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Roberto Cafferata, Corrado Cerruti, Corrado Gatti

The Life-cycle of the Internet Companies Quoted on the Milan Stock Exchange

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The Life-cycle of the Internet Companies Quoted on the Milan Stock Exchange

Roberto Cafferata, Corrado Cerruti, Corrado Gatti[1]

Abstract

This paper describes the evolution of the Italian Internet companies quoted on the Milan Stock Exchange. Despite a relevant international literature on the Internet bubble, the transition of Internet companies through different business strategies remains somewhat under explored in the Italian context. Internet companies are shifting from aggressive, international and diversified growth strategies to more defensive and profitable ones, focusing on core competencies and national markets. An Internet company life-cycle model with three phases is proposed: 1. a growth phase (strong growth of revenues with negative and decreasing profitability); 2. a phase of adjustment (weak growth of revenues, negative profitability, and need to refinance/restructure the firm); 3. a consolidation phase (focus on a new perimeter of operations, increased revenues, and growing profitability). Based on such a lifecycle, a profile of successful Internet entrepreneurs is presented.

JEL Classifications: M1 – Business Administration; M13 – New Firms; Startups

Keywords: Internet strategies, Italian Internet companies, life-cycle, start-up, entrepreneurship.

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Contents

Editorial notes

The present paper expands and updates the results obtained in a monitoring study on Internet firms quoted on the Milan Stock Exchange. It started in 2000 thanks to a research project financed by the Italian University Ministry on "The Creation of High-tech Firms: Strategic, Organizational and Financial Characteristics" (Research Unit at Rome Tor Vergata). See Cafferata R., Cerruti C. and Gatti C. (2006), «Strategie e performance delle imprese Internet. Un'analisi sulle imprese italiane quotate alla Borsa di Milano», in *Economia e Politica Industriale*, 2007, n. 1, pp. 97-132.

1. Introduction

This paper deals with the Italian firms which operate in the "Internet industry" – a term which will be better defined further on – at the beginning of this century.

The goal of our research has been the analysis of the quantitative and qualitative evolution of the Italian firms belonging to the most advanced area of telecommunications and quoted on the Milan Stock Exchange (as of 2006).

The top American firms have almost always been used as a reference point for the research studies on the Internet. Nonetheless, it seemed useful to verify the strategic choices and performances of Internet firms different from the American ones, which faced global web competition in the relatively small Italian market.

After analysing the production of Internet goods and services, the article suggests a life-cycle model for the firms in this industry and validates it with those quoted on the Milan Stock Exchange. In the last chapter of the paper we describe the emerging characteristics of the entrepreneurs leading the aforesaid firms.

Milan's Stock Exchange was chosen for the presence of companies which cover the entire spectrum of Internet activities. Moreover, the Internet firms which are quoted on the Milan Stock Exchange are both *start-ups,* which have undertaken and successfully undergone the launch phase, and medium-sized firms which are going for a dimensional jump.

In both situations, the chosen firms had promising perspectives, but met high risks, which this study intends to examine further.

To focus on quoted companies has its limits. It does not provide adequate evidence on the strategic choices made both by the numerous *start-ups* which have not yet achieved a strong organizational structure and by the large companies belonging to the *old economy* which, in certain Internet sectors, are the true *leaders* (for example in the access to the Internet and in the case of web portals). Our choice limits the possibility of drawing generalizations from the results of this research study, but we think that the present analysis contributes to a better understanding of an important segment of the Italian Internet industry.

Since the impact of the revenues deriving from transactions connected to the management of the Internet on the total revenues differs among the companies populating the industry, we decided to focus on the firms which are the almost totally engaged in the Internet business. For this reason, the analysis carried out in this study is based to a large extent on "*pure player*" or *"dot-com"* Internet firms. These are companies that make almost all their revenues from the business carried out through the Internet [1]. Due to their almost exclusive focus on the web, these companies tend to have a behaviour that exploits in a decisive manner – sometimes almost extreme – the potential of the Internet technology [2].

2. The Internet industry

The spread of the Internet has led to relevant changes in the structure and competitive dynamics of many sectors of economic activity, from telecommunications to commerce (Evans and Wuster, 2000), as well as in organizational forms and firms' strategies (Brews and Tucci, 2004). As Internet technology crosses many fields, the analysis of such changes calls for a precise preliminary definition of the reference boundaries.

In this study, the term Internet industry refers to those activities that were created or developed with the spread of the Internet. They will be classified ac-

[1] In American literature, a *pure player* is a firm that obtains over 95% of its earnings from its Internet activity (Barua and Whinston, 2001). Due to the rather slow progress of the Internet in Italy, in our empirical analysis we have considered to be *pure* players the firms gaining more than 75% of their revenues from the Internet. See also Ancarani and Shankar (2004) on this subject.

[2] For example, this is the case of Tiscali, which in March 1999 launched the first Internet access at free registration (TiscaliFreeNet) in Italy, thus paving the way for the diffusion of other types of access. One must moreover point out that *first movers* are not necessarily able to consolidate their points of strength. The competitive advantage of these *first mover* Internet firms has been a topic of discussion (Rangan and Adner, 2001; Eisenmann, 2006).

cording to the different "activity levels" which enable the web to work, according to a hierarchy of levels which starts from the management of the basic infrastructure to the supply of services to its users (Barua and Whinston, 2001) (Tab. 1) [3].

This classification highlights the different points of view from which Internet, as business, can be analysed: a new infrastructure (the physical network through which information is passed), a new technology (application software that allows the realization and development of the services that are offered on the web), a new media (online content creation and uploading), and a new distribution channel (sales of goods and services through the web).

These levels of Internet activities have in common two features: *a)* fast and cheap interconnection with all the users; *b)* the possibility of sharing information in a digital format using standard protocols and applications. Technology standardization – such as communication protocols and visual interfaces – has enabled web users to have access to a vast collection of contents; it has also presented application software developers and service suppliers with the opportunity of getting into a fast growing market. The interconnection of the users, the exchange of digital information and the use of standard applications have resulted in the creation of an open market with low entry barriers (Porter, 2001). This has undoubtedly favoured the progress of Internet activities in the global new economy, but at the same time has allowed, and still allows new companies to enter the market – whether these are firms which have already acquired the infrastructures and know-how, or *start-ups* – without facing significant barriers in the form of either proprietary technologies or configuration of the applications.

The standardization typical of the Internet technology, together with the transparency of the offer of goods and services via the web, make the Internet industry a highly competitive one. Shapiro and Varian (1999) highlight the

[3] This classification is based on the research studies of Barua and Whinston at the University of Texas for Cisco Systems (www.internetindicators.com). It is also very similar to that used by Rangan and Adner (2001). The classification devised by the University of Texas presents some advantages in terms of clarity because, referring to the various web activity levels, it clearly links every business to a different application area of the Internet technology.

"economic laws" which push the Internet industry towards high levels of competition [4]. This is because of the low switching costs, the cost structure which is typical of goods with digital contents (*high sunk cost and low marginal cost*) and the presence of a non-proprietary Internet standard. From a strategic analysis point of view, Porter (2001) verified the impact of the Internet technology on the structure of many sectors of economic activity that had been constrained by «high costs for communicating, gathering information, or accomplishing transactions» (p. 66). In particular, he observed that in many industries the Internet and other ICTs brought about a reduction in entry barriers and product differentiation, which in turn enhanced price competition and displaced the traditional mode of production or made it less attractive than before [5].

In spite of its standard technology and its interconnected world, the Internet industry is not, however, a frictionless market where the transparency of the supply conditions is complete and where a tendency to price levelling is under way (Brynjolfsson et al., 2003). Many Internet companies have adopted strategies of differentiation based on such elements as the brand, the quantity and the quality of available information, the delivery conditions and/or terms of payment (Kim et al., 2004). Prices of Internet products are not always lower than those of the traditional channels of distribution and communication, though there is a tendency to more frequent price adjustments based on the

[4] Shapiro and Varian (1999) do not specifically analyse the Internet world, but broadly examine *information technology* in order to identify «long-term economic principles [that] can guide you in today's frenetic business environment. Technology changes. Economic laws do not» (Shapiro, Varian, 1999, pp. 1-2).

[5] Even if Porter (2001, p. 66) appreciated the potentials of the Internet technology in terms of the improvement it provided for communication efficiency and effectiveness, and of information-sharing within a company, he remarked: «The great paradox of the Internet is that its very benefits – making information widely available; reducing the difficulty of purchasing, marketing, and distribution; allowing buyers and sellers to find and transact business with one another more easily – also make it more difficult for companies to capture those benefits». And he added: «The time has come to take a clearer view of the Internet. We need to move away from the rhetoric about "Internet industries", "e-business strategies", and a "new economy" and see the Internet for what it is: an enabling technology, a powerful set of tools that can be used, wisely or unwisely, in almost any industry and as part of almost any strategy» (Porter, 2001, p. 64).

competitors' moves (Brynjolfsson and Smith, 2000; Pan et al., 2004). Moreover, since Internet cuts on the expense to reach client niches, some companies have taken advantage of this technology to strongly segment their target market.

