to sellers. With competition, lowering the consumer price attracts consumers from the competing platform, which degrades the value of the competitor to buyers, and hence leads to a larger increase in buyer interest in the original platform. Hence, the “twosidedness” of pricing can be more pronounced in competitive markets. The extent of this effect is partially influenced by the way in which agents move from one platform to another: in fact, two-sided markets often seem to evolve toward to a situation where members of one side use a single platform and the other side uses multiple platforms (Armstrong, 2006).

An intermediary can be viewed as a monopolist over access to members that do not use other intermediaries. Hence, firms compete aggressively on the side that uses a single network in order to charge monopoly prices to

the other side that is trying to reach them (Armstrong, 2006). As a result, competition between platforms can have large price effects on the side of the market that uses a single platform and little or no effect on the side that uses multiple platforms.

In markets with multiple newspapers, consumers typically read only one newspaper whereas advertisers appear in all of them (Lee, 2007). This result is not necessarily true in mutual funds industry, although there consumers usually (but not always) join only one distributor platform, and funds produced by SGR are distributed by multiple networks.

Another important issue in a two-sided framework is price discrimination. In a situation of demand heterogeneity, standard price discrimination allows a platform to capture more of the surplus on the side with discrimination. Thus, discrimination increases the value extracted on one side, which leads to lower prices on the other side which has now become more valuable (Weyl, 2009).

In two-sided markets literature, openness refers to two specific strategic issues. The first one is the number of sides to pursue: a potential platform firm must choose whether to be one-sided, two-sided, or multi-sided. The second issue is how to compete to other platforms: platforms may prefer incompatibility, compatibility, or some sort of integration.

As an example of the decision over how many sides to join, consider operating systems. Apple sells both computer hardware (e.g. MacBook) and its device operating system (e.g. OS Lion), whereas Microsoft controls only the operating system (e.g. Windows) and independent manufacturers supply hardware. In this sense, Microsoft is more open than Apple. This strategic choice is quite similar to a choice over vertical integration, even if the relationship between hardware and operating systems is not strictly

vertical. Rather, to the extent that a platform does not integrate, it often introduces another side to the multi-sided market calculation. That is, Microsoft is managing a three-sided market between consumers, software providers, and hardware providers, whereas Apple manages only a two-sided market between consumers and software providers. A platform may decide to change its strategy toward integration as its market evolves (e.g. Media Player integrates in Windows). Incorporated in this decision over openness is the decision of whether to be two-sided or one-sided. Being one-sided is in effect an extreme move away from openness where a firm integrates to the extent that there is no longer a two-sided market interaction. Perhaps it is more natural to observe firms begin with a one-sided model and switch to a two-sided model during growing process of company, because to be two-sided could be more expensive than to be one sided at early stage. For example, Amazon first established itself as a fairly standard on-line book retailer and then it introduces the “marketplace” options where sellers set prices and interact with consumers.

The second strategic issue related to openness refers to the decision over compatibility and inclusiveness toward rival platforms. If the first meaning of openness is similar to the choice over vertical integration, this second meaning is comparable to choosing horizontal relationships. Compatibility refers to the ability of a consumer using one platform to reach a seller using another. Compatibility need not be an “on-off” variable.

The two-sided market theory is also important for a wide variety of public policy issues, like antitrust and regulation policy.

Because two-sided markets typically have network effects and such effects could lead to a monopolistic platform, these markets are of interest to antitrust authorities. Given that the price is different from two- to one-

side markets, it is important that authorities can properly evaluate the observed outcomes. The economics of two-sided markets provides guidelines mainly into pricing and so it is important for antitrust on pricing issues (Evans, 2002). For instance, there is a growing interest in using merger simulations to evaluate the impact of mergers on prices and outcomes (Rysman, 2004)

Pricing issues are also the main field of action in regulation policy where the economics of two-sided markets can make a contribution. Classic price rules involved commissions with research staffs which tries to measure marginal cost and demand attempting to determine optimal prices. It could imagine such a staff attempting to determine optimum in a two-sided market, where the staff would have to investigate demand and cross-price elasticity on both sides, as well as cost. For instance, consider the policy of “net neutrality,” which reduces pricing by Internet service providers to content providers on the Internet. The Internet service providers can be seen as platforms matching Internet users to providers and hence, the concept of “net neutrality” is often evaluated from the perspective of two-sided markets (Lee and Wu, 2009). If there isn’t antitrust violation in setting interchange fees but the equilibrium outcome diverges from the social optimum (Rochet and Tirole, 2002), then price regulation could provide solution.

