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Yahoo! – The End of the Banner Years

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Dissertation submitted in partial fulfilment of requirements for the degree of MSc in Business Administration, at the Universidade Católica Portuguesa
May 30th, 2012

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Abstract

Yahoo! was in the late nineties the most profitable and successful internet company on the web. However, after the burst of the dotcom bubble, its competitive position changed dramatically as the banner advertising format, the center of its advertising-based business model, entered in decline. This dissertation uses dynamic capabilities to explain the failure of Yahoo! to respond to that change in the environment. For that purpose, we develop and analyze in detail a teaching case covering Yahoo!'s history from 1994 to 2007. As we succeed to explain the failure of Yahoo! as caused by a low level of dynamic capabilities, we conclude that the company had a low propensity to sense opportunities and threats, to make timely decisions and to make market-oriented decisions. We further identify problems in Yahoo!'s propensity to change its resource base that we classify as medium-low. Its low level of dynamic capabilities led Yahoo! to ignore the potential of search as a business and the emergence of keywords advertising as the dominant format of online advertising. Yahoo! reacted late and failed to transform its resource base in an effective manner to respond to those changes. These events still impact Yahoo!'s performance today.

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1. Introduction

The study of the dynamic capabilities framework aims to answer the fundamental question of how firms achieve and sustain competitive advantage (Teece et al. 1997), making it of the outmost importance in the field of strategic management. If brought from the academia to the everyday of businesses, this topic has potential to have a significant impact in business practices since the goal of achieving and sustaining competitive advantage must be the ultimate objective of any manager, in order to create value to his shareholder.

The dynamic capabilities framework emerged both as an alternative and as a complement to the existing theories in strategic thinking like, for instance, the competitive forces approach from Porter, that focuses its analysis at the industry level and states that advantage comes from the deterrence of specific competitive forces, or the Resource Based Theory (RBT, formerly known as Resource Based View), that looks at the intrinsic characteristics of the resources and capabilities possessed by a firm as the source of its competitive advantage (Teece et al. 1997). The dynamic capabilities framework is centered on the idea that the ability to change its resources and capabilities is what gives a firm its competitive advantage, rather than the resources and capabilities themselves (Eisenhardt & Martin 2000; Teece 2007; Zahra et al. 2006). Sustained competitive advantage actually derives from a series of successive temporary competitive advantages (Eisenhardt & Martin 2000), and it is the ability to, when the environment changes, move from one advantage to the next that ensures long-term success. This means dynamic capabilities may be more valuable when the external environment of a firm changes rapidly or unpredictably, but that is not a necessary condition, making this concept valuable for all the firms (Zahra et al. 2006; Zollo & Winter 2002).

However, due to the novelty of the field, problems of “near-tautology” (Zollo & Winter 2002) and even confusion between the concept itself and its effects (Zahra et al. 2006) arose. In an attempt to solve these problems, Barreto (2010) proposed a new definition for dynamic capabilities. Given that recent leap forward, this dissertation aims to provide an in-depth analysis of how that definition can be applied to a real world situation. For that purpose, a teaching case will be developed and analysed in detail. The development of teaching cases related to this subject is fundamental to ensure that it moves from the theoretical discussion to the practice, and to facilitate the transmission of knowledge to, in this case, students.

The company chosen to be analyzed was Yahoo! Inc. This dissertation will show how the company failed to cope with the dramatic changes the burst of the dotcom bubble brought to its online advertising business. The effects of that shock on Yahoo!'s competitive position can still be seen today. This company emerges as an interesting case also since the internet sector is a highly dynamic one that requires constant adaptation, and, therefore, is perfect to illustrate the impact dynamic capabilities can have on a firm.

Following this introduction, a review of the existent literature is presented to theoretically frame the teaching case. The teaching case will come next, followed by the teaching note, a discussion and the conclusion.

2. Literature Review

2.1. The need for dynamic capabilities

The field of strategic management has been centered around three main paradigms: the competitive forces approach, the strategic conflict approach and a last group of approaches focused on building competitive advantage based on firm-level efficiency, like the RBT (Teece et al. 1997).

In the first paradigm, the focus of the analysis is the industry. It is the behaviour of industry-level forces that determines the inherent profit potential of an industry or industry segment, and it is the eventual manipulation of those forces that allows firms to have sustainable competitive advantages. Rents are created at industry or segment level, being differences among firms explained primarily by scale (Teece et al. 1997). In the case of the strategic conflict approach, it relies heavily on game theory to analyze the competitive interactions between rivals, focusing on how a firm can influence the outcome of those interactions in its favour. However, by focusing too much on the interactions, it "ignores competition as a process involving the development, accumulation, combination, and protection of unique skills and capabilities", insinuating that the success in the market place is the result of sophisticated plays and counter plays, when it is generally not the case (Teece et al. 1997). These two theories fail to consider the skills, know-how and path dependency effects of each firm (Teece et al. 1997). They fail to explain individual sources of sustainable competitive advantage, and furthermore fail to consider the need for that competitive advantage to be sustained over time.

The last big paradigm focuses on internal factors to explain a firm's success, considering each firm as a bundle of resources, and considering that resources are heterogeneously distributed across firms. It looks to the ownership of specific resources or capabilities as the mean to create competitive advantage (Eisenhardt & Martin 2000; Teece 2007). Despite explaining the existence of competitive advantage at a given moment in time, it fails to explain how that advantage can be sustained when the environment changes (Teece et al. 1997; Eisenhardt & Martin 2000; Teece 2007).

The dynamic capabilities concept emerged intrinsically emphasising two dimensions that these existing paradigms were missing: the capacity of a firm to change its resource base to achieve a fit with the changing external environment - suggested by the term "dynamic" - and the key role that active strategic management has when making decisions to achieve that fit - suggested by the term "capabilities" (Teece et al. 1997).

2.2. Definition and concept of dynamic capabilities

The first proposed definition to the concept was the one from Teece et al. (1997), which states that dynamic capabilities are the "firms ability to integrate, build and reconfigure internal and external competences to address rapidly changing environments", opening the door to define the concept as an ability or capability. That lead was followed by Zahra et al. (2006) stating that dynamic capabilities are the "abilities to reconfigure a firm's resources and routines in the manner envisioned and deemed appropriate by its principal decision-makers", by Winter (2003), who defined dynamic capabilities as "those that operate to extend, modify or create ordinary capabilities", and by Teece (2007) to whom "dynamic capabilities can be disaggregated into the capacity (a) to sense and shape opportunities and threats (b) to seize opportunities, and (c) to maintain competitiveness through enhancing, combining, protecting, and, when necessary, reconfiguring the business enterprise's intangible and tangible assets". A second branch of the theory has defined dynamic capabilities as being processes or routines by saying they are "the firm's processes that use resources – specifically the processes to integrate, reconfigure, gain, and release resources – to mach and even create market change. Dynamic capabilities thus are organizational and strategic routines by which firms achieve new resource configurations as markets emerge, collide, split, evolve and die" (Eisenhardt & Martin 2000) or that "a dynamic capability is a learned and stable pattern of collective activity through which the organization systematically generates and modifies its operating routines in pursuit of improved effectiveness" (Zollo & Winter 2002).

When defining dynamic capabilities the need to further distinguish those from other capabilities or processes operating within a firm emerged, forging the concept of dynamic capabilities in opposition to the concepts of: "operating routines", which are the activities that maintain the operational functioning of a firm (Zollo & Winter 2002), "ordinary capabilities", which are those exercised by a firm to survive in equilibrium where no change is needed (Winter 2003), or "substantive capabilities" those that allow a firm to solve problems (Zahra et al. 2006). Instead, dynamic capabilities are the activities dedicated to the modification of operational routines (Zollo & Winter 2002), or the capabilities used to change the way a firm solves problems (Zahra et al. 2006). They are "higher level" routines that work to change the ordinary capabilities that lie at zero-level in the capabilities hierarchy (Winter 2003).

Dynamic capabilities must have a systematic component. An organization that adapts in a creative but disjoint way to a succession of crises is not exercising a dynamic capability (Zollo & Winter 2002; Eisenhardt & Martin 2000). Without that systematic component, other mechanisms to achieve change exist like, for instance, "ad-hoc" problem solving (Winter 2003).

Integrating past contributions, a new definition to the concept of dynamic capabilities was proposed by Barreto (2010) to whom "a dynamic capability is the firm's potential to systematically solve problems, formed by its propensity to sense opportunities and threats, to make timely and market-oriented decisions, and to change its resource base". Here the concept is viewed as a multidimensional construct, referring to four distinct but related dimensions: the propensity to feel opportunities and threats, the propensity to make timely decisions, the propensity to make market-oriented decisions and the propensity to change the resource base. A dynamic capability is not a dichotomous notion but rather one that can be present in different degrees. No dimension alone can represent the concept but there is no requirement about the level of correlation about the dimensions (Barreto 2010). It is the level that a firm presents in each of the dimensions that allows the inference of its overall level of dynamic capabilities.

2.3. Performance implications and means of action

The concept of dynamic capabilities emerged to explain the existence of sustained competitive advantage (Teece et al. 1997; Teece 2007) and, in some definitions, the presence of dynamic capabilities is directly linked to the possession of that advantage. In the original definition of Teece (1997), dynamic capabilities imply success as they "reflect" an organization's ability to achieve competitive advantage. Again, in 2007, Teece states that dynamic capabilities lie at the core of enterprise success and failure, reinforcing the direct link.

However, that approach can be seen as tautological (Eisenhardt & Martin 2000; Barreto 2010) since the phenomenon the concept aims to explain is by definition included in the concept itself. It is, therefore, fundamental to define the concept independently of its possible outcomes (Eisenhardt & Martin 2000; Barreto 2010; Zahra et al. 2006).

In line with that idea, a second line within the field saw dynamic capabilities as necessary but not sufficient conditions to competitive advantage and posited that their presence does not automatically guarantee organizational success or survival (Zahra et al. 2006; Eisenhardt & Martin 2000; Barreto 2010). A firm can have a high level of dynamic capabilities but, without intentionally deciding to put them to use, these will not automatically lead to a higher performance (Barreto 2010). Additionally, when used, they need to be well target and deployed to achieve strategic goals (Zahra et al. 2006) instead of other objectives that are irrelevant to a firm's future. The position of Zollo & Winter (2002) is somehow less clear but seems to be in line with this view when they state that the absence of dynamic capabilities implies only transitory advantage. From there logically follows that a permanent competitive advantage implies the presence of dynamic capabilities, but not the opposite.