3. A life-cycle model for Internet companies

The characteristics which are specific to this industry suggest that Internet companies have a life-cycle of their own [6]. We propose – and then test with respect to the Italian Internet companies quoted at the Milan Stock Exchange (as of 2006) – a model of life-cycle with extreme features: an initial phase of impetuous growth, followed by an adjustment phase with a high selection among the market players and then a phase of consolidation.

3.1 Phase I: launch and early growth

Qualifying features: aggressive strategies; strong revenues growth, but negative profitability

In this phase we hypothesize fast and significant growth of revenues due to aggressive strategies in marketing, diversification of production (whenever possible) and international expansion. Features like high start-up investments to create either the infrastructure or the web portals or the contents and brand awareness; and like very low marginal costs, typical of high-content information goods, entail that those who offer products and services have to obtain a noteworthy number of users/subscribers in order to spread the overhead costs over as large a volume of outputs as possible. In this way, the producers can face price competition with favourable points of strength (Shapiro and Varian,

[6] As regards to the life-cycle of the product, company and/or industry, see the following papers: Levitt (1965); Steinmetz (1969); Parks (1977); Pettigrew (1979); Child and Kieser (1981); Churchill and Lewis (1983); Smith and Miner (1983); Kazanjian (1988); Gomes and Michaelides (2004). With specific reference to the Internet sector: Koch and Schmengler (2006) as to on line-retailing; Helm (2007) on web portals.

1999). This is a growth strategy centred on exploiting the economies of scale and scope, in terms of reduced average costs for the service and at the same time of enlarging the portfolio of accessible services to users [7].

The economies of scale are critical, due to the cost advantages made possible by the large size of the technical and commercial investments. The technical investments for the initial technological infrastructure refer, for example, to the laying of the cable network of optical fibres, the development of the first software copy, the creation of a portal or the start of an e-commerce platform. One must also add the immaterial investments, which are needed to strengthen the image and visibility of the initiative: from the promotional off-line and on-line campaigns to the search for subscribers and, at times, even to the training of the users.

The economies of scope are critical to widening the range of production and distribution of services thanks to limited additional investments and expenses. The advantages in terms of transaction costs spur Internet companies to offer clients a wide portfolio of services, which requires entering new fields of activity and adopting a strategy of «related diversification» (Rumelt, 1986). Once the infrastructure has been constructed and the necessary expertise for the basic services has been acquired or the web site has accomplished visibility, Internet companies can quickly, and at a low cost, add additional provision of goods and services, making interesting proposals to the consumers' market. This has led many suppliers of technological solutions in the Internet industry to enter the business of their own clients and service suppliers, both capitalising on the know-how they have acquired from the management and development of their infrastructure, and offering themselves as technological partners.

[7] Apart from the structural characteristics looked at in this paper, the push towards aggressive strategies was encouraged by the criteria often used by banks to evaluate Internet companies during 1999-2000: without reliable indicators to determine the Internet companies' capacity to compete and generate profit, many assessments adopted physical indicators of the company's activities, such as the number of users registered at a site or the number of click-throughs. This encouraged many Internet companies to aim at high growth rates providing services/products at a price that is not justifiable on a strictly industrial scale. The main companies' aim was to gain traffic, irrespective of their ability to generate good revenues and high profit in the medium-to-long term.

These strategies are, to a large extent, pursued via price competition. Indeed, this is typical of all companies that are at the launch and development stage, not only of Internet companies. Sometimes, the exponential turnover growth at this stage reflects the artificiality of high demand that, among other things, does not allow one to evaluate whether or not any value for the consumers has been created. At this stage it is also difficult to assess the future risks, which are influenced not only by internal conditions (work organization and production management), but also, and especially, by external events difficult to control, such as the loyalty of consumers and the evolution of technology [8].

In the short-term the outlined strategic paths are not profitable from an economic point of view, and expose the companies which pursue them to dangerous competitive pressures. Profitability is often sacrificed, because it is believed that it can be increased in the long-term. Hence, as the time lapse seems to get longer and longer, there is an increasing sense of uncertainty. The intensity and the length of this growth phase are tied to the financial resources which are available to the company, including those which it was able to collect when it was created and launched.

[8] The management of the companies here analyzed seems to be significantly open to the «strategic dissonance» risk (Burgelman and Grove, 1996). These authors claim that companies in the high-tech industries often have to face threats and opportunities related to *strategic inflection points* (SIPs). These are caused by changes in the environmental dynamics, in the strategies of the winners and in the dominant technologies. However, the management of Internet firms can benefit from this strategic dissonance by taking advantage of the information which is derived from experience, redefining its *strategic intent* and governing in new ways the uncertain company's evolution. According to the authors mentioned here, managing strategic dissonance requires *strategic recognition* on the part of the top decision makers, i.e. the capability to pick up the weak signals that a change is about to occur.

3.2 Phase II: adjustment

Qualifying features: defensive strategies; need to refinance/recapitalize the firm, which may even oblige the original entrepreneur to step out; restructuring of the organization

The second phase of the life-cycle of Internet companies is assumed to be characterised, on the one hand, by a slowdown in revenues growth, and on the other, by a rise of the level of efficiency. A need to adopt defensive strategies emerges, reinforcing the search of a way for simply surviving.

Firms tend to focus on business areas where they have developed firm-specific knowledge, looking for competitive advantage and value creation. Rarely imitable material and immaterial resources are exploited. They are partly freed from the standard application of the Internet technology and from purely digital contents, so as to cut back on open competition and offer products with unique properties. Companies offer what they can do better than their competitors, and, at the same time, they focus on the quality rather than on the quantity of revenues, even accepting a cut back in turnover. Instead of acquiring new clients – which would be too expensive – at this stage Internet companies foster customer loyalty; they try to increase their sales, aiming to the customers they have already reached using the aggressive strategies (Gupta et al., 2003) [9].

At the same time, these companies try to improve their economic performance by rationalizing their organizational structure (Sine et al., 2006). This basically involves either a cut in the operating costs, or the integration of their activities down-stream through goal-targeted acquisitions and/or tech-commercial agreements [10]. If the initial phase of growth has been fast and cen-

[9] For example, greater attention to quality and to clients' safety and protection led a company like I.Net to create a proprietary *anti-spam* system and made Tiscali give up selling advertising space known as «*dialers*» (numbers which have a high, undisclosed charge) at the expense of the revenues from the portal.

[10] Consider, for example, that in 2004 all the *pure player* companies - except for e.Biscom and Reply - cut back on their staff. In the international context one could also refer to the mergers and acquisitions which Yahoo and InterActive made in the Internet market (Eden, 2003).

tred on a strategy of takeovers, the present phase of adjustment will be proportionally intense and long.

However many Internet companies do not overcome this phase and close down or are sold. In the case of sale, the company that buys either continues the original business idea bringing new resources, or exploits the resources and know-how of the acquired company giving them a radically different direction, in certain cases as back-up to the diversified growth of its own off-line activity.

3.3 Phase III: consolidation

Qualifying features: differentiation strategies focused on a new perimeter of activity; increased revenues; positive and growing profitability

In this phase, the surviving companies are expected to become profitable as far as the operating profit is concerned. The benefits of the defensive strategies implemented in the previous phase come now to surface. The company we refer to begins a new growth period, either extending its geographical areas of activity or making diversification choices; it also focuses on developing stronger and stronger ties with its clients (Javalgi et al., 2005).

In both cases, the company adopts more conservative strategies than those implemented in the initial phase, paying greater attention on exploiting its own expertise. This may even occur after it has been taken over by a non-Internet company that aims at establishing its own presence in the new sector and promises a stronger company setting and future competitive positioning (Uhlenbruck et al., 2006).

In this phase, the prevailing strategy is a hybrid one, attentive of costs and differentiation. Differently from what was pointed out by Porter as regards to the dangers of hybrid strategies stuck in the middle (Porter, 1980), the ability to compete in the Internet world seems to be favoured by the contemporary attention to costs and product differentiation (Kim et al., 2004). In fact, a pure cost leadership strategy risks to push the company into price wars, while a pure differentiation strategy makes the company vulnerable to the consumer’s critical evaluation of the quality offered in the Internet market, which is actually transparent.

The hybrid strategy, instead, can act as a lever on the potentials of the Internet technology, which at the same time offers the possibility of both reducing operating costs and contacting consumer market niches, thanks to a personalized offer.