TWO-SIDED MARKETS AND ITALIAN MUTUAL FUND INDUSTRY

The definition proposed by Hangiu (2009) of “twosideness” focusing difference over the possession of sellers’ goods, could explain the nature of relationship in two-sided market. Even if the case of Italian Mutual funds Industry seems not to be a pure platform mode, like in the case of iTunes shown by literature, the distributors of funds don’t have the legal

possession of funds they sell but, they hold the right to price and advice to investors the products, in this sense the asset under management industry is not a pure two-side market platform.

Up to now the literature of this economy has treated topics, like pricing and openness, which are issues common also to mutual fund industry.

About pricing the main result useful to our industry relies on the price behavior in multiple competing market intermediaries, because the effect of participation of one side on the other has more evident. With competition, lowering the consumer price attracts consumers from the competing platform, which degrades the value of the competitor to buyers, and hence leads to a larger increase in buyer interest in the original platform. Hence, the “twosidedness” of pricing can be more pronounced in competitive markets. The effect is influenced by the way in which agents move from one platform to another: members of one side use a single platform and the other side uses multiple platforms. This situation is common also to the case of mutual funds where recently the producers of funds join multiple platform and on the other side nearly all investors use only one platform.

Considering a distributor of funds as a monopolist over access to investors that do not use other platform firms compete on the side that uses a single network in order to charge monopoly prices to the other side that is trying to reach them. As a result, competition between platforms can have large price effects on the side of the market that uses a single platform (investors) and little or no effect on the side that uses multiple platforms (the production side).

The mutual funds industry shows treats of similarity to the newspapers case: if in this case consumers typically read only one newspaper whereas advertisers appear in all of them, in our case typically the investors join

only one platform (due also to the cost to maintain relations with two platforms) even if it's not ever true that all funds are distributed by multiple networks.

Another important topic relied on our market is the decision over how many sides to join. This choice is somewhat similar to a choice over vertical integration. The main contribute deriving from two-sided market literature is linked to the decision of a firm, born with a one-sided model, to switch to a two-sided model during the evolution of business model. In the first stage of mutual funds market, the distribution were vertically integrated with the production and subsequently a lot of distributors decide to sell also not own product. The data show that the paradigm of exclusiveness is becoming outdated. In fact the trend is to open the distribution channel also to funds not produced by groups affiliates. In 2005, more than 50% of the distributors sold only mutual funds “produced” by their own SGR, at the end of 2009 only one of these maintained this choice.

But the strategic choice to sell funds managed by third-party could regard quality problems too; if funds produced by an own SGR show low quality or if it is costly to produce funds with high performance, the network have an incentive to sell fund managed by third-party and so to avoid vertical integration (production-distribution).

The second issue related to openness refers to the decision over compatibility and inclusiveness toward rival platforms; this concept is similar to choose horizontal relationships. Compatibility refers to the ability of an investor using one platform to reach a seller using another. It is quite evident that, to our scope, the second issue loses relevance in fact the product fund is by nature compatible with all platforms.

Concluding, two-sided market model shows quite well the nature of relationship in mutual fund industry even if this literature on two-sided market doesn't investigate the quality issue and doesn't face the interest conflicts which arise on platform due to professional advice to select the products.

6. Conclusions

Over the last few years the analysis of Italian Asset management industry has gained increasing attention.

The asset management industry, faced with the increase in competitive pressures arising from harmonization of European standards and integration of financial markets, is challenged by an important strategic decisions, in particular about its business model.