Equally important to understand if dynamic capabilities lead directly to competitive advantage is to understand how they do it. It is the ability to change its resources and capabilities what gives the firm its sustainable competitive advantage, rather than the resources and capabilities themselves (Eisenhardt & Martin 2000; Teece 2007; Zahra et al. 2006; Barreto 2010). The contribution of dynamic capabilities to sustained competitive advantage is, therefore, indirect through resource manipulation (Eisenhardt & Martin 2000).

This contribution is set to be indirect since the functionality of dynamic capabilities can be duplicated across firms, which, according to the RBT requirements of inimitability and non substitutability, means that the dynamic capabilities can be sources of competitive advantage, but not of sustained competitive advantage. (Eisenhardt & Martin 2000)

While some consider dynamic capabilities to be idiosyncratic due to the path dependence effects of each firm (Teece et al. 1997), dynamic capabilities can be considered idiosyncratic only in their details (Eisenhardt & Martin 2000). Dynamic capabilities may present communalities across firms since there are always more or less effective ways of dealing with the problems faced and those problems will be, in their essence, common across companies (Eisenhardt & Martin 2000). This existence of communalities implies that managers that begin developing a certain capability can start at different points, take unique paths and end up with capabilities that perform the same function (Eisenhardt & Martin 2000). It also implies that the dynamic capabilities are relatively substitutable and fungible across firms (Eisenhardt & Martin 2000).

2.4. Relevant environments

Regarding the environments where the dynamic capabilities framework can be applied, it is found both the opinion that it can only be applied to firms in environments with a high (Teece et al. 1997; Teece 2007) or at least moderate (Eisenhardt & Martin 2000) level of change and that a dynamic environment is not a necessary component of dynamic capabilities (Zollo & Winter 2002; Zahra et al. 2006).

Teece et al. (1997) have intrinsic to their definition that dynamic capabilities only apply to firms operating in environments with a high degree of change. Teece (2007) further details that the possession of dynamic capabilities is especially relevant in environments open to international commerce, exposed to rapid technological change and that present systemic technical change. These characteristics can be found specially in high tech sectors (Teece 2007).

Despite stating that “dynamic capabilities consist of specific strategic and organizational processes (…) that create value for firms within dynamic markets”, Eisenhardt & Martin (2002) further divide those dynamic markets in moderately dynamic environments and high-velocity markets. To these authors, this distinction is relevant since different environments influence the way dynamic capabilities are built and its characteristics. In moderately dynamic environments, where change is predictable, dynamic capabilities resemble routines that lie on existing knowledge, whereas in high-velocity markets, where change is unpredictable, dynamic capabilities are simpler, relying on knowledge acquired as the environment changes.

Nevertheless, even Zollo & Winter (2002) and Zahra et al. (2000) agree that, despite not exclusive to those environments, dynamic capabilities may be more valuable for firms within rapidly changing environments.

2.5. Costs associated with dynamic capabilities

One reason to say that dynamic capabilities might be more useful in rapidly changing environments lies in the costs of developing and maintaining those capabilities that may not yield enough return out of those environments (Zollo & Winter 2002; Zahra et al. 2006).

Building and using dynamic capabilities is costly (Zahra et al. 2006; Winter 2003; Zollo & Winter 2002; Helfat & Winter 2011) and, typically, dynamic capabilities involve long-term commitments to specialized resources (Winter 2003). Therefore, it might be more advantageous to firms in less dynamic environments to sustain their competitive advantage by recurring to less costly processes of change (Zollo & Winter 2002; Zahra et al. 2006) that do not require maintenance and, therefore, only bring costs if used like, for instance, ad hoc problem solving (Winter 2003). In fact, the costs of maintaining and developing dynamic capabilities are another reason why dynamic capabilities might be present in a firm without leading to superior performance (Winter 2003). Dynamic capabilities only have a positive implication in a firm's performance if the costs of developing and maintaining those capabilities are inferior to the benefits that from them arise (Winter 2003).

2.6. Dynamic capabilities development process

Regarding their development, dynamic capabilities lie their foundations in the organization's knowledge base (Zahra et al. 2006), which is in line with the idea that distinctive competences and capabilities generally cannot be acquired and must be built internally (Teece et al. 1997).

The main mechanisms of creation and development of dynamic capabilities are practice, mistakes (by providing a greater motivation to learn) and the pacing of experience (which affects how easy it is to incorporate new experiences into the existent knowledge base of a company) (Eisenhardt & Martin 2000). This learning that comes from past experience can be enhanced by having formal mechanisms associated with the learning process (Eisenhardt & Martin 2000; Zollo & Winter 2002). Examples of these, are the mechanisms of knowledge articulation, which alludes to the process through which individuals explicitly discuss the subjects at hand, and the mechanism of knowledge codification, which refers to the written documentation of acquired knowledge (Zollo & Winter 2002).

The foundations and the development process of dynamic capabilities will be important to explain Yahoo!'s level of dynamic capabilities, as we will show on the discussion. For now, in the next section, we present the teaching case. The information in the case will allow us to evaluate the level of Yahoo! in each of the four dynamic capabilities' dimensions and conclude about its overall level of dynamic capabilities, in the teaching note.

3. Teaching Case

Yahoo! – The End of the Banner Years

In 1994, two Stanford students turned a hobby into a business that by 1998 was the most visited website on the planet, attracting up to 40 million pairs of eyeballs per month.[1] The Fortune magazine announced Yahoo! had won the search wars and was poised to much bigger things[2], latter calling it one of the great success stories in the short commercial history of the Internet.[3] At its high in January 2000, Yahoo! had a market value of more than $115 billion and in the same year it would become, according to the Financial Times, the world's most profitable internet company.[4] By the end of 2007, it was worth only $30 billion, Fortune was now calling it the Internet's most successful punching bag[5] and its former place on the internet now belonged to a newcomer valued at $216 billion. At the beginning of 2012, Forbes declared Yahoo! was already dead[6] and ready to become another internet artifact.[7] What went wrong to cause such a dramatic shift? What opportunities did they miss and others saw? What wrong decisions did they take?

"Yet Another Hierarchical Officious Oracle"

It was 1994, September 22nd, 50 minutes past midnight when Jerry Yang, a Stanford Ph.D. student, 25 years-old, answered to a post placed on a webforum[8] one day earlier. A user had asked if anyone could suggest "some good index pages with links to lots of other pages" and commented that "It'd be cool to have some kind of web yellow-pages" preferably searchable. He answered saying: "we have a pretty comprehensive listing at the Yahoo Database", sent the link and added "it's an attempt to be organized by subject (although not very well) - but we are working on it... searchable too." The other person Yang was referring to when he said "we" was his friend and colleague David Filo, 28 years-old, and Yahoo was a web directory they both had developed and were trying to spread the word about.

That user's request was not as silly as today it might sound. Back in that time the internet was quite a different place from what it is today. It was still in its infancy and was before anything else quite disorganized, with new webpages and content being created everyday but that were hard to find unless one knew the addresses. Feeling the same problem, Yang and Filo had started six months earlier, in their campus trailer, the "Jerry and David's Guide to the World Wide Web". It was a list, made as a hobby, for the two colleagues to keep track of their personal interests on the web. Soon the list grew up and they started organizing it by categories and subcategories. Eventually they changed the name to "Yahoo" an acronym of "Yet Another Hierarchical Officious Oracle" and because they liked the meaning of the word: "rude, unsophisticated, uncouth". Their list became popular among friends and the word spread quickly.[9]

In the fall of 1994, Yahoo celebrated its first million-hit day, translating to almost 100 thousand unique visitors per day[10]. Yang and Filo realised they had something with business potential in their hands, dropped their Ph.D.'s and, in March 1995, Yahoo! Inc. was born (they were forced to add the exclamation point since just "Yahoo" was already taken). In April, they got initial financing in the amount of nearly $2 million from Sequoia Capital, a venture capital firm which had on its track record investments in Apple, Atari, Oracle and Cisco.[11]

Everyone online

Yahoo! was not alone in its quest to organize the information on the web. On one side, there were the directories – human organized lists of websites classified under categories and subcategories by editors – while, on the other, there were the search engines – automated indexes based on algorithms that automatically scouted the internet in an attempt to classify under subjects as many webpages as they could, using the words on the websites' content as references. The other top search providers were Infoseek, Lycos and Excite, plus Netscape and AOL, a web browser and a proprietary online content network, which were also providing search services. New start-ups were born online every day wishing to reclaim a part of the web, and its value, to their own. It was a highly competitive environment.

Finding information on the web was not a concern only for users – with new websites and companies constantly coming online, website owners wanted to be sure they could be found among the crowd. For that, they could advertise or, for free, give search providers a help: in addition to their own search for content to index, both directories and search engines would allow website's owners to submit their websites for inclusion in their listings. That was a fundamental step for any new website. However, with hundreds of small search providers on the web, submitting websites for inclusion was cumbersome and time consuming. Each search provider would have its own submitting process and timing to deal with the requests, and, in the end, there wasn't even the guarantee that the submission would be approved or that it would appear among the first search results.[12]

Bringing in adult supervision

In 1995, the Yahoo! family grew up when Tim Koogle, also a Stanford *alumnus*, was nominated by Yang and Filo to be the company's President and CEO as they recognized they had no business experience. On his turn, Koogle brought in Jeff Mallet to COO and Tim Brady to CMO.[13] Koogle had previously worked at Motorola and had been CEO and President of several technology companies.[14] The founders moved to the company's board of directors.