The life-cycle model of the Internet companies here above proposed, presents at company level (or *micro* level) the same dynamics that are described by the *shakeout concept* at industry level (or *meso* level) and at economic system level (or *macro* level).

The shakeout phenomenon is not new, nor is it typical of the Internet world. It is a recurring phenomenon in numerous sectors of economic activity which have high growth rates. Speed is what distinguishes shakeout both in the markets of electronic products and in all the qualifying phases of the life-cycle of Internet companies. Among the explanations to this phenomenon, Mariotti and Sgobbi (2003) point to technological theories, which indicate that shakeout is due to technological innovation within the sector. Non-technological theories emphasize the role of a mix of different factors to explain the high number of entries in a new market and the contemporary high number of firms getting out of it at the same time [11]: according to these theories, entries can be explained in terms of an occurring *information cascade* (concentration of opinions) which, in turn, generates *herd behavior* (imitating behaviour). Alternatively, they can be interpreted using the *entry delay* approach, by which the time of entry is postponed until there is sufficient information available to sustain the decision of stepping in. This is when all potentially interested companies take the same decision, which leads to a peak of entries.

Lastly, differently from the aforesaid types of approach, the interpretation based on the *concept of get big fast* links the reason for the overcrowding of entries to the incentives firms have to anticipate their moves, rather than to the

[11] Besides from the references in this text, one can usefully consult the studies carried out by Willard and Cooper (1985), Audretsch (1991), and Klepper and Simons (2005). There is also a specific interpretation of the dynamics of the B2B segment, based on the shakeout concept by Day, Fein and Ruppersberger (2003).

incompleteness of information [12]. According to this kind of non-technological theories, the high number of firms leaving the industry can be attributed to the lack of critical skills and/or the failure to attain the expected results which had stimulated the entries and/or the creation of overcapacity in the sector.

We can also mention an original *eclectic model*, in which the emergent new markets or the markets derived from a replacement on the web of the traditional activities select the type of the most probable entry strategies, showing how and when such moves can take place. At the same time, the competitive dynamics which arise from those entries can be the reason for a possible shakeout. The eclectic model points out the importance not only of the environmental characteristics that encourage new entries, but also of the role of the financial backers, whose interaction with the Internet companies significantly influences the evolution of the markets (Park and Mezias, 2005).

In this paper, the empirical test of the above-described life-cycle model is carried out through a longitudinal analysis of nine *pure player* Internet companies quoted on the Milan Stock Exchange. Such an analysis is based on the companies' IPO documents and annual reports. It includes both the quantitative report of their main economic performance indicators (revenue growth, ROI and ROE) and a qualitative review of both the strategic intentions declared to the public and of their actual market achievements. The changes in the shareholding structure and in the top management team are also monitored.

4. The life-cycle of the Internet companies quoted on the Milan Stock Exchange

In the year 2000, when our research study began, the *pure player* Internet companies quoted on the Milan Stock Exchange were nine: CHL, Dada, e.Biscom

[12] In this context, the fact that death risk declines with age seems to be a salient feature for the entry choice. See Stinchcombe (1965), who has coined the concept of "liability of newness" for the comparatively higher death rates of new organizations relative to old ones. See also Freeman et al. (1983), and Brüderl and Schüssler (1990).

(now Fastweb), Freedomland (now Eutelia), Inferentia (now FullSix), I.Net, Reply, Tiscali and Vitaminic (now Buongiorno).

Based on an entrepreneurial project formally stated at the moment of being quoted, these companies operate at the following different levels of the Internet activities classified according to Barua and Whinston (2001) in Tab.1:

a) three companies at level I – infrastructures;
b) one company mainly at level II – application software;
c) four companies at level III – contents (including firms which provide e-business consultancy services);
d) one company at level IV – electronic commerce.

On the basis of the date of their constitution, these companies can be qualified as follows: three companies as *start-ups,* quoted within their first eighteen months of life; six companies were *already present* in the broad information or telecommunication sector and saw an opportunity to expand into the Internet industry by being quoted.

All nine companies are briefly described in Tab. 2, and their business projects are synthesized in Tab. 3. Some useful data are also briefly presented in Tab. 4, so as to report the main economic performance indicators (revenue growth, ROI and ROE). Though in the different reality of each company, the years 2000-2001 show a highly growing turnover and very negative profitability (typical of the initial growth phase). For 2002-2004, in spite of the much lower growth rate, there is a progressive improvement in the profitability (typical of the adjustment phase). The following two years 2005-2006 show the consolidation of the companies' business, with positive profitability and a turnover which is growing again.

On the basis of the above mentioned data, the nine Internet companies can be classified into different *typologies*.

- Companies that have abandoned their initial business project in the phase I of launch and early growth without having reached the phase II of adjustment: this is the case of Freedomland and Vitaminic, which – in their early growing phase – had to accept the non-sustainability of their project.

– Companies that, after more than six years from their initial public offering (IPO), are in the phase II of adjustment, owing to the modification of their original projects: this is the case of Tiscali and CHL, which, after rapid initial growth, have redefined their business, without being able however to reach significant consolidation. The outcome of the strategic changes is uncertain.
– Companies that have arrived at the phase of consolidation of their business (phase III), without having completely reached their goals. Production development and economic performance are far from the initial expectations: this is the case of Inferentia (now FullSix) and I.Net. When they started to be quoted, they presented a business project that was not particularly distinguishing and simply pointed out that they wanted to exploit the opportunities offered by the Internet industry.
– Companies that reached the consolidation phase, having attained their own goals with good economic results: this is the case of e.Biscom, Dada, and Reply that have shown continuous growth and a significant rise in the number of the employees.

In the following pages we will examine the afore said typologies of Internet companies and track them to different dynamics along the proposed life-cycle.

4.1 Early abandonment

Companies that have early abandoned their original strategic intentions, in the phase I of launch and early growth, are Freedomland and Vitaminic.

In the IPO period Freedomland declared its aim to develop a TV-based Internet activity at European scale. It offered an integrated access service to Internet via television (terminal + web portal), where a "Top-Box" set connected to the telephone line and to the television would allow the user to surf the web on the TV-screen using a dedicated simple portal, set to the user's language. In the company's forecast, the proposal of a simple access to Internet without the use of the PC should have enabled the company to turn to a large area of potential users.

In conformity to this goal, in 2000 Freedomland began to operate at European level creating companies also in Spain, Germany and the UK. However, its business idea soon turned out to be unsustainable since it was centred on an old and non-performing technology (access to Internet via TV) and pointed to a niche in decline, that is to families that were interested in Internet though they did not own a PC.

The growth phase of the company closed a few months after the IPO. Freedomland's revenues, which went from 3.6 million Euro in 1999 to 31.8 in 2000 (+777%), collapsed to 7.1 in 2001 (-77%). The company remained without strategic plans until February 2002 [13], when the board of directors recognized the weakness of the company's competitive positioning and decided to use its own know-how in multimedia to develop video contents and an interactive television. The new plan, however, was never carried out, even if the company could survive thanks to the liquidity deriving from its IPO. After restructuring and changing its name into NTS-Network Systems, the company definitely abandoned its original strategic goal. In the first semester of 2003 the foreign controlled enterprises were sold or liquidated and the Italian holding company prepared a reorganization plan which should have enabled the new-created software house Tecnosistemi to be quoted on the Stock Exchange as a result of its merger with NTS (ex-Freedomland) [14].

In its IPO period, Vitaminic – the other company of the two here considered – declared that its aim was to develop an innovative platform to promote and manage music online in the digital format.

[13] Judicial enquires against the company's president, Virgilio Degiovanni, were set up, which worsened the company's equilibrium. He was accused of false accounting and agiotage with regard to declaring nonexistent users and to receipts never cashed in. In October 2000 Virgilio Degiovanni resigned from the presidency of the company's board of directors.

[14] The company's vicissitudes, however, did not end. In December 2003 the above-stated project of integration was cancelled because of the instable economic and financial equilibrium of Tecnosistemi. In April 2004 the company went under the control of Eutelia, an alternative telephone operator, as a means to be listed on the Stock Exchange. In January 2005 the company name was finally changed to Eutelia.

Due to this strategic intention and according to its plans, the company developed its presence on the market very fast, so that in 2001 it was in a position of absolute leadership in Europe in the promotion and distribution of digital music. Its growth went through the creation of local, dedicated companies in seven European countries and in the USA, and through the takeover of other players: in France Eurekan Multimedia who owned FranceMP3.com; in the UK Peoplesound who owned the Protein brand.

Vitaminic financed these two acquisitions by emitting new shares; its plans enjoyed the confidence of the companies it had taken over [15]. Taking advantage of the online social community concept, Vitaminic entered into contracts with record companies and with individual artists so as to legally distribute musical scores on its web site, free or on payment. The availability of proprietary musical material strengthened at the start of 2001 as a result of the takeover of an important musical archive, IUMA (*Internet Underground Music Archive*). Hence Vitaminic became the second largest online community of artists in the world.