One of the main exogenous factors, often indicated as cause of competitive disadvantage represented by the tax regime that characterizes the Italian funds, was solved in 2010.

Nevertheless, in the industry remain critical endogenous issues, mainly related to its structure: as the offer of mutual funds is wide, it becomes difficult for a common investor, without financial skills, to choose how to allocate his wealth (Zheng, 1999). Investors' preferences are heterogeneous and, besides that, funds show different qualities. A relevant bulk of literature studies the problem of quality/performance measurement. Performance is a possible measure for quality. The focal point of this vast literature is the measure of unbiased quality. Starting from a market equilibrium model, this field of study estimates the performance of funds compared to the equilibrium hypothesis in different time preferences.

This study, based on data from Assoreti, reveals that, in Italian mutual funds industry, most of the consumers are not capable to evaluate the quality of good funds and that such perceivable quality is different from the unbiased quality. On the other hand, focusing on industry structure, the mutual fund performance, hence the quality of goods sold, do not affect the

market share. This result is consistent with the study of Krahenen, Schmidt and Theissen (2006) who analyzed the German Mutual fund Industry.

In recent years, the Bank of Italy, the Ministry of Finance and Consob are studying regulatory improvements to the industrial organization of this sector in order to align it with other European Countries.

The Bank of Italy and Consob provide guidance on how to exercise the power of direction and coordination of the parent banking groups in relation to asset management companies (SGR) belonging to the group.

The overall objective is to set these new regulatory provisions in order to “preserve and enhance the ability of the management company to act solely in the interest of investors” (Protocollo di Autonomia per la gestione dei conflitti di interessi, 2010). The mechanisms identified to ensure this goal focus on an increasing degree of autonomy at the production stage, with respect to distribution.

The achievement of a greater degree of independence, however, may allow to overcome current weaknesses in the asset management activity only if there are alternative to captive networks distribution channels.

The development of electronic platforms should be viewed under this perspective. From the customer point of view, the emergence of alternative distribution channels could allow sophisticated investors to gain direct access to the services without getting support by “consulting” distribution networks, resulting in distribution’s cost savings; the less sophisticated investors would gain the freedom to select independent advice to support their investment’s choices.

Breaking off the model of vertical integration, the SGRs may recover a central role in the operational production with potential benefits for

investors in terms of expected returns and lower costs incurred by means of the reduction of distribution barriers.

The distributors, in turn, could focus on the core activity, such as searching for investment solutions featuring a risk-return profile consistent with the mandate of investors.

In vertical integrated model, though, which still dominates this industry, the bargaining power is given by monopolistic power, and empirical evidences show that the networks also sell products provided by different producers.

This result leads to state that the proposed solution to limit the vertically integrated market power, splitting the production side from distribution side, is at least ineffective. In fact, in this particular industry, the market power seems not to be related to vertical integration, but to complementary services.

In this context, a two-sided market model could show the nature of relationship in mutual fund industry, even if it doesn't give fully information on choices made by intermediaries (distribution stage) to sell exclusively those products that are offered by SGR within the group.

The interpretation of this phenomenon could be related to the quality problem, if funds produced by an own SGR shows low quality or it's costly to produce funds with high performance; in this case the networks have an incentive to sell funds managed by third-party, so to avoid the vertical integration (production-distribution).

Is it desirable to transform the Italian Mutual Funds Industry in a pure platform *sic et simpliciter*? If the good fund was not a credence / experience good and the quality of good was easily measurable, the "metamorphosis" would be a good solution because it would avoid to give

incentives to moral hazard in distribution stage since the good fund has particular features whereby most consumers need professional advice.

A possible alternative would be to consider two different levels: on the one hand the lawmaker could impose a separation between distribution and consulting services; on the other hand, all networks should sell all the products.

The combination of these two strategies may give an incentive to producers to provide high quality products, and simultaneously may align the interests of consumers and advisors reducing agency issues.

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