July was an important month for Yahoo! as it launched a new user interface, one that, for the first time, included advertising. Yahoo! was launching a three-month trial program during which five advertisers would pay $20.000 per month for rotating banners on its most popular pages, namely the sections "What's New", "What's Cool" and "What's Popular". Advertisers included MCI, Mastercard, Internet Shopping Network, NECX, and Worlds Inc.[15] "While advertising on the Internet is still unmeasured in its effectiveness, we think it is the avenue which will allow Web sites to turn into effective businesses", Brady commented.[16] Yahoo! went with advertising in alternative to subscriptions – they were committed to keep the website free for users.[17] Along with the advertising, Yahoo!'s first partnership would become visible – the website would from then on include news updates from Reuters New Media.[18] By then, Yahoo! included more than 60.000 entries and got 1.000 user submissions for new ones per day, most of them from commercial websites.[19]

By November, its trial advertising program was a success and they brought on board 10 more advertisers which had among them AT&T, American Express, Bank of America, Citibank, Samsung and Honda.[20]

Also in November, another major change happened for Yahoo! as they added a search engine to their website to complement its offer until then only directory based. From then on, if no results were found when searching the directory, results provided by its new partner, Open Text, would appear as a backup. Open Text was probably the most advanced search engine company to date since instead of crawling through just the first paragraphs of a web page when searching, it would scout every single word. The two companies saw that their offers combined would create the most powerful search tool available on the Internet.[21] Yahoo! had now more than 100.000 entries and allowed the search of millions of Web documents.[22]

On April 12th 1996, Yahoo! Inc. went public at an issue price of $13 per share but it was such a hit that it closed the day at $33 - its performance was the second-biggest first-day gain ever for a Nasdaq stock to date. Yahoo! was not yet a profitable company but, in the year before, its revenues had been $1,36 million.[23] At the end of June, Yahoo!'s market value was $551 million.

Soon after, branding emerged as a priority for Yahoo!. They started a successful marketing campaign to increase the value and awareness of its brand, including $5 million spent on TV ads.[24] Yahoo! was written everywhere and becoming an established brand in the minds of consumers.

The banner

In 1996, the total annual online advertising spending was $267 million and growing.[25] The internet held the promise of highly targeted and effective marketing campaigns that would revolutionize advertising. The most popular form of advertising on the web was the banner. Usually about one inch by four or five inches and run across the top of a page, it invited the user to visit the advertiser’s page, by clicking on it.[26] The ads shown on the banner could be always the same or could rotate and, as the banners size was becoming standard, they were starting to include animated images, videos, sounds, interactive forms or shockwave enhanced games that would claim to raise their click through rate – the number of times a user that sees the banner actually clicks on it.[27] In the case of search providers, banners would usually be associated to specific search terms - an advertiser would pay a search provider to show its banner whenever a list of chosen words was run through search.[28]

However, the promise wasn’t quite there yet. Banners were quite inefficient and the effectiveness of the internet as an advertising medium was strongly questioned, especially by traditional advertisers. A spokesperson from Coca-Cola commented: “our interest will increase when there are more sophisticated ways to measure its effectiveness as a marketing tool”. “We are truly, truly in a research and development phase - we're learning what works, what doesn't, how to measure it. We don't know yet”, said on his turn a representative from Procter & Gamble.[29] The click through rate of banner ads was between 2 to 3% when a banner was new, and would afterwards fall to below 1%.[30] The value coming from banner ads was so relative and hard to measure that P&G told advertisers that it would only pay for banner ads on a CPC (cost-per-click) basis versus the CPM (cost per thousand impressions) that was common at the time.[31] On a CPC basis the advertiser would only pay when the banner was actually clicked on, while with CPM every time the banner was shown counted as “an impression”. CPC banner ads were largely overpriced for their return,[32] but, nevertheless, the demand kept increasing since more than 50% of the advertisers on the web were Internet start-ups that had freely available funds from their initial financing and weren’t raising questions.[33]

In 1996, Yahoo! was charging 2 to 5 dollar cents per search term per impression depending on the word's popularity or $1.000 per month, per word[34]- advertisers on CPC basis were only 2 to 3% of its clients.[35] A report covering the first-half of the year, found that the top 10 websites selling online advertising space were concentrating 66% of the revenue generated in the category. Search engines and directories accounted for 36% of the ad revenue, portals for 19%, computers and related interests websites for 18%, and news media for 11%.[36] Data covering the year until November showed Netscape led the advertising business with revenues of $24,3 million, followed by Yahoo! with $16,5 million, Infoseek $16.3 million, Lycos $10,9 million and Excite $10,7 million.[37]

A revolutionary idea

By 1996, an 18 years-old college drop-out named Scott Banister was working for Submit It! a start-up he had created in February 1995 and had became the most popular centralized submission service in the web.[38] To simplify the process of submitting new websites to search providers, there were companies offering centralized submission services - instead of dealing with each search provider individually, an advertiser would go to a centralized submission company.[39]

Banister's start-up gave him a huge exposure to the wants and needs of advertisers and he could see how badly those wanted to ensure they got listed on the search provider's results.[40] That made him came up with an idea he called “Keywords”: to sell search listings based on pay-for-placement bidding.[41] Banister saw that search results could be used to do advertising, merging advertising and search in one simple business. Search would be the future of advertising, showing people highly targeted ads when they were actively looking for related information instead of just passing-by. Banister never got to implement its vision but he did pitch it to several people in a few start-ups. The idea was out.

In February 1998, a company called GoTo.com launched at the Technology, Entertainment & Design Conference a search engine its chairman and founder, Jim Gross, called revolutionary[42]: at GoTo.com all search results were ranked based on how much websites were willing to bid to be listed, and advertisers would pay only if users effectively clicked the search results, on a CPC basis. Jim Gross was among the people Banister had told his idea to, and eventually decided to act on it.[43]

At the GoTo website, advertisers could register, choose and bid on a keyword, add a description to what would be their ad and submit it. After approval of the submitted keyword, link and description, the ad would be added to Overture's database. Every time a search for that keyword was triggered, the search results would be ranked from the website with the highest bid, at the top, to the unpaid sites at the bottom. To add transparency to the process, the price bided per click would be shown next to every result. Advertisers could at any time access their account and change the bid or the submission - they would be later billed for the service.[44] To improve future results, GoTo would also ask users to vote on the quality and relevance of search results and allow some editorial input.[45]

Mr. Gross compared the offer of GoTo to other search websites saying "they make money when you stay - I make money when you leave. We're changing the alignment of the proposition". "We really are a true search engine", "what these guys have is traffic, but they don't have a good business model", he said.[46] "I am not saying other search engines are not pure in their results, but those search results are surrounded by very expensive ads which are really what search engine companies want you to click on" he added in another interview.[47] Mr. Gross believed that a combination of market forces and user feedback was the best and most cost-effective way to provide better search results and that even non commercial websites would have interest in paying for users' attention.[48] "This filters out the junk. It also gives the little guy a chance to buy space without having to pony up exorbitant fees for banner ads".[49]

The Portal to success

By 1998, Yahoo! had climbed its way to the top of the search providing business.[50] It had more than twice the traffic of Excite and more than four times the one of Lycos.[51] Its market value was now more than $2 billion. In November 1997, it had 25,4 million unique U.S. adult users per month and reached 63% of all U.S. adults using the Internet, having a larger audience than any other Web site or online service.[52] Its success came from its editorial approach that provided users highly relevant results at a time where automated search still had flaws. Yahoo! didn't want to enter the technological race to map the web's content like its non-directory competitors were doing – Yahoo! should be about relevance, not quantity.[53] If one would visit Excite or Lycos, he or she would see rows of expensive servers working to provide thousands of results in seconds. Yahoo!'s servers were pc's run by a third party and at the core of its search was a team of editors.[54]

Yahoo! had grown away from its search providing roots, offering a huge range of other features. Added mostly trough acquisitions and partnerships, it now offered services like free email, chat, yellow pages, classifieds, maps, calendar, a personalized entry page and sections dedicated to news, finance, sports, travels and kids.[55] It was now the number one financial[56] and news source[57] on the web and had agreements with Compaq and Gateway to be on their computers desktops as their featured directory provider. Geographically, it was now present in Japan, France, Germany, the UK, Ireland, Asia, Korea, Singapore, Australia, New Zealand, Canada, Norway, Denmark and Sweden with regional directories.[58]

Yahoo! had evolved to become a Portal. Search providers didn't want to be search providers anymore; they wanted to be portals, hubs and gateways to the web's content.[59] They didn't want people to just pass by, they were trying to give users reasons to stay and, eventually, watch the banner ads they had based their business model on. Actually, since its business was based on selling advertising, Yahoo! had now a different vision of itself: "What Yahoo! had been from day one was a media company, in the context of the internet as a [broadcast] medium", Koogle said in an interview.[60] In the vision of Yang, Koogle and Mallet, Yahoo! should be a media company instead of a technology company – technology, was a commodity and they were better off with advertising.[61] Yahoo! would be a content provider in this new communication medium that was the internet and draw its revenues from the opportunity to show ads to users viewing that content. Mallet said the secret to Yahoo!'s success so far had been "a laserlike focus on three areas: content, brand and distribution".[62] By then, only one out of three users would go to Yahoo! to search, the rest of the time they would go there to use other Yahoo! features like email, chat or Yahoo! Finance, said Yang in an interview, "we certainly are becoming more online service-like, but that doesn't make our navigation service any less important".[63] In 1997, Yahoo! had been the top ad-supported website on the web for the second consecutive year, generating $53,2 million in advertising up 180% from $19 million in 1996.[64].

In March 1998, Yahoo! announced they would drop Altavista as their web search provider (they had previously dropped Open Text) and switched to a company called Inktomi mainly because Altavista had evolved from a search-only company and was now a competitor in advertising.[65]

Revenue Loop

They kept adding content and features to Yahoo! and eventually, in June 1998, Yahoo! acquired a company called Viaweb, an e-commerce hosting service, and turned it into Yahoo! Store, a platform for merchants wanting to do business online to set their websites.[66] However, the interest on Viaweb had started moths before.

Viaweb was at that time developing the idea of a product search engine to maximize the revenue from their e-commerce platform to which they called Revenue Loop. The idea was that Revenue Loop would sort search results not in order of textual relevance (like ordinary search engines) nor in order of how much advertisers bid (as GoTo did) but in order of the bid value times the number of transactions of the product in question.[67] That would exclude from the top of the listing products with a high bid but that users never actually bought, improving the revenues of an online retailer earning on a CPC basis and improving the relevance of the search results for users.