In spite of its strong market position and the remarkable technological innovation of its platform, the failure to carry out the launch of the legal distribution of digital music prevented Vitaminic from expanding its turnover and reaching economic break-even. During 2000-2002, the turnover grew from 1.9 to 6.9 million Euro, but at the same time the gross operating loss was very high: in the financial year 2002 it was still almost twice the turnover, though it decreased from 24.6 to 11.4 million Euro. During 2002, its unbearable economic-financial situation forced Vitaminic to negotiate a cooperation agreement with Buongiorno, an emerging "mobile infotainment" company making the most of its competencies and contents in digital music. However, with the merger, the original idea of Vitaminic, which was centred on managing online music, was discarded; the controlled European companies were progressively liquidated, even if a part of the group's know-how contributed to the development of Buongiorno. The three founding members of Vitaminic left the

[15] Vitaminic has acquired the French Eurekan company for 80% against a share swap (the value of the operation came to almost 7 million Euro) and the English Peoplesound.com for 100% against a new issue of shares.

company [16] and, in May 2006, by changing the company name to Buongiorno all references to Vitaminic were erased.

4.2 Struggle towards adjustment

Companies that seem to live in a long phase of adjustment are Tiscali and CHL.

In the IPO period Tiscali declared that its aim was to become the European leading Internet company, developing into an independent and innovative enterprise and making the new technology available to everyone. In accordance with the initial project of growing at European level and using the advantage of being a *first mover*, Tiscali chose to invest in new segments of the business, in particular offering free access to Internet. As a result, in 2003 it became the third European company for Internet access – after the German T-Online and the French Wanadoo, with a market of 11% on Internet access in Europe, compared with 17% of the T-Online leader – and a strong presence in five European geographical areas [17].

In these five years, Tiscali has grown by resorting systematically to takeovers [18]. These were mainly based on the acquisition of shares of new issue [19].

[16] In July 2003 Vitaminic incorporated Buongiorno and changed its company name to Buongiorno Vitaminic, with the acquisition of almost 90% of the capital stock on the part of its new members. The three founding members of Vitaminic, Gianluca Dettori, Adriano Marconetto and Franco Gonella, after the merger found themselves respectively with a capital share of 0.84%, 0.75% and 0.75% (before the IPO they each had – in the same order – 14.97%, 13.41% and 13.41% of the company). Only the previous managing director (Gianluca Dettori) stayed in the board of directors for slightly more than a year after the merger, until December 2004.

[17] The large number of active Tiscali users (more than 7.5 million already by 2001) should however be weighed in relation to the fact that the majority of these subscribers were non-paying and therefore they were not so much attractive customers in the medium-term.

[18] Among the main takeovers, those worthy of being remembered are: in January 2000 the takeover in Switzerland of 80% of DataComm (then Tiscali DataComm) with 98,000 subscribers; in February 2000 in Belgium, 100% of Link Line (then Tiscali Belgium); in March 2000 in France, 100% of A Telecom (then Tiscali France) with 18 Point-of-Presence (PoP); in April 2000 in Germany, 100% of Nikoma (Tiscali Germany) with 250,000 subscribers; always in April 2000 in Belgium, 100% of Interweb; in December 2000 in Holland, 99.5% of World Online (a company listed on the Amsterdam Stock Exchange), the European ISP leader present in 15 countries, with over 300 PoP and 2.5 million active users; in March 2001, 70% of Excite

By means of these processes an integrated group of companies was born. They shared a single entrepreneurial project: the creation of an Internet company which could become a leader in Europe for access, contents and e-commerce.

Its growth continued until August 2004 when the company revenues exceeded a million Euro. The growth ended in late 2004 when, to face an unsustainable economic-financial situation, Tiscali launched a new industrial plan focusing on only five of the previous 15 countries in which it was present and better segmenting its Internet business (ADSL connections capable of offering larger margins) [20]. A period of divestment of non strategic assets and a deep restructuring of the group began [21].

This first block of interventions was however insufficient to lead to the desired economic equilibrium and in October 2006 a new industrial plan was presented (2007-2010) which further restricted the strategic focus of the firm's operations to Italy and the UK. The company's activities in Holland, Germany and the Czech Republic were sold. During 2006 the consolidated turnover of Tiscali fell to about 680 million Euro (-37% compared to the maximum turnover reached in 2004) but, at the same time, the operating losses greatly decreased (-89%). This kind of evolution significantly redefined Tiscali's initial strategic goals: from a pan-European presence to one limited to Italy and the

Italia (from March 2002 100%), one of the main Italian web portals with over 2 million registered users; in April 2001 in France, 94.5% of the Liberty Surf group, a leader in the media and Internet industry in France, with a significant presence in Europe.

[19] Due to the offer of newly issued shares, during the financial year 2000 the number of shares almost doubled and new partners joined the group. Given a stock of 156 million Tiscali shares on 31/12/1999, 148 million new shares were issued, of which 136 million for the exchange bid with World On-Line. Given a stock of 305 million on 31/12/2000, in the first semester of 2001 the ordinary shares increased to 343 million, as a consequence of the integration of Liberty Surf into the group.

[20] The end of the growth process has coincided with the entrepreneur Renato Soru leaving the active governance of the company. In September 2004, Soru resigned from the presidency of the board of directors because of his political commitment as President of the Sardinia Region. However, he is still the controlling shareholder of the group.

[21] In June 2005 the active users fell to 4.8 million but, of these, 1.4 were highly profitable ADSL subscribers.

UK; from an Internet service provider to a supplier of integrated telecommunications and media services including Internet Pay TV [22].

In spite of this re-focalization, Tiscali has not yet been able to overcome the phase II of adjustment. It still has to complete its new industrial plan and reach a long lasting economic and financial equilibrium.

In the IPO period, CHL – the other company here considered – declared that its goal was to become the reference point on the Internet for the Italian users interested in information, audio-video and telephone products. That is to become a vertical web portal.

CHL pursued this goal with an aggressive growth strategy and with investments in advertising and promotion which, in the financial year 2000, were over 21 million Euro, equivalent to about 25% of its yearly turnover. In the year it was quoted, CHL more than doubled its revenues – going from 43.8 million Euro in 1999 to 91.2 million Euro in 2000 – and obtained the leadership in Italy in the online sale of technological products [23].

In spite of this growth, the company was not able to reach a sufficient volume of revenues to cover the costs of the large technical and promotional investments it had made for the development of its e-commerce platform. Because of this, in July 2001 CHL modified its strategy, which shifted from that of a commercial intermediary buying and reselling products, into that of a service provider invoicing producers only for those services that were needed for the distribution of their products on its own web site. The difficulties that CHL had to overcome to reach a sustainable market share were related to the fact that the company – compared to what it was doing in its core business of e-commerce – did not have significant differentiation capabilities for developing information contents and application functionalities. In spite of the development of its web portal, online CHL was vulnerable with regard to the contents and services which were offered by other large hardware/software manu-

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[22] This kind of adjustment includes aimed takeovers – as for the takeover in the UK of the broadband and voice division of Pipex in 2007 – and the possibility of reaching the final user with its own lines (Unbundling of Local Loop – ULL).

[23] According to Shop Lab IDC data, in 2000 the company invoiced about 25% of the total Italian B2C commerce and almost 90% of the e-commerce of high-tech goods.

facturers and large international web sites. Despite its emerging distribution network, offline CHL was vulnerable compared to those competitors that had a widespread physical presence throughout Italy.

The failure of this strategic turnaround forced the company to sign a cooperative agreement with Frael, a PC assembler. According to the agreement Frael acquired from CHL the activity of PC assembly, assistance and logistics that had previously been assigned to third parties; and CHL became the online sales channel of Frael [24]. Even this second intervention of adjustment, however, failed to make CHL break even with e-commerce.

Because of this, the company has to be considered still in the phase II of adjustment. With the support of a venture capital fund, CHL is trying to find a company structure which could allow the consolidation of its market share and improve its economic and financial performance [25].

4.3 Consolidation without goal achievement

Companies that reached the phase III of consolidation without fully attaining their original business goals are Inferentia (now FullSix) and I.Net.

Already present in the three areas of e-business, e-marketing and e-sourcing, Inferentia followed an aggressive growth strategy of diversification in a number of areas of the Internet industry, with a turnover that tripled in two years. Its growth was mainly based on takeovers: it took 100% control of DNM (a company which specialised in the study, production and assistance of e-business solutions) and 60% control of the FullSix group (one of the main units of French Web Agency, present also in the UK and Holland).