When Yang first met with Viaweb to check out the company in early 1998, already with the undisclosed intention to buy it, Paul Graham, one of the two Viawebs' founders, thought they were meeting together because Yahoo! was interested in Revenue Loop and presented to him the whole concept.[68] To Graham's surprise, Yang didn't seem to be interested in anything other than the platform itself: "I was confused. I was showing him technology that extracted the maximum value from search traffic, and he didn't care? I couldn't tell whether I was explaining it badly, or he was just very poker faced" he commented.[69] The acquisition went forward, Graham ended up working at Yahoo! and Revenue Loop was never implemented.[70]

As it turns out, it was probably not the first time Yang was hearing and saying no to an idea to improve Yahoo!'s search function. Before Revenue Loop, Banister's idea had knocked on Yahoo!'s door, and Yahoo! also didn't open: In addition to Jim Gross, Ali Partovi and other principals of LinkExchange (a start-up that had acquired Submit It!) were also among the ones that Banister had pitched Keywords. "[We] loved the idea, because we had the benefit of the right context. LinkExchange offered traffic-generating services to almost a million small website owners. Every day our customers emailed us, 'Can you help my website get listed properly on Yahoo! search?'", Ali Partovi remembers. They saw potential on Banister's idea and went on to the big search providers to pitch it themselves, starting with the biggest, Yahoo!, in 1997. "We visited Yahoo! more than a dozen times to pitch the Keywords idea. (…) Despite repeated rejection, we pitched every member of Yahoo!'s executive team multiple times, each time finding new ways to present the concept and new data to support how profitable and huge the opportunity might be, all in vain".[71]

The reason Yahoo!, or any other major search provider, wasn't interested neither in Revenue Loop nor in Keywords was that advertisers were still overpaying for banner ads, making banner advertising everyday more profitable. Internet start-ups were an easy money source and they didn't need to look for it anywhere else. If advertisers were to start paying for online advertising what it was really worth, Yahoo!'s revenues would have actually decreased.[72]

Consolidating the audiences

Back at Yahoo!, project managers were called "producers" and the different parts of the company were called "properties". It was now more a media company than ever. Engineers, programmers and technical improvement were not central parts of the organization and the search function was just another feature on their Portal offer.[73] In late 1998 or early 1999, Graham, one of the Viaweb's founders, that was still working at Yahoo!, told Filo they should buy a start-up called Google because he and Yahoo!'s other programmers were using it instead of Yahoo! for search. To his surprise, Filo answered that it wasn't worth worrying about since search was only 6% of Yahoo!'s traffic, and they were growing at 10% a month. To Filo search "wasn't worth doing better". [74]

Google was a new search company, incorporated in 1998 but that had been operating for a few years[75], which had a revolutionary algorithm that would assess the relevance of a search result not only in terms of matching the searched keywords with a website's content but by considering how many links on the web would drive to that website, using a proprietary and unique technology called PageRank. This system allowed Google to increase dramatically the relevance of its search results in comparison with its rivals. Coincidently, Google was also an idea from two Stanford students.

Yahoo! continued on its route and in January 1999 announced its intention to acquire Geocities, the Web's most popular and widely used user community at the time, by $3,56 billion[76] aiming to combine two of the Web's strongest brands and most heavily used services.[77] In April, it bought Broadcast.com, the leading destination on the Web for audio and video broadcasts, in a deal valued at $5,7 billion[78] that would provide "significant added value to Yahoo!'s audiences worldwide" said Tim Koogle[79]. The more users Yahoo! could attract, the better.

Google strikes

In April 1999, AltaVista followed GoTo.com and started auctioning keywords text ads to the highest bidder with the difference that paid placements would appear in a box separated from the "core" results. "This is a rare opportunity to deliver a very good user experience, while generating revenues" its CEO Rod Schrock commented, adding that Altavista was taking the auction route to "give smaller businesses the opportunity to buy access to the site" rather than selling only through syndication firms.[80]

While Banister's vision was gaining traction, on January 3rd 2000, Yahoo!'s shares hit an all time high with the company reaching a record of more than $115 billion market value. Later that year it would become the world's most profitable internet company.[81]

In June, Yahoo! dropped Inktomi and licensed the search function in its portal to Google in part motivated by the quality of Google's engine, in part to lower the costs in that area as Google was providing a cheaper service.[82] Google had actually been calling Yahoo! for a partnership for months – to be the search provider of Yahoo! would bring them the visibility and reputation they needed to grow.[83]

After been elected by consumers the number 1 search provider in the market two quarters in a row,[84] Google would become in 2000 a direct competitor to Yahoo! in the advertising business when it joined GoTo.com and Altavista on the field of keyword search advertising with an advertising program they called Adwords.[85] Google's paid results would appear separated from non-paid results (like at AltaVista) and would be charged on a CPM basis, with rates varying from 1 to 1,5 dollar cents per impression, according to the position of the paid ads on the results page (top, side or bottom). It had the goal of being easy to use and was, unlike GoTo and Altavista's, fully automated, allowing advertisers to set by themselves a campaign at the Adwords website without any need of revision or approval. Other features allowed advertisers to fine-tune ads in real time, to monitor ad statistics, track ads inventory and CPM daily estimates.[86] Google had made the bet of not using images, pop-ups, animations or flashing logos to keep its website "clutter-free" and focused on search[87] an approach completely different from the other players and their Portals.

In 2000, Microsoft, that was on the search business with MSN Search and had its own Portal, also did a brief incursion into the world of keywords advertising after Ali Partovi and his colleagues had been persuading its executives that it was a good opportunity (after LinkExchange was acquired by Microsoft). However, they ended up pulling that offer out of MSN Search when it started cannibalizing the revenues from banner ads.[88]

The call back to earth

Meanwhile, the dot.com bubble had burst and by the end of August 2000, Yahoo!'s stock started to fall sharply after a series of warnings by analysts concerned with the impact the cut on online advertising would have on the company. They were concerned over the future of online advertising now that many of the internet start-ups were cutting their advertising budgets and the non-dotcom companies were not changing their advertising habits fast enough to compensate.[89] As the medium developed, traditional advertisers had finally started it invest online, but they were being cautious and their opinion about banners remained basically the same as in 1996. They were focusing their investments on their own websites and opting for advertising formats beyond the banner.[90] Banners still had a part in the web's marketing mix, but, after years of experimenting, now advertisers were fully aware about what the overpriced rectangles could and could not do[91] – even the dotcom's were rethinking their advertising strategies to include more cost-effective solutions now that they were forced to be rational with their money.[92] Concerns from the market further increased when Yahoo! started to call advertisers in search for business, allowing the renegotiation of existing contracts and lowering their rates.[93] By the end of September the company was worth only $50 billion.

To convince investors of its good health Yahoo! disclosed in October, for the first time in its history, the composition of its advertising client base to say that 40% of its advertisers were "pure internet companies" down from 47% in the previous quarter, the number of advertisers had declined to 3.450 from 3.675, but that its average daily page views had been 780 million in September, up from 680 million in June, the number of registered users was 185 million, up from 155 and that the number of unique users had risen 6% from the quarter before. "The Yahoo! franchise is stronger today than never before", said Koogle.[94]

In January 2001, Yahoo! released a warning to investors saying that its profits would fall 10 to 30% that year, a colossal difference from the 34% growth analysts had expected.[95] "This will be a transition year as we move our customer base from pure play internet advertisers to more traditional advertisers" admitted Koogle. "There is a softening of the economy, but we can use that to take market share from our competitors. We have a powerful franchise, the internet's importance is increasing and the near-term effect of softening economy is just that - short-term".[96] But as the pressure over Yahoo! kept increasing, some analysts were worried the company's problems could have deeper roots and were questioning Yahoo!'s ability to implement changes. "It is a very insular management team which believed that their way was the right way" comment an analyst from UBS.[97] Internally, the confidence wasn't higher. Executives had been criticizing Koogle's consensus-style management for slowing down decision making at that time of crisis: before the executive meetings they would joke about whether they were about to enter to a "TK [Tim Koogle] meeting" or not; "we wanted to know if we were actually going to get anything done", one remembered.[98]

In March, after a new announcement that the company would barely break-even and the suspension of Yahoo!'s shares, Tim Koogle stepped down as CEO, following the resignation of Fabiolo Arredondo (chief of the European operations), Mark Rubenstein (chief of the Canadian operations), Savio Cho (chief of Asian operations), and Jin Youm (chief of the South Korean operations) over the previous months.[99] The shares sunk to a 52-week low.[100] At the end of the month, Yahoo! was worth only $8,5 billion.

The situation was particularly problematic since Yahoo! had been neglecting the needs of advertisers and the need to build long-term relationships with them – especially with the non-dotcom that were more reticent about investing online: "We ran Yahoo! to optimize market share. I make no apologies for that", "if there was a company that didn't get it [Internet advertising], we moved on very quickly", Mallett said in an interview.[101] Since their client base kept growing, Yahoo! was accustomed to charge the rates they wanted, cutting the deal, and moving on. Their sales team was difficult to deal with and some customers had been questioning their long term prospects for years.[102]

Hollywood to the rescue

On March 1st 2001, Terry Semel took over the place left empty by Koogle arriving directly from Hollywood – he had been the CEO of Warner Brothers for 20 years. Critics commented his lack of experience in advertising and technology but Yang replied: "Most people who look up Terry think of him as a movies guy, we see someone who has been involved in almost every conceivable model of the media business".[103]

Mr Semel would focus the company turnaround on two factors: selling more advertising to established companies and developing more fee-based services. He believed his experience would be enough to address those challenges: "Yahoo! is a media company, it doesn't matter if it's Batman, The Matrix or Yahoo! Finance. It needs to be the best, most fairly priced, best marketed brand to the consumer", he commented.[104] Yahoo!'s 44 business units were merged into 6.[105]

To increase the revenue from fees, he would develop partnerships and joint ventures with companies that would provide Yahoo! with entertainment and information contents that it could sell. Mr Semel defined that the company's priorities would be in music, finance, sports and other areas of entertainment that would allow boosting their content portfolio and charge users for access.[106] He wanted half of Yahoo!'s revenues to come from fees by 2004.[107] At the end of the second quarter of 2001, advertising was the source of more than 80% of its revenues.[108]

To turn around its shrinking advertising business Yahoo! would bet on new advertising formats that were larger and included interactive elements like streaming video. "We are at the cusp of creating a much better advertising medium that is more persuasive, more visible and more entertaining, and causes more people to click", said Semel. Yahoo! had never done so by fear that users would not react well but he believed that wouldn't be a problem drawing a comparison: "Why do people sit in theatres and watch a bunch of trailers?", he asked "Because they enjoy it".[109]

At the beginning of 2002, Yahoo! had acquired and integrated Launch Media, which claimed to have the largest collection of music videos on the Web, and launched Yahoo! Music, where users could listen to songs online or download them for a fee from the Pressplay subscription service (a partnership). At Yahoo! Broadcast users could access the contents of 400 radio stations and 70 TV stations across the U.S, all paid on demand.[110] Auctions, personal ads and classifieds were now paid services.[111] It acquired Hotjobs.com, an online employment platform, and was now charging employers and recruiters subscription fees.[112] It positioned itself as an online-marketing partner for entertainment and media companies by making a deal with Sony to feature Sony Entertainment contents on its websites.[113]

However, trying to convince people to pay for what so far had been free wasn't easy especially when the contents Yahoo! was offering for pay were available for free elsewhere. Analysts estimated that only less than 10% of Yahoo! users would be willing to pay for content.[114]

Google strikes again

Another change had happened at Yahoo! when, in November 2001, it started displaying paid search results through a partnership with GoTo.com, in a 6-month trial deal.[115] The 5 first results from every search in its directory would be paid ads provided by GoTo – Yahoo! would receive a fee from GoTo to post the results. GoTo had recently changed its name to Overture Services and stopped promoting itself as a search provider to focus only on syndicating paid ads.[116] Overture was now the dominant player in selling keywords advertising and was also syndicating paid placements to AOL, Lycos and Microsoft's MSN.[117] Paid listings were now a major trend as banners were in decline (See exhibit 1) and every major search engine was doing it.

In February 2002, Google introduced a second version of its Adwords program called Adwords Select. Google changed the system to a CPC auction system like Overture's but introduced two important differences. One was the way ads were ranked not only by bid but by a combination of the click-through rate and the bid.[118] The second one was the auction method, as Google started using an adaptation of a second-price auction system, where the highest bidder would not pay what he had bid, but the price of the second highest bid plus a penny.[119] Google had created its own Revenue Loop – ads that weren't clicked would be cut and revenue would be maximized.

The similarity of this model with Overture's led the latter to sue Google for patent infringement[121] in a process that was afterwards settled in Overture's favour out of the courts.[122] Overture had reasons to feel threatened - Google had entered the deal of syndicating search ads and had already stolen one of Overture's syndication contracts, one with Earthlink.[123] Google was at the time a player with both its own search and advertising technology while most of the payers were subcontracting one or both these systems. (See figure 1)

	Directory	Algorithmic	Paid
Yahoo!	Proprietary	Google	Overture
Google	Open Directory Project	Proprietary	Proprietary
MSN	LookSmart	Inktomi	Overture, LookSmart
Overture Services	----	Inktomi, Altavista	Proprietary
AltaVista	----	Proprietary	Proprietary
Source[120]			

Figure 1 – Technology used by the main search providers 2002

Better late than never?

In April 2002, the time came for Yahoo! to decide on its trial contract with Overture and CEO Semel commented: "Search and paid listings are key growth areas for Yahoo!". A contract was sign for the next 3 years.[124] At this point the importance of the search business seemed evident for everyone. Search had truly become the future of online advertising

Yahoo! continued with its strategy, adding a fee-based online gaming service to its offer and announcing that a partnership it had with SBC Communications would evolve to selling high-speed internet access.[125] In June, they presented their first positive results since the bubble burst in the amount of $21 million, but the public continued apprehensive about whether these results could be sustained in the long term. Most of the company's recovery was coming from HotJobs, which was losing market to the competition, and from the Overture deal. Also, industry spending on online advertising had climbed 1% in the first-half of 2002, yet

Yahoo!'s ad sales tumbled 14% in the same period.[126] In September, Newsweek commented: "this bid to remake Yahoo! is nothing less than a superproduction. And a Hollywood ending is far from assured."[127]

In the summer of 2002, Semel tries to acquire Google with an offer of roughly $3 billion but Google considered the value to be too low and refused.[128] In April, Google had for the first time been announced as the leader in global websearch.[129] By November, 41,3 million people were using Google in the U.S. compared with 40,6 million for Yahoo!'s search page.[130] Directories had been losing their ability to compete with automated search both in reach and quality,[131] but, until October, Yahoo! was still using its directory as the as the primary source to its search results. That changed when it finally moved it to second place and started putting the automated search results, provided by Google, first.[132]

As a plan B, in December Yahoo! acquires Inktomi for $235 million, paying a premium of 41% over the market price.[133] "Yahoo!'s vast reach and its unmatched breadth and depth of services, combined with Inktomi's outstanding engineering expertise and leading search technology, will help us achieve our goal of providing users with the most comprehensive, relevant and highest quality search solutions on the Web", said Semel.[134] "There is a big difference between being a renter and an owner", he continued "being less dependent on others to create the innovation for us is worth an awful lot of money to Yahoo!". In fact, Yahoo! had estimated that for every one percentage point that it was able to increase its market share in search, it would gain $20 million to $60 million a year in advertising revenue.[135] Inktomi was at the time the search provider of Microsoft's MSN. It was still in some financial trouble due to the bubble crash and to the newcomer Google superiority. It did not have its own website, living only from search syndication only and paid inclusion – two new revenue streams for Yahoo!.

Overture	$688M
Google*	$294M
Yahoo!	$140M
MSN*	$138M
AOL*	$92M
(*Estimated - company did not disclose data) Source[136]	

Figure 2 - Keyword advertising revenues 2002

By March 2003, the environment among search engines was competitive. In the previous year, Overture had lead the keywords advertising business (see figure 2) and had just announced it would buy Altavista to gain control of its own search technology in order to better compete with Google – Google had recently stolen it biggest client AOL.[137] Following the latest innovation on keywords advertising called contextual advertising, Google was launching a new program called Adsense that would use Adwords technology to post its text ads in others' websites, according to the website's content, allowing anyone to become and advertising distributor. Google would manage the process, syndicate the ads, and make money.[138]

In the first quarter of 2003, 19% of Yahoo!'s revenues were coming from its deal with Overture and the commercial search sector was predicted to grow from $2 billion by year-end to $5 billion by 2006.[139]

In July, Yahoo! announced it would buy Overture for $1,63 billion. "By combining Overture's world class monetization platform and complementary web search assets with Yahoo!'s already robust search business, we will further improve our ability to offer the highest quality search experience", said Semel[140]

Curiously this move put Microsoft MSN in a strange position now that Yahoo! was in control of 2 of the 3 services that were providing its search functions. Yahoo! had now some of the best technologies available in the market related to search like Altavista, Inktomi, Overture and other companies that these companies had acquired themselves. "They are all really good, nice pieces for us to put together an entire framework of providing the best search experience to the user", said its VP for engineering.[141]

Social search

By February 2004, more than one year after buying Inktomi, Yahoo! dropped Google as its search provider and presented its own algorithmic search engine incorporating Inktomi's technology. It was based on a crawler they named Yahoo! Slurp.[142] "Today's announcement marks the beginning of a rapid succession of innovations from Yahoo! Search that will deliver against our mission of providing the highest quality search experience on the Web" said the Senior VP for Yahoo! Search and Marketplace.[143] Google had lost its largest licensing partner and specially the one that had given it more exposure to search users and had helped building its reputation but, in August 19th, it went public and without problems closed the month with a market cap of $28 billion. Yahoo! was then worth $38 billion. By the end of the year, only 13% of its revenues were coming from fees.[144]

Now that Yahoo! had its own search technology, it went on a quest to develop its own advertising technology in a project they code-named "Project Panama", integrating Overture's technology – they started in March 2005.[145] The sense of urgency in the project was obvious. When Semel and his CFO were asked to approve the initial project budget, their answer came back in 6 hours and was "Go figure what it takes and do it right".[146] Mr. Semel admitted they were starting late because Yahoo!'s search advertising system bought from Overture "was performing well, and it took time for executives to realize just how much better Google's system was".[147] Panama's main goal was to make the ads more related to the search queries in order to receive more clicks and, therefore, more revenue and more advertisers.

Now search was finally a priority; but Yahoo! had a unique vision of search in the long term – they saw the future on "marring search with the community" in what they called "social search", an approach where searching for one piece of information would build on other people's successes and failures to find the same information, within a community.[148] In the same way they once had wanted to stay away from fully automated search trusting on their editor build directory, they were again going back to people.[149] The web was evolving to a place where users were every time more producers of contents rather than only consumers and Yahoo! wanted to take advantage of it. In 2005, they developed their own social network called Yahoo! 360° where users could share their blogs, photos, music and restaurant reviews, a search service called My Web 2.0 where users could save and tag their search results to later allow them to be searched by people in their network, acquired Flickr, a picture sharing platform, Delicious, a network where users could bookmark and share their interests on the web, and were developing Yahoo! Answers where users would post questions that would be answered by other users.[150]

The turning point

After tens of million dollars in costs, Yahoo! announced Panama's launch to the summer of 2006.[151] Yahoo! had lost considerable market share to Google in the last year. In March 2006, Google's share of the online searches in the United States rose to 43% of all searches from 36% in March 2005, while Yahoo!'s share declined from 30% to 28%, during the same period.[152] An advisor that used to sit at the executive meetings was not surprised: Yahoo! had a "relatively constipated process of reviewing anything", it was slow, cumbersome and "not an entrepreneurial culture" mainly due to Mr. Semel's "low-risk, non confrontational" profile, he pointed. He particularly remembered a meeting where an engineer had asked how long the company would take from an idea to its execution – the answer was 8 months.[153]

By July, Semel announced Panama would be late 3 months.[154] The project was harder than expected; it created internal tensions with Overture structure that had not been fully integrated, Overture's software was still working with human revision and had not been designed to work on a global scale.[155] Before the third trimester's performance was presented, Mr. Semel warned investors that the growth of internet advertising had fallen short of

Yahoo!'s predictions and earnings would be on the conservative side of the estimations – but nobody else in the industry seemed to be affected by and ease on demand.[156]

In October, Panama finally started to be rolled out with advertisers gradually changing to the new platform. It gave advertisers a digital dashboard where they could manage their marketing campaigns, aim ads geographically and test their effectiveness, features that were already available from competition. The only significant difference to the competition was that Yahoo! had a "quality index" that could give advertisers a sense of how the system would rank an ad and guide the decision of how much to bid. The platform was intended to be flexible enough eventually to handle video and audio ads and to distribute ads to mobile devices, and that was one of the reasons it had taken so long.[157]

However, only in February 2007, after all the advertisers had been moved to the new platform, Panama started working with the new auction method. During all the time that had passed, Yahoo! had been operating Overture's original system in which results were ordered by bid. Google had taken the same time to improve its system to one where a supercomputer network of 100 machines evaluated more than a million variables in milliseconds to pick which ads to display with each search.[158] Technologically, Yahoo! was now where Google had been 5 years before. Financially, Google had been ahead of Yahoo! both in revenues and profits since 2005 (see exhibits 3 and 4).