[24] In May 2003 Frael shareholders gave 43% of their own company against an increase of capital reserved to them and they became controlling shareholders of the company. Federico and Ferdinando Franchi respectively became the new president and new managing director. The integration process went on by the takeover by CHL of the remaining 57% of the Frael capital, which occurred in June 2005.

[25] In March 2006 it drew up an agreement with the venture capital fund Cornell (now YA Global Investments). A first tranche was subscribed by the fund in November 2006. A second and more consistent tranche, however, was subscribed in March 2008.

Its programme based on the integration of the new activities and the development of the previous business was not as virtuous as expected. For this reason in 2001, to face a net loss equal to twice its turnover, the company started a deep restructuring with sharp re-focalization on its traditional business. According to the restructuring plan of April 2002, the company specialised in web marketing services, web channel building and the management of outsourced services. The activities external to this perimeter were progressively liquidated. Instead, in December 2003, an additional company, Onetone, was taken over, thus reinforcing the capabilities of marketing services and market research.

Growing abroad was identified as a priority for the strengthening of the company [26]. As a result of this re-focalization, in the first semester of 2006 the company seemed to have reached the third phase of the life-cycle model. After changing the company name to FullSix, the group totally focused on the design and production of relational multi-channel marketing. Though remaining a competitor in only one of the three business areas in which it worked at the time of the IPO, the company seems well structured, not only in its traditional business model but also in its new international dimension. However, the company's profitability is not high; and secondly, even if the company has made a number of takeovers, it has not been capable of performing a substantial growth of its total revenues [27].

Differently from Inferentia, in the first years after its IPO, I.Net was able to combine growth with the maintenance of profitability, thanks to its links with medium-sized and larger enterprises willing to pay for advanced Internet services. The company progressively raised the quality and value of its services, going from a preponderant provision of basic connectivity services to one of advanced web services (hosting, anti-spamming, network monitoring and cor-

[26] In 2004 foreign activities began to play a more important role than the Italian ones.

[27] The net result, positive for 2005, was again negative for 2006, because of a not brilliant economic performance in Italy. In 2006 the shareholders' equity was a little more than ¼ of what it was in 2000 (11.4 million Euro against 43.5 million Euro). In the period 2000-2006 the average growth rate of the revenues was a little above 20%. If we consider the growth which took place after the takeovers campaign in the first two years, the average growth rate of the revenues falls to about 7% (period 2002-2006).

porate messaging) and extending its infrastructures by opening two new web farms.

The general IT recession and the continuous growth of competitors for basic ISP services hit I.Net. The company closed the financial year 2003 with a loss and a decreasing turnover. For this reason, during 2003 it repositioned itself deciding to pay more attention to the development of solutions of security, evolving toward the typology of the "managed security service provider".

Following this new strategic direction, in January 2004 it bought SioSistemi, an Italian firm leader in developing security solutions and advanced networking. In the following years, the security business became stronger and stronger, emerging as the central output of the I.Net supply. Nowadays I.Net presents itself as the Italian leader, providing solutions of information security for companies, guaranteeing business continuity to its clients.

This re-focalization enabled it to return to an operating profit in 2006. During 2007, the company's economic performance was consolidated, not only because it had reported a profit, but also and especially because British Telecom, majority shareholder of the group, decided to incorporate it into BT Italia. These events inevitably provoked the delisting of I.Net [28].

The original goal of the merger has not been fully attained for two reasons. The first is that I.Net did not possess sufficient distinctive features (not only products and services) to push BT to keep it as an autonomous company. The second is that the company was anyway unable to enter a growth path as profitable as it initially planned to do [29].

[28] The main steps that brought I.Net to merge into BT Italia were: in February, BT's launch of an offer to purchase the ordinary shares of I.Net; in April 2007, the transfer by Etnoteam (the original shareholder of I.Net) of almost all its shares to BT.

[29] Although it could avail itself of sufficient resources in the quotation phase (equivalent to about 160 million Euro) and even if the Internet industry was highly growing in the period 2000 - 2006, I.Net showed an average rate of increased earnings of about 10% a year, with an average operating loss equivalent to 3% of the earnings.

4.4 Consolidation with goal achievement

Companies that arrived at the phase III of the life-cycle model reaching their original business goals are e.Biscom (now Fastweb), Dada and Reply.

In the IPO period, e.Biscom stated that its goal was to become a leader in providing integrated services (voice, data and video) via broad band with *Internet Protocol* technologies. Its target geographic area of operation was northern Italy, aiming to expand throughout Italy. Following this programme, at the start of the year 2000, Fastweb launched its integrated supply of broad band services in Milan in collaboration with the local utility, AEM, taking advantage of the optical fibre cables infrastructure of its controlled company Metroweb [30].

This telecommunication network was characterized by a very broad band – totally based on IP technology – and direct access, via optical fibres, to the users (fibre to home or ADSL). This technology enabled Fastweb to offer its subscribers access to Internet at a very high speed as well as other innovative services (for example, video-on-demand), with an effective bundling of services, such as telephone, Internet and new services. The price policy was aggressive.

In spite of its focalization on the development of a network completely based on IP technology, from July 2001 Fastweb began supplying services even through the xDSL technology, which did not need optical fibres and allowed a reduction in access costs. In November 2001 it was granted a concession for the use of Socrate cable duct network, an old project which aimed at providing cable TV in Italy. This allowed it to cover the main Italian cities: Milan, Rome, Genoa, Turin, Naples and Bologna. In the financial years 2002 and 2003, Fastweb further developed its network: at the end of 2003 it reached over 3 million homes, equivalent to 14% of the population. Its commercial penetration was able to raise the total revenues to 560 million Euro in 2003.

In the financial year 2004, e.Biscom entered the phase II of adjustment and changed its company name to Fastweb. In this period the company focused on

[30] In June 2000, in Genoa, it repeated this model of cooperation by founding Fastweb Mediterranea in partnership with the local utility (AMGA). In September 2000, e.Biscom entered the German market by taking over Hansenet, a telephone operator in the Hamburg district, which started to develop broad band services based on the Fastweb model.

its core business, that is the IP network [31]. To be able to finance its geographic expansion, Fastweb defined its new industrial plan for 2005-2013. With an investment of 2.8 billion Euro, the plan would have enabled the company to serve 45% of the Italian public. This growth strategy has been successful: on 31 December 2006 Fastweb had over one million subscribers with a widespread presence in Italy; the amortization of its industrial and commercial investments have not, however, enabled the company to break even [32].

The consolidation phase of Fastweb began with the transfer of the company control to the Swiss telephone operator Swisscom [33], an operation that both has enhanced the project of Fastweb and has respected the independence of the management team.

In the IPO period, Dada declared that its strategic goal was to become one of the main Italian Internet companies with an integrated supply of services: social community portal, ISP (access services to Internet), ASP (services to firms) and online advertising.

This project mainly aimed at the creation of a web portal which could be the ideal place for Internet communication. In accordance with this plan, Dada has progressively grown around its online social community and its web portal. Since 2001 it has developed a strategy of progressive integration between fixed Internet and mobile Internet. Dada has developed contents and services that are not easily obtainable on other web sites, thus making the view of the portal and the sense of belonging to a community very appealing to its users. On the one hand this setting allowed advertising firms to obtain very precise profiles

[31] A number of Internet companies of the group was divested. Besides, during its first years of activity, together with the enlargement of the IP infrastructure, e.Biscom launched a number of new initiatives in the Internet industry, namely web portals, contents and e-commerce.

[32] At the end of 2005 Fastweb had 723 central exchanges (they were 304 in 2004). These enabled it to cover 113 metropolitan areas (they were 14 in 2004), reaching 8.5 homes (they were 4 million in 2004).

[33] In April 2007 Swisscom launched an offer to purchase Fastweb shares; in relation to this offer Silvio Scaglia sold its entire stake (equivalent to 18.7%, indirectly detained through the SMS Finance company). In May 2007, when the offer to purchase was over, Silvio Scaglia resigned as president of the board of directors, even if he engaged himself to stay as counsellor of the company for five years, where requested.

so to post the right banner and direct marketing proposals; on the other hand the same setting allowed the users to get updated services.

In the first years after its IPO, Dada developed its activity especially through a takeover campaign which made its revenues rise almost six-fold in three financial years, from almost 5 million Euro in 1999 to almost 28 million Euro in 2002, but with a growing negative profitability [34].

With the 2003 financial year Dada started a restructuring process of the companies it had bought. In this period, there was an increasing presence of the firm in the mobile area, taking advantage of the traditional leadership Dada had in organizing social networks (including chat and dating). Access to the web via cellular phone, that is microbrowsing, has been considered by the company as the most interesting investment project for the future, because it seemed capable of enriching the potentials of the web with those of mobility.