The last year had been tough for Yahoo! with big advertisers leaving, strong competition and some financial problems.[159] By the end of the year, Flickr, Delicious and Yahoo! 360° were far from mainstream and Yahoo! Answers was full of rubbish.[160] In October, in an interview to Forbes, Semel let the world find out he didn't know the mission of the company he had been CEO for the past five years, and that the best he could do when trying to hide that was to say Yahoo!'s mission was "[to] deliver great value to its customers, and, basically, value them".[161] In November, one of Yahoo!'s senior vice-presidents was caught comparing the company's strategy to "spreading peanut butter across the myriad of opportunities that continue to evolve in the online world", in an internal memo[162] that leaked out: "We want to do everything and be everything to everyone", "we are reactive instead of charting an unwavering course", "we are separated into silos that far too frequently don't talk to each other", he pointed. Yahoo! was "overly bureaucratic" - "there are so many people in charge that it's not clear if anyone is in charge - this forces decisions to be pushed up rather than down", he said. "Decisions are either not made or are made when it is already too late", "we are held hostage by our analysis paralysis".

At the beginning of 2007 Yahoo! market capitalization was $34 billion. Google's was $142 billion. Even during the peak of the dotcom bubble Yahoo! had never been as high as Google was now. Despite initial positive signs[163], the effect of Panama didn't last. Google now had years of experience in fine-tuning both its search and its advertising algorithms.[164] Yahoo! was never able to close the gap between the two companies. (See exhibit 4)

On June 18th, Terry Semel sent an email to the board of directors resigning and suggesting Jerry Yang to take his place. He said Yahoo! was "again addressing challenges created by dramatic changes in the needs of audiences and advertisers" and that it was "the time for new executive leadership, with different skills and strengths, to step in and drive the company to realize its full potential".[165]

Yang took Semel's place. In February 2008, Yahoo! received a proposal to be acquired by Microsoft for $43 billion that was refused. Yang stepped down in November when Yahoo! was worth only $18 billion.[166] Carol Bratz was appointed to replace Yang in January 2009. She entered the job saying "we are not a search company" [167], like Koogle had done 11 years before. In the same year, Yahoo! truly stopped being a search company when Microsoft became the search provider for all its websites, in a partnership against Google.[168] Failing to present results, Bratz was abruptly fired by the company's board in September 2011.[169] A new CEO, Scott Thompson, took over in January 2012. By May, he was already out, amid controversy over his academic credentials.[170] No one can predict what will happen next, but Forbes declared Yahoo! as already dead[171] and ready to become another internet artifact.[172]

Exhibits

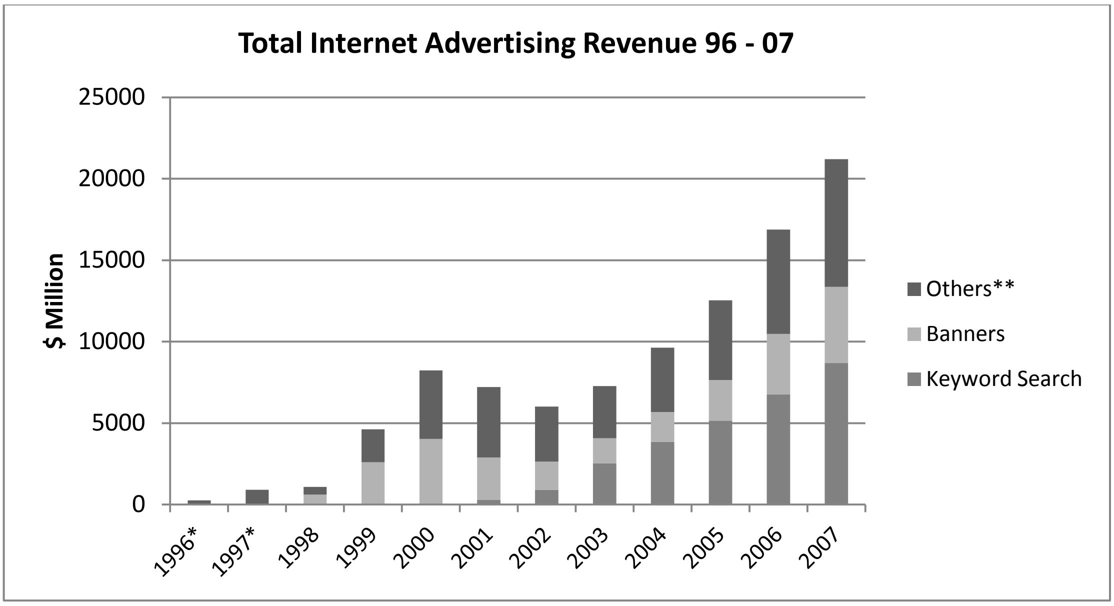

Exhibit 1 – *Only totals available; **Includes, for instance, e-mail, classifieds, rich media and sponsorships Source: Interactive Advertising Bureau - Internet Advertising Revenue Reports 96-07

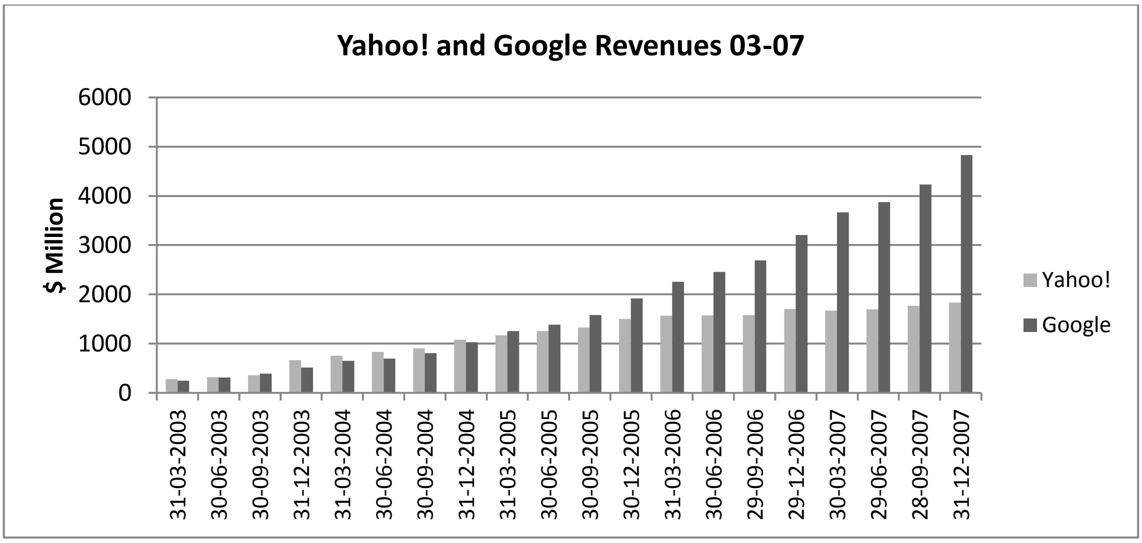

Exhibit 2 - Source: Bloomberg

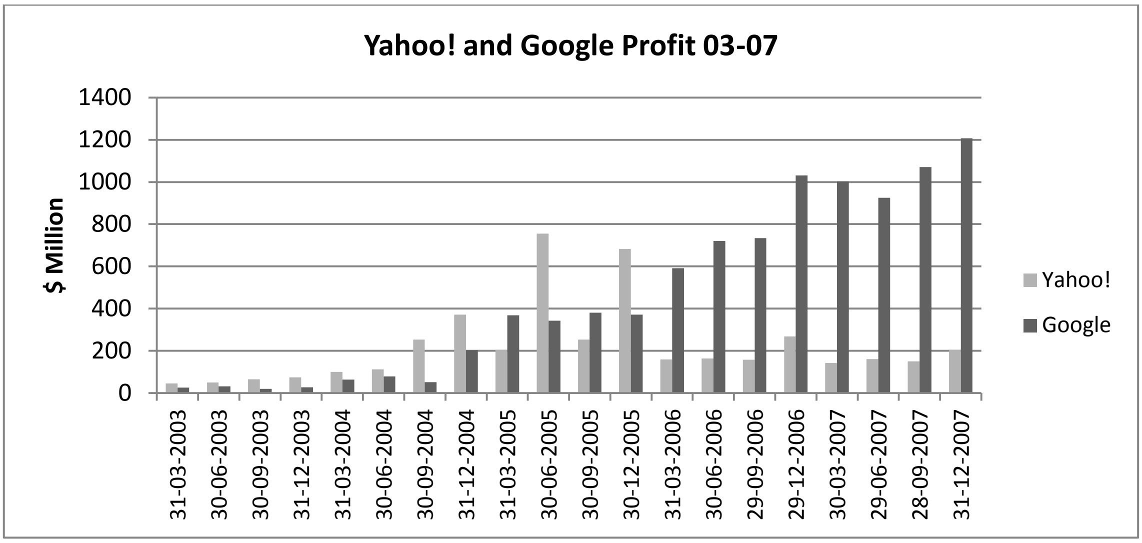

Exhibit 3 - Source: Bloomberg

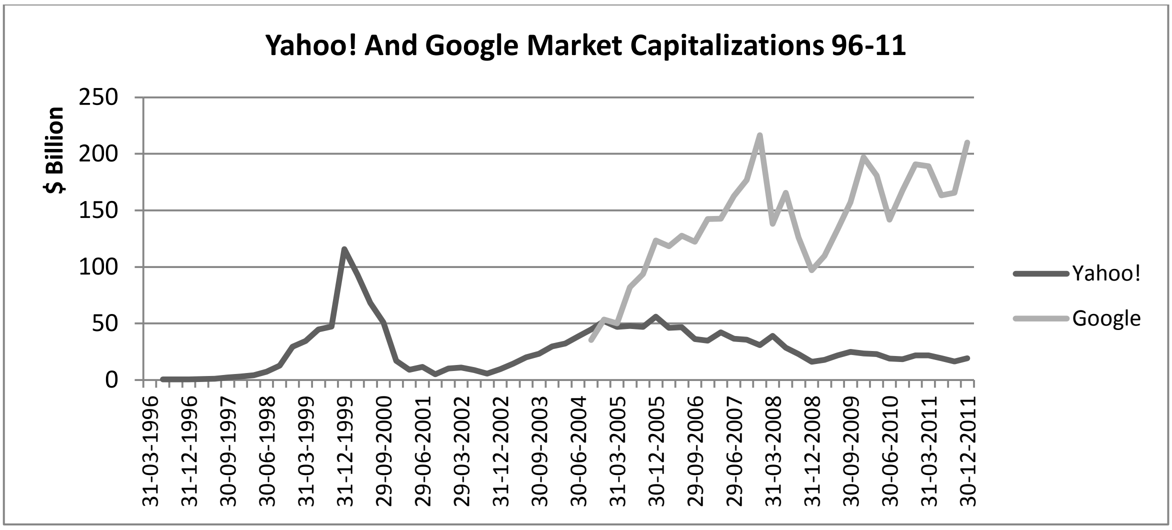

Exhibit 4 - Source: Bloomberg – Historical Market Capitalization (Quarterly)

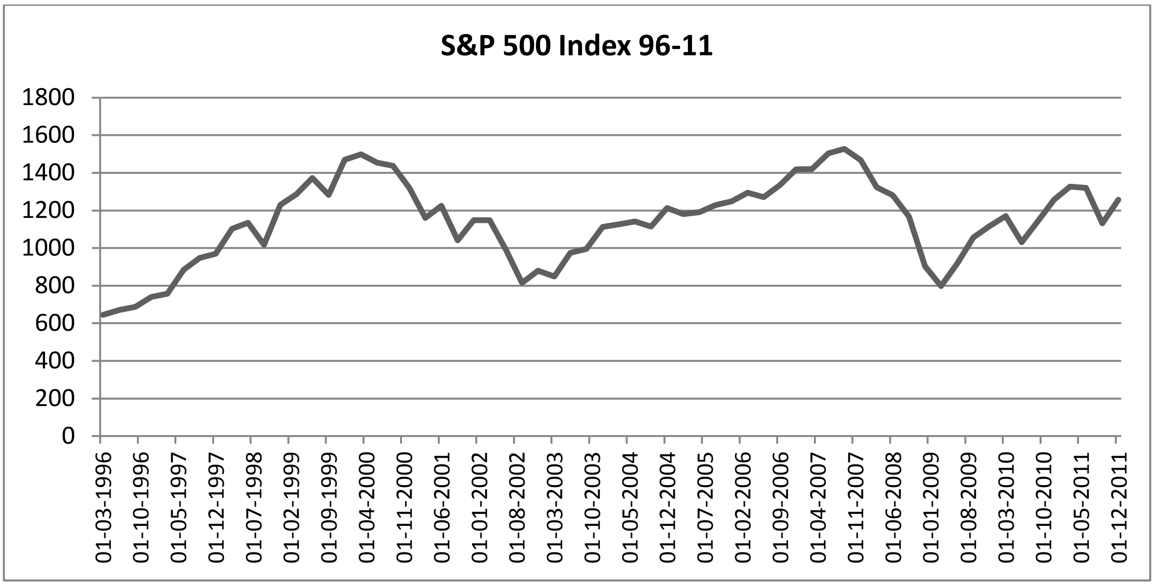

Exhibit 5 - Source: Bloomberg

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4. Teaching Note

4.1. Case synopsis

Yahoo! Inc. is an internet company incorporated in 1995. It started as a directory-based search provider and gained popularity for the accurate and highly relevant results it presented to users at a time automated search technology had flaws. Despite being a company created to help people find content on the web, when it decided to base its business model on selling advertising, it started seeing itself not as a search company but as a media company and transformed its website into a Portal, to enlarge its audience. At the time Yahoo! entered the online advertising business, it was based on banner ads that, despite providing proved low return on investment to the advertisers, were a growing source of revenues due to the fact that internet start-ups with venture capital financing widely available were its biggest clients. While Yahoo! was focusing its efforts on banner advertising, other companies, like GoTo.com, Altavista and Google, had been turning search traffic into a source of revenue by selling search results as an advertising mean. Keywords advertising allowed highly targeted advertising and showed ads to people actively looking for related information, in a clear contrast with banner technology. Keywords advertising should have risen the interest of the company that led the online advertising business, but it didn't - Yahoo! largely underestimated the potential of search and keywords advertising, failing to see how it could contribute to its own value creation. When the dotcom bubble burst and, with the bankruptcy of many dotcoms and the cut in the financing to those that remained, the demand for banner ads drastically decreased, Yahoo! was caught by surprise and had not developed any alternative revenue sources.

After its first CEO was fired, Yahoo! brought in an executive with an extensive media background to turnaround the company. He bet on charging fees for the features and contents on Yahoo!'s Portal and in new advertising formats with interactive and media content – this would push the company further away from keywords advertising, where it should be. Only in 2002 Yahoo! started to take actions to enter in the automated search business and develop its own keywords advertising technology that had always been outsourced. Its keywords advertising program was fully operational only at the beginning of 2007. Google, Yahoo!'s biggest competitor, had launched the first version of its keywords technology in 2000, and by 2002, had improved it to be superior to any other in the market. By the end of 2007 the gap between Yahoo! and Google's market value was unlikely to be closed. Yahoo! had failed both as a search company and as a media company since, online, those two businesses had been deeply interconnected - to succeed in one was now hard without the other and Yahoo! had failed to see the connection.

- After this synopsis, the teaching purpose of case is presented, followed by the instructor preparation section, the suggested assignment questions and a suggested teaching plan. Information complementary to the case and a case update are also included.

4.2. Teaching purpose

The teaching purpose of this case is to illustrate how the low level of dynamic capabilities of a firm can cause it to lose its competitive advantage when an external shock happens. It allows students to:

- Evaluate the level of dynamic capabilities of a firm and understand how that impacts the firm's competitive advantage
- Identify environmental shocks and assess their effect on a company
- Discuss how management bias and differences in opportunity templates of key decision makers can impact strategic decisions of a company vis-à-vis its competition

The case aims to prepare students to use dynamic capabilities in their business decisions and strategic analysis throughout their life. It is written in a simple and clear manner, being targeted to anyone intending to learn about dynamic capabilities. However, an instructor might want to consider its length as a variable to decide on whether or not to apply it to undergraduate students. This case can be particularly suitable as an initial motivation to the topic as, instead of presenting a case where a company successfully applies dynamic capabilities, it presents an example of the dramatic impact a low level of dynamic capabilities can have on a firm's performance and, consequently, why they are of the outmost importance.

As its final outcome, this case finds the reasons behind Yahoo!'s decline as a leading internet company and the roots that led to the problems if faces today.

4.3. Instructor preparation

An instructor teaching this case may consider the need or the interest in consulting the materials indicated in this section to go deeper on the topics listed below:

- <u>Origins, evolution and data on online advertising</u>

Bruner, R. E., 2005. The decade in online advertising 1994 to 2004. *DoubleClick Research,* April. Available at: http://static.googleusercontent.com/external_content/untrusted_dlcp/www.google.com/pt-PT//doubleclick/pdfs/DoubleClick-04-2005-The-Decade-in-Online-Advertising.pdf

Interactive Advertising Bureau. Internet Advertising Revenue Reports 1996-Present Available at: http://www.iab.net/insights_research/industry_data_and_landscape/adrevenuereport

- <u>Google's Adwords platform</u>

Levy, S., 2009. Secret of Googlenomics. *Wired,* 22 May. Available at: http://www.wired.com/culture/culturereviews/magazine/17-06/nep_googlenomics

- <u>Detailed technological functioning and history of sponsored search</u>

Jansen, B.J., Mullen, T., 2008. Sponsored search: an overview of the concept, history, and Technology. *Int. J. Electronic Business,* Vol. 6, No. 2, pp.114–131.

- <u>Search engines current and historical news and facts</u>

Search Engine Watch website at http://searchenginewatch.com/

Search Engine Journal Website at http://www.searchenginejournal.com/

4.4. Suggested assignment questions

1. What brought Yahoo!'s success to an end?

- The shock that changed Yahoo!'s competitive position was the burst of the dotcom bubble in 2000/2001. It consisted on the realization that most of the Internet companies were largely overvalued, which led to the fall of their value and to subsequent cuts in their easy financing – which lead many into bankruptcy. This exogenous economic shock changed dramatically Yahoo!'s customer base (47% of its customers were "pure internet companies") and drastically cut its undiversified revenues. The internet companies were the ones supporting the banner format as traditional advertisers had demanded more accountability in the online advertising since its beginning. As their financing was reduced, even the dotcoms that survived the shake-out started to look for more cost efficient advertising formats.

- A secondary shock that should also be considered as important to Yahoo!'s history is the development of the keywords advertising technology. It was developed in reaction to the needs of small advertisers that could not afford banner ads and to meet the need of more efficient and effective advertising. This was the emergence of an alternative to banner ads and the beginning of the democratization of online advertising. Despite providing better targeted ads and full accountability for its return (on a CPC basis) Yahoo! failed to understand the importance of this advertising model.
- Another secondary shock that can be considered was the development of the Adwords Select platform by Google. This development made the keywords advertising model mainstream and increased its popularity. Google's Adwords Select changed the way the ads were ordered when showed to the users, increasing their relevance and maximizing the revenue, and changed the auction method to extract more value from the advertisers' willingness to pay. It consolidated Google's position in the online advertising mean.