Dada has actually become one of the main suppliers of multimedia contents for the main Italian operators in the mobile telephone market. Moreover, whilst the company had always concentrated on the Italian public, in 2005 it began to face the international market, launching its services in the USA, the UK, Germany, and creating a presence also in France, Brazil and China [35].

Thanks to the high margins in the new consumer/mobile services – which accounted for more than 80% of the turnover – the group obtained a profit in the financial year 2005. Dada consolidated its position in November 2005 after RCS Media took control of it and signed a shareholding agreement with Dada founders [36]. The takeover recognised and enhanced Dada's original entrepreneurial project, giving autonomy to the management of the company and, at the same time, providing new resources for the further international growth of the company.

[34] In the first two years of the post-quotation, Dada took over Wireless Solutions, Register.it, Clarence and HdPNet/Concento.
[35] The international revenues for the Consumer Program increased from 1% in 2004 to 12% in 2005, to arrive at 46% in 2006.
[36] RCS Media became part of the Dada capital in October 2002 with a share of 15.5% against the transfer of 100% of its subsidiary HdPNet.

From its birth onwards, Reply – the third company here considered – has had as strategic goal to give advice to other enterprises in the development of e-business, offering them consulting services, system integration and application management.

Reply has developed its activities through a group structure with many small controlled companies. Each of them is specialized in a single line of products, very often in a specific geographic area, at the same time sharing management methodologies and competencies[37]. This model enables the whole organization to be flexible and dynamic.

In the five years that followed its IPO, Reply has kept growing by both increasing the number of employees in its companies and taking over small niche enterprises, which it has quickly integrated into its network [38]. After having strengthened its position on the Italian market and its organizational structure, at the start of 2006 Reply carried out a large takeover: Syskoplan, a German company providing consultancy services and application management which was quoted on the Hamburg Stock Exchange. Reply's aim was to reproduce its operational model in Germany, with an increase in the number of employees and acquisitions [39]. Taking over Syskoplan, Reply has entered the phase III of consolidation. The ever improving profits and the launch of new investments for an international growth, apart from the continuous growth in revenues are clear signs that Reply has reached the strategic goal it declared when it started to be quoted [40].

[37] As a result of the creation of new companies and the takeover of small niche ones, the number of firms controlled by the parent company has gone from 9 before quotation to 24, as stated in the balance-sheet of 2005.

[38] The only large takeover made in the first years of its life was that of Santer (49% in December 2002, increased to 53.8% in July 2006). Santer finds solutions for the National and Local Health Service.

[39] The Syskoplan Group in Germany at the end of the first three months of 2007 was already composed by four companies.

[40] In the six years that followed its quotation, Reply has maintained an average growth rate of its revenues equal to 38% a year, and has almost doubled its shareholders' equity.

5. Internet entrepreneurs

The evidences from the nine cases above described give preliminary support to the proposed Internet life-cycle. At the same time, these experiences highlight the centrality of the entrepreneur with his personal values and choices (Begley and Boyd, 1987; Korunka et al., 2003). Being quoted on the Stock Exchange is an element that can ease off the financial constraints that hinder the moves of small or medium-sized Internet companies, the evolution of the industry is determined in Italy by the strategic role of the entrepreneur. The person's ability to modify his/her approach to competition according to the different challenges that the company faces during the different phases of its life-cycle is crucial indeed (Cafferata and Mensi, 1995; Forbes, 2005).

Only in three of the nine companies examined in this paper has the entrepreneur (or the entrepreneurial team) stayed throughout the entire evolution of the company: that is the case of Fastweb, Dada and Reply. From the moment it was set up until the takeover bid by Swisscom, e.Biscom has always been lead by Silvio Scaglia, as managing director until April 2003 and then as president. From its foundation to today, Dada has always been guided by Paolo Barberis and Angelo Falchetti, respectively as president and managing director [41]. In Reply, the entrepreneurial team has remained unaltered throughout the life-cycle of the firm, centred on Mario Rizzante.

In the other six cases, the entrepreneur who had founded the company and led it until it was quoted, left the company. In four cases, the entrepreneur left because his leadership could not guarantee the economic and financial equilibrium of the firm: that's the case of Freedomland, Vitaminic, CHL and Inferentia.

As already pointed out, the cases of Freedomland and Vitaminic concerned start-ups where the business idea, launched by the entrepreneur, turned out to be unsustainable. In the other cases (CHL and Inferentia) there was an internal turnover of the pre-existing shareholders, where the founding entrepreneur

[41] Even after the takeover bid launched by RCS Media in January 2006, both took part to the shareholding agreement.

was replaced by another member, bringing external resources and refocusing the business model. In CHL, the strategy of integration with Frael led to Stefano Bargagni's exit from the board of directors, although he had been the key promoter of the historical progress of CHL. Federico Franchi – who was one of the key shareholders of CHL, even before it was quoted – took over from Bargagni in guiding the company [42]. In Inferentia, the progressive focalization on marketing services brought about also the gradual stepping out from the company of the two entrepreneurs who founded the company and led its growth: Enrico Gasparini (president and managing director until April 2005) and Alberto Fioravanti (managing director until January 2004). Another shareholder, Marco Benatti, joined Inferentia in 1999, just before it was quoted, with a pre-IPO share of 50%. He has since then progressively taken on all management responsibilities. Marco Benatti was already Inferentia's non-executive vice-president when in April 2006 he became president and executive adviser; he still remains as controlling shareholder with a stake of 46.1%, held through his controlled company Blugroup.

In two situations, Tiscali and I.Net, the entrepreneur left for other reasons. In September 2004 Renato Soru, the founding entrepreneur of Tiscali, resigned from the presidency of the board of directors because of his political commitment as president of the Region of Sardinia, although he stayed on as controlling shareholder of the group. In May 2007 Roberto Galimberti, the founding entrepreneur of I.Net, resigned from the presidency of the board of directors after having sold his shares, as a result of British Telecom wanting to integrate I.Net into its Italian subsidiary.

Though they are not fully representative of the entire Internet industry, the companies presented in this paper can be treated as a useful sample to further examine how entrepreneurs act in an era of uncertainty and discontinuity in the growth of the business of Internet. In such circumstances, entrepreneurship can be fully qualified as the ability to identify new investment opportunities (*opportunity discovery)* and to develop such opportunities (*opportunity development*)

[42] In the pre-IPO period, Federico Franchi had a stake of 18% compared to the stake of 23.5% detained by Stefano Bargagni.

through fast and effective reconfiguration of the initial strategic and organizational choices (Stevenson and Jarillo, 1990; McMullen and Shepherd, 2006).

Apart from its past exposure to the turbulences of the speculative bubble and the immoderate emphasis on the virtues of the New Economy, Internet remains an industry with broad and excellent perspectives. It requires entrepreneurs with planning skills, who can quickly modify their strategies and organizational alternatives (Forbes, 2005; Sine et al., 2006). This means that the entrepreneur must be a fast learner (Sanz-Velasco, 2006) and experience "continuous morphing" (Rindova and Kotha, 2001), improving his/her capabilities to oversee the transition from early growth to adjustment that leads to the consolidation of his/her original initiatives.

As Greiner (1972) noted, growing organizations move through different phases of development, each of which ends with a crisis. Having a sense of change and learning from its own organization's history can help the leading managers anticipate the future and prepare for the next developmental crisis.

References

ANCARANI, F. & SHANKAR, V. (2004), "Price Levels and Price Dispersion Within and Across Multiple Retailer Types: Further Evidence and Extension", *Journal of the Academy of Marketing Science*, vol. 32, n. 2, pp. 176-187.

AUDRETSCH, D. B. (1991), "New-Firm Survival and the Technological Regime", *Review of Economics & Statistics*, vol. 73, n. 3, pp. 441-450.

BARUA, A. & WHINSTON, A. (2001), "Measuring the Internet Economy", Report, Cisco Systems and University of Texas (www.internetindicators.com).

BEGLEY, T. M. & BOYD, D.P. (1987), "Psychological Characteristics Associated with Performance in Entrepreneurial Firms and Smaller Businesses", *Journal of Business Venturing*, vol. 2, n. 1, pp. 79-104.

BODILY S. & VENKATRAMAN S.(2004), "Not Walls, Windows: Capturing Value in the Digital Age", *Journal of Business Strategy*, vol. 25, n. 3, pp. 15-25.

BREWS, P. J. & TUCCI, C. L. (2004), "Exploring the Structural Effects of Internetworking", *Strategic Management Journal*, vol. 25, n. 5, pp. 429-451.

BRÜDERL, J. & SCHÜSSLER, R. (1990), "Organizational Mortality: The Liabilities of Newness and Adolescence", *Administrative Science Quarterly*, vol. 35, n. 3, pp. 530-547.

BRYNJOLFSSON, E., DICK, A. & SMITH M. (2003), "Search and Product Differentiation at an Internet Shopbot", Working Paper, Center for eBusiness@MIT.

BRYNJOLFSSON, E. & SMITH, M. (2000), "Frictionless Commerce? A Comparison of Internet and Conventional Retailers", *Management Science*, vol. 46, n. 4, pp. 563-585.

BURGELMAN, R.A. & GROVE, A.S. (1996), "Strategic Dissonance", *California Management Review*, vol. 38, n. 2, pp. 8-28.

CAFFERATA, R., CERRUTI, C. & GATTI, C. (2006) "Strategie e performance delle imprese internet. Un'analisi sulle imprese italiane quotate alla Borsa di Milano", *Economia e Politica Industriale*, n. 1, pp. 97-132.

CAFFERATA, R. & MENSI, R. (1995), "The Role of Information in the Internationalization of Small and Medium-Sized Enterprises. A Typological Approach", *International Small Business Journal*, vol. 13, n. 3, pp. 35-46.

CHAN, P.S. & POLLARD, D. (2003), "Succeeding in the Dotcom Economy: Challenges for Brick & Mortar Companies", *International Journal of Management*, vol. 20, n. 1, pp. 11-16.

CHILD, J. & KIESER, A. (1981). "Development of Organizations over Time", in NYSTROM, P.C. & STARBUCK, W.H. (Eds.), *Handbook of Organizational Design,* Oxford: Oxford University Press, pp. 28-64.

CHURCHILL, N.C. & LEWIS, V.L. (1983), "The Five Stages of Small Business Growth", *Harvard Business Review*, vol. 61, n. 3, pp. 30-50.

DAY, G.S., FEIN, A.J. & RUPPERSBERGER, G. (2003), "Shakeouts in Digital Markets: Lessons from B2B Exchanges", *California Management Review*, vol. 45, n. 2, pp. 131-150.

DE COCK, C., FITCHETT, J. & VOLKMANN, C. (2005), "Constructing the New Economy: A Discursive Perspective", *British Journal of Management*, vol. 16, n.1, pp. 37-49.

EDEN, J. (2003), "Dotcom M&A", *Corporate Finance*, November, pp. 10-12.

EISENMANN, T.R. (2006), "Internet Companies' Growth Strategies: Determinants of Investment Intensity and Long-term Performance", *Strategic Management Journal*, vol. 27, n. 12, pp. 1183-1204.

ESTRADA, J. (2004), "The Cost of Equity of Internet Stocks: A Downside Risk Approach", Working Paper, IESE Business School.

EVANS, P. & WURSTER, T. (2000), *Blown to Bits. How the New Economics of Information Transforms Strategy*, Boston: Harvard Business School Press.

FORBES, D.P. (2005), "Managerial Determinants of Decision Speed in New Ventures", *Strategic Management Journal*, vol. 26, n. 4, pp. 355-366.

FREEMAN, J., CARROLL, G. R. & HANNAN, M. T. (1983), "The Liability of Newness: Age Dependence in Organizational Death Rates", *American Sociological Review*, vol. 48, n. 5, pp. 692-710.

GEORGE, G. (2005), " Slack Resources and the Performance of Privately Held Firms", *Academy of Management Journal*, vol. 48, n. 4, pp. 661-676.

GEROSKI, P.A. (1995) "What Do We Know About Entry?", *International Journal of Industrial Organization*, vol. 13, n. 4, pp. 421-440.

GOMES, J. & MICHAELIDES, A.F. (2004), "Optimal Life-Cycle Asset Allocation: Understanding the Empirical Evidence", Working Paper, London Business School and London School of Economics.

GREINER, L. E. (1972), "Evolution and Revolution as Organizations Grow", *Harvard Business Review*, vol. 50, n. 4, pp. 37-46.

GULATI, R. & GARINO, J. (2000), "Get the Right Mix of Bricks & Clicks", *Harvard Business Review*, vol. 78, n. 3, pp. 107-114.

GUPTA, S., LEHMANN, D.R. & AMES STUART, J. (2003), "Valuing Customers", Working Paper, Columbia Business School and Novartis International.

HELM, C. (2007), "From Tech-led to Brand-led. Has the Internet Portal Business Grown Up?", *Journal of Brand Management*, vol. 14, n. 5, pp. 368-379.

JAVALGI, R.G., RADULOVICH, L.P., PENDLETON, G. & SCHERER, R. (2005), "Sustainable Competitive Advantage of Internet Firms. A Strategic Framework and Implications for Global Marketers", *International Marketing Review*, vol. 22, n. 6, pp. 658-672.

KAZANJIAN, R.K. (1988), "Relation of Dominant Problems to Stages of Growth in Technology-Based New Ventures", *Academy of Management Journal*, vol. 31, n. 2, pp. 257-279.

KIM, E., NAN, D-I. & STIMPERT, J.L (2004), "The Applicability of Porter's Generic Strategies in the Digital Age: Assumptions, Conjectures, and Suggestions", *Journal of Management*, vol. 30, n. 5, pp. 569-589.

KLEPPER, S. & SIMONS, K.L. (1997), "Technological Extinctions of Industrial Firms: An Inquiry into their Nature and Causes", *Industrial and Corporate Change*, vol. 6, n. 2, pp. 379-460.

KLEPPER, S. & SIMONS, K.L. (2005), "Industry Shakeouts and Technological Change", *International Journal of Industrial Organization*, vol. 23, n. 1, pp. 23-43.

KOCH, L.T. & SCHMENGLER, K. (2006), "Entrepreneurial Success and Low-Budget Internet Exposure: the Case of Online-Retailing", *International Journal of Technology Management*, vol. 33, n. 4, pp. 438-451.

KORUNKA, C., FRANK, H., LUEGER, M. & MUGLER, J. (2003), "The Entrepreneurial Personality in the Context of Resources, Environment, and the Startup Process. A Configurational Approach", *Entrepreneurship: Theory & Practice*, vol. 28, n. 1, pp. 23-42.

LEVITT, T. (1965), "Exploiting the Product Life Cycle", *Harvard Business Review*, vol. 43, n. 6, pp. 81-94.

MARIOTTI, S. & SGOBBI, F. (2003), "Lo shakeout nei mercati elettronici", in Gottardi, G. & Mariotti, S. (Eds.) (2003). *Crisi e trasformazione dell'economia digitale. Il dibattito e il caso italiano*,. Milano: Franco Angeli.

MCMULLEN, J.S. & SHEPHERD, D.A. (2006), "Entrepreneurial Action and the Role of Uncertainty in the Theory of Entrepreneur", *Academy of Management Review*, vol. 31, n. 1, pp. 132-152.

PAN, X., RATCHFORD, B. & SHANKAR, V. (2004), "A Model of Retail Competition in Service and Price: Pure Play Internet vs. Bricks-and Mortar Retailers", Working Paper, Indiana University, University of Maryland and Texas A&M University.

PARK, N.K. & MEZIAS, J.M. (2005), "Before and After the Technology Sector Crash: The Effect of Environmental Munificence on Stock Market Response to Alliances of E-Commerce Firms", *Strategic Management Journal*, vol. 26, n. 11, pp. 987-1007.

PARKS, G.M. (1977, "How to Climb a Growth Curve: Eleven Hurdles for the Entrepreneur – Manager", *Journal of Small Business Management*, vol. 15, n. 2, pp. 41-45.

PERRINI, F. (2000). *E-valuation. Valutare le imprese Internet,* Milano: McGraw-Hill.

PETTIGREW, A.M. (1979), "On Studying Organizational Cultures", *Administrative Science Quarterly*, vol. 24, n. 4, pp. 570-581.

PORTER, M. (1980), *Competitive Strategy: Techniques for Analyzing Industries and Competitors,* New York: The Free Press.

PORTER, M. (2001), "Strategy and the Internet", *Harvard Business Review*, vol. 79, n. 3, pp. 62-78.

RANGAN, S. & ADNER, R. (2001), "Profits and the Internet: Seven Misconceptions", *Sloan Management Review*, vol. 42, n. 4, pp. 44-53.

RINDOVA, V. P. & KOTHA, S. (2001), "Continuous "Morphing": Competing through Dynamic Capabilities, Form, and Function", *Academy of Management Journal*, vol. 44, n. 6, pp. 1263-1280.

RUMELT, R.P. (1986), *Strategy, Structure and Economic Performance,* Boston: Harvard Business School Press.

SANZ-VELASCO, S.A. (2006) "Opportunity Development as a Learning Process for Entrepreneurs", *International Journal of Entrepreneurial Behaviour & Research*, vol. 12, n. 5, pp. 272-288.

SHAPIRO, C. & VARIAN, H. (1999), *Information Rules. A Strategic Guide to the Network Economy*, Boston: Harvard Business School Press.

SINE, W.D., MITSUHASHI, H. & KIRSCH, D.A. (2006), "Revisiting Burns and Stalker: Formal Structure and New Venture Performance in Emerging Economic Sectors", *Academy of Management Journal*, vol. 49, n. 1, pp. 121-132.

SMITH, N. R. & MINER, J. B. (1983), " Type of Entrepreneur, Type of Firm, and Managerial Motivation: Implications for Organizational Life Cycle Theory", *Strategic Management Journal*, vol. 4, n. 4, pp. 325-340.

STEINMETZ, L. L. (1969), "Critical Stages of Small Business Growth", *Business Horizons*, vol. 12, n. 1, pp. 29-36.

STEVENSON, H.H. & JARILLO, J.C. (1990), "A Paradigm of Entrepreneurship: Entrepreneurial Management", *Strategic Management Journal*, vol. 11, n. 4, pp. 17-27.

STINCHCOMBE, A. L. (1965), *Social Structures and Organizations,* in MARCH, J.G. (Ed.), *Handbook of Organizations,* Chicago: Rand McNally, pp. 142-193.

THUROW, L.C. (2001) "Does the "E" in E-Business Stand for "Exit"?", *Sloan Management Review*, vol. 42, n. 2, pp. 112-112.

UHLENBRUCK, K., HITT, M.A. & SEMADENI, M. (2006), "Market Value Effects of Acquisitions Involving Internet Firms: A Resource-based Analysis", *Strategic Management Journal*, vol. 27, n. 10, pp. 899-913.

WILLARD, G.F. & COOPER, A.C. (1985), Survivors of Industry Shakeouts: the Case of the U.S. Color Television Set Industry, *Strategic Management Journal*, vol. 6, n. 4, pp. 299-318.

Tables

Table 1: Classification of the "activity levels" in the Internet industry (Modified from Barua and Whinston, 2001).

IV – *Electronic Commerce* Supply of goods and services via the web
III – *Contents* Information, publicity and intermediation via the web
II – *Application software* Development of software needed to offer services on the web
I – *Infrastructure* Management of the physical network and access management

Table 2: Classification of *pure player* Internet companies quoted on the Milan Stock Exchange (before January 2001)

Company	**Main Activity**	**Date of birth**	**Date of quotation**
e.Biscom	I – telecom/ISP	June 1999	March 2000
Tiscali	I – telecom/ISP – web portal	June 1997	October 1999
I.Net	I – ISP – ASP	June 1994	April 2000
Reply	II – application software (sw)	June 1996	December 2000
Dada	III – web portal	January 1995	June 2000
Inferentia	III – application sw & consulting	January 1988	August 2000
Freedomland	III – web portal	April 1999	April 2000
Vitaminic	III – web portal	April 1999	October 2000
CHL	IV – distribution of IT products	December 1994	June 2000

Note:

- e.Biscom changed its name to Fastweb from December 2004.

- The business name of Freedomland was modified to NTS - Network Systems in February 2003 and then to Eutelia in January 2005.

- The business name of Inferentia was modified to Inferentia-DNM in 2001 (following the integration with DNM) to Inferentia-FullSix in 2005 and then to FullSix in 2006.

- The business name of Vitaminic was modified to Buongiorno Vitaminic in July 2003 and to Buongiorno in May 2006.

Table 3: Strategic intentions of the *pure player* Internet firms at IPO

Company	Statement of the company's strategic goal
e.Biscom	To become the leading broad band operator of integrated services (voice, data and video) using IP (*Internet Protocol*) technologies. The initial geographic target area was northern Italy (starting in Milan) to then spread throughout Italy. The availability of a broad band telecommunication network – entirely based on IP technology, with direct access to its users via optical «Fibre to Home» – enables e.Biscom to offer subscribers a fast connection to Internet as well as other top quality services with high profit margins (such as Video-on-Demand).
Tiscali	To be the leading European Internet company and to develop as an independent innovative company, making Internet accessible to everybody. Tiscali believes that only the growth of a large interconnected IP network can generate those economies of scale which characterise Internet activities and can, at the same time, allow offering high quality services. Tiscali therefore aims at developing its business at pan-European level in order to reach the critical mass and be one of the first three companies on the market in all the main European countries. Its goal is to become the top ISP and portal within Europe. Tiscali is considered a *pure player* Internet firm even if in the year 2000 its percentage of revenues from Internet was slightly above 60% (the remaining part came from the revenues from the mobile telephone service); in fact, its strategic intent was entirely centred on becoming the leading pan-European Internet operator (goal attained in 2001).
I.Net	To offer clients infrastructures and applications on Internet, integrating the Internet Service Provider activity (for connection) and the Network Application Service Provider (for connectivity services such as Intranet, Extranet, Housing).
Reply	To support companies developing their e-business with consulting, communication and implementation services.
Dada	To create a portal capable of representing an ideal place for Internet communication and become one of the main Italian Internet companies with an integrated offer of facilities: web portal for online social communities, ISP (access to Internet), ASP (services to firms), online advertising. The development of social communities as the focal point of Dada is based on strong interaction with its users Dada believes in the growth of Internet as an interactive place, where "*many talk to many others*".
Freedomland	To develop a European TV Internet business offering an integrated service of Internet access via television (terminal + web portal), where a «Top-Box» set is connected to both a telephone line and a television. This allows one to surf the web on the TV screen using a dedicated web portal that is simple and set to the user's language. In the company's forecast, a simplified Internet access as an alternative to the PC should have enabled it to turn to a wide spectrum of potential users.
Inferentia	To offer consultancy and other services for the e-business. Inferentia works in three areas: e-business strategy (design, planning and realization of digital channels); e-marketing (strategic and operational marketing on Internet); e-sourcing (planning and running e-business infrastructures).

Vitaminic	To develop an innovative online platform for the promotion and management of music in the digital format. To create a virtuous circle of available original music among composers and listeners in its social online community, by connecting those who make the music to those who enjoy it, letting users express themselves, share ideas, interests and experiences.
CHL	To become the main reference point on the Internet for the Italian users interested in ICT products, audio-video and telephony, as a vertical web portal. The web portal allows one to buy online goods and services (commerce), to obtain information on offered products and services (contents) and become part of a virtual social group of experts/enthusiasts (community).

Source: Companies' IPO documents and annual reports (2000-2006).

Table 4: Main economic performance indicators of Internet *pure player* companies quoted on the Milan Stock Exchange

Yearly growth rate of revenues*		**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**
CHL		108%	-27%	-47%	-23%	-37%	1%	13%
Dada		320%	43%	-4%	7%	63%	44%	59%
e-Biscom		*9467%*	225%	94%	59%	33%	29%	30%
Freedomland		*778%*	-78%	-5%				
I.Net		103%	34%	4%	-15%	23%	9%	14%
Inferentia		269%	101%	25%	-3%	1%	17%	13%
Reply		79%	81%	28%	11%	30%	29%	59%
Tiscali		428%	267%	18%	20%	20%	-32%	-8%
Vitaminic		*3757%*	138%	55%				
	Weighted average	**260%**	**131%**	**26%**	**26%**	**24%**	**-3%**	**18%**
ROI		**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**
CHL		-63%	-42%	-46%	-33%	-8%	-5%	-3%
Dada		-1%	-15%	-25%	-15%	0%	11%	9%
e-Biscom		-4%	-11%	-11%	-8%	-5%	-4%	-3%
Freedomland		-10%	-44%	-11%				
I.Net		1%	0%	-1%	-5%	-2%	-1%	2%
Inferentia		3%	-76%	-40%	-15%	0%	9%	2%
Reply		8%	12%	12%	7%	11%	15%	13%
Tiscali		-6%	-30%	-24%	-14%	-8%	-7%	-1%
Vitaminic		-77%	-27%	-207%				
	Weighted average	**-6%**	**-21%**	**-16%**	**-10%**	**-5%**	**-3%**	**-1%**
ROE		**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**
CHL		-66%	-92%	-57%	-50%	-32%	-14%	-4%
Dada		0%	-16%	-36%	-40%	-8%	22%	30%
e-Biscom		-6%	-8%	-13%	-22%	-10%	-7%	-9%
Freedomland		-8%	-32%	-5%				
I.Net		2%	1%	0%	-5%	-2%	-2%	4%
Inferentia		-6%	-80%	-63%	-68%	1%	19%	-14%
Reply		5%	9%	8%	6%	8%	13%	15%
Tiscali		-8%	-60%	-49%	-36%	-34%	-4%	-34%
Vitaminic		-46%	-24%	-79%				
	Weighted average	**-7%**	**-38%**	**-27%**	**-25%**	**-15%**	**-5%**	**-11%**

* In 1999/2000 e-Biscom, Freedomland and Vitaminic were start-up companies.

Source: Companies' annual reports (2000-2006)

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