2. Evaluate Yahoo!'s propensity to sense opportunities and threats.

D 1 – Propensity to sense opportunities and threats: *Low*

- Yahoo! systematically failed to sense the opportunity posed by search traffic and keywords advertising technology, and the threat coming from the decline of the banners advertising model

Evidence
• **Failure to sense threats**
-Yahoo! failed to sense the dissatisfaction with banner advertising that was clear since its beginning - "our interest will increase when there are more sophisticated ways to measure its effectiveness as a marketing tool" said a representative from Coca-Cola in 1996. "We are truly, truly in a research and development phase - we're learning what works, what doesn't, how to measure it. We don't know yet" said a representative from Procter & Gamble in the same year. -The click through rate of banner ads was between 2 to 3% when a banner was new, and would afterwards fall to below 1% – P&G decided to pay advertisers only on a CPC basis in 1996 -Yahoo! failed to see how the burst of the dotcom bubble would affect its business model

permanently - “The Yahoo! franchise is stronger today than never before” said Koogle in October 2000. “This will be a transition year as we move our customer base from pure play internet advertisers to more traditional advertisers” said Koogle. “There is a softening of the economy, but we can use that to take market share from our competitors. (…) the near-term effect of softening economy is just that - short-term”, said Koogle in January 2001

-There was a failure to feel the decline of directory-based search – Yahoo! only made automated search its primary source of search results in October 2002, despite Google being the top search provider in the market and Yahoo!’s secondary search results source since 2000

-Failure to sense the threat from Google’s Adwords Select launched in 2002– Semel commented that Overture’s system “was performing well, and it took time for executives to realize just how much better Google’s system was”

- **Failure to sense opportunities**

- Yahoo! saw no opportunity in search by considering it a commodity – It outsourced the search function to OpenText (1995), Altavista, Inktomi (1998) and Google (1999)

-Lack of reaction to GoTo.com’s launch in February 1998 – Jim Gross saw the keywords search advertising as “revolutionary” and one that would “change the alignment of the proposition” for search providers. It gave small advertisers the “chance to buy space without having to pony up exorbitant fees for banner ads”

-Lack of reaction to Paul Graham’s Revenue Loop presentation in 1998 – Graham was showing Yang “technology that extracted the maximum value from search traffic and he didn't care”, the Revenue Loop technology was never implemented after the acquisition of Viaweb

-Lack of reaction to Ali Partovi’s Keywords pitch - Partovi “visited Yahoo! more than a dozen times to pitch the Keywords idea. (…) pitched every member of Yahoo!’s executive team multiple times, each time finding new ways to present the concept and new data to support how profitable and huge the opportunity might be, all in vain”

-Yahoo! ignored the fact that its engineers were using Google for search and the recommendation to buy Google in late 1998/early 1999 – search wasn't worth worrying about since it was only 6% of their traffic, and they were growing at 10% a month. To David Filo search “wasn't worth doing better”

-Lack of reaction at AltaVista’s entrance in keywords advertising in April 1999 – AltaVista’s CEO saw keywords advertising as “a rare opportunity to deliver a very good user experience, while generating revenues" adding that Altavista was taking the auction route to “give smaller businesses the opportunity to buy access to the site”

-Lack of reaction to Microsoft's trial in search advertising in 2000

-Lack of reaction to Google Adwords launch in 2000

3. What factors conditioned Yahoo!'s ability to assess opportunities and threats?

Several factors can be considered as part of the explanation of why Yahoo! failed to see the opportunity in search and keywords advertising and became overconfidence in relation to banner advertising (See Exhibit TN 1):

- Initial strategic decisions - Yahoo!'s initial strategy was one of the factors that contributed to its decline as they drifted the company's focus away from where it should have been:
  - Refusal to automate - as Yahoo!'s initial success was coming from its human compiled directory, Yahoo! rejected the inclusion of more technology in its core business and rejected the development of automated search technology. It decided it was not a technology company and started seeing technology as a commodity.
  - Advertising funded business model - as it made the decision to start selling advertising (it could have opted for a subscription model) it started seeing itself as a media company, which had as its main activity to sell advertisement and not anymore search providing. "What Yahoo! had been from day one was a media company" said Koogle in 1998.
  - Portal strategy - the need to attract more viewers to support its advertising business made Yahoo! pursue a Portal strategy that would lead it to focus its business on features and content providing. Search providing, its initial way of attracting users, was seen as just another function on its Portal.
- Lack of entrepreneurial culture – all these decisions impacted the culture of the company. Most of the internet and technology companies saw continuous technological development and exploitation of opportunities as fundamental to their success. In contrast, Yahoo! had its sales team and advertising platforms at its core, leaving programmers and technological development to be support structures.
- Banner Bubble – All of the previous factors were further fuelled by the success in banner advertising granted by the banner bubble. This led Yahoo! to get conformed to the status quo, and to the belief that that source of revenue would eventually last forever. The abundance of demand led to overconfidence by its sales force that made it loose contact with advertisers and their concerns. It is important to note that, as Yahoo! considered

itself a media company, it should have been extremely interested in the keywords advertising concept, since would have allowed it to provide a better service to its advertising clients.

- <u>Organizational structure and internal problems</u> - By 2001, Yahoo! had 44 business units and the decision process seemed to be concentrated on its top-decision makers - analysts criticised the isolation of its management team and its believe that "their way was the right way". Even with only 6 divisions the structure problems would persist in 2007, when the VP wrote in its memo "we are separated into silos that far too frequently don't talk to each other" and added that decisions were forced to be "pushed up rather than down". The centralization of the decision making process in the top managers and a lack of communication within the company might have left it more vulnerable to decision making bias of its top management and to the dominance of their personal opportunity templates that were not prepared to recognize an opportunity in search.
- <u>Wrong choice of Semel to CEO -</u> The bringing in of a CEO related to media to turn around the company in 2001 contributed to the further missing of the opportunity as he failed to bring a "fresh look" into the company. This would affect the company until Semel's exit in 2007.

4. Evaluate Yahoo!'s propensity to make timely and market oriented decisions and to change its resource base.

<u>D2 – Propensity to make timely decisions:</u> *Low*

- Yahoo! systematically failed to make decisions at a time when they could have had a positive impact on its performance in comparison to the competition.

Evidence
-Late change to automated search as primary source of search results in October 2002, despite Google being the top search provider in the market and its secondary search results source since June 2000. -Late actions to own automated search technology – only in December 2002 Yahoo! acquires Inktomi and only in February 2004 released Yahoo! Slurp. -Late actions to own keywords advertising technology - only in July 2003 Yahoo! acquired Overture when keywords advertising was already 35% of the total online advertising spending. Only in April 2002 Semel classified search and paid listings "key growth areas for Yahoo!"

-Slow internal decision making – Yahoo!'s executives would question the Koogle's ability "to get anything done" given its consensus-style management that was slowing down the company's decision making process (2000); Taking 8 months from an idea to start its execution Yahoo!'s process was slow in comparison to other Internet and technology companies; testimony from an external advisor that Yahoo! had a "relatively constipated process of reviewing anything", it was slow and cumbersome (2006); testimony from a senior VP "Decisions are either not made or are made when it is already too late", "we are held hostage by our analysis paralysis" (2006).

D3 – Propensity to make market-oriented decisions:

Since Yahoo! presented different levels of D3 at different stages of its history, the analysis must consider those periods separately:

Initial period (until 1998): *Medium*

- Despite the fact that part of Yahoo!'s initial advantage had its origin on the founders' hobby and not in systematic decision making, Yahoo!'s initial decisions were customer oriented and allowed it to attract users and gain the leadership among Portals in 1998.

Evidence
• **Initial period (until 1998)**
-Initially focused on editorial search results to give customers the highly relevant results automated search couldn't – led Yahoo! to "won the search wars" -Successfully implemented a portal strategy, developing features relevant to attract users – "only one out of three users would go to Yahoo! to search" by 1998

Second period (after 1998): *Low*

- The initial D3 level rapidly changed and Yahoo! drifted away from what its market, both advertisers and users, wanted.

• **Second period (after 1998)**
-Stickiness to banners to increase market share with no regards for customers that considered banners inefficient or questioned online advertising - Mallet said "we ran Yahoo! to optimize market share", "if there was a company that didn't get it [Internet advertising], we moved on very quickly"; an analyst commented the management team was isolated from the market believing "their way was the right way"

-Introduction of larger, more visible ads when advertisers wanted better targeting and return (2001) – Yahoo! had never done so by fear of a bad reaction from users; Google was betting successfully on a clean Interface since 2000 -Introduction of fees when customers were not willing to pay – It was estimated that only 10% of users would be willing to pay. By 2004 Yahoo!'s fees revenue was only 13% of the total when the goal was 50% -Lack of strategic focus - accusation by a Vice President in 2006. "We want to do everything and be everything to everyone", "we are reactive instead of charting an unwavering course" -Strategic drift to "social search" with My Web 2.0, Delicious, Yahoo! Answers, Yahoo! 360° and Flickr

<u>D4 – Propensity to change the firm's resource base:</u> *Medium-Low*

Yahoo! underwent several transformations throughout its life to add services, features and technologies to its offer. However, according to whether those changes resulted from acquisitions or internal development, they should be analyzed separately and given different weights in the analysis of D4. Resources which have origin in internal development are not only potentially more significant to the success of a firm, but also tell us more about the real competences a company possesses to change its resource base as to acquire does not mean necessarily to fully integrate or transform. Despite being successful in expanding its resource base by acquisitions, when it came to internal development Yahoo! failed systematically.

- Yahoo! did several acquisitions over the years, focusing on acquiring already successful businesses or technologies to increase its user's base or improve its competitive position. However, given that Yahoo! was organized as a Portal, many of those changes to its resource base were simple annexations of resources, requiring little technological modifications and little structural integration – after bought, these services were linked to the portal, but their basic technology remained unaltered and they would function independently from each other. Despite successful and valuable, these operations cannot illustrate a high propensity to change the resource base.

Evidence
• **Acquisitions**
-Acquisition of Viaweb in 1998, converted into Yahoo! Store -Acquisition of Geocities in January 1999 – the Web's most popular and widely used user

community -Acquisition of Broadcast.com in April 1999 – the leading destination on the Web for audio and video broadcasts -LaunchMedia acquisition, converted into Yahoo! Music – it claimed to have the largest collection of music videos on the Web -Acquisition of HotJobs -Acquisition of Inktomi in December 2002 -Acquisition of Overture in July 2003 – the best keywords advertising technology behind Google -Acquisition of Flickr and Delicious in 2005

- When it came to the internal development of functions, Yahoo! not only did it less times but also with far worse results. The most important projects developed internally (those that were key to its survival) systematically failed to achieve their goals. When Yahoo! had to completely integrate and transform acquired technologies or when it had to develop a product from scratch, it seemed to lack the ability to do so in a way that would be relevant for its ability to create value.

• **Internal Development**
-Transformation of Yahoo! auctions, personal ads and classifieds into paid services – Successful but a minor change -Development of Yahoo! Slurp finished on February 2004 (integrating Inktomi's technology) – Despite vital, was never able to compete with Google's Page Rank algorithm -Development of Yahoo! 360°, Yahoo! Answers and My Web 2.0 – In spite of being seen as the future of search by Yahoo!, these services failed to attract users and become mainstream -Development of Project Panama (integrating Overture's technology) – Started in March 2005, but only became fully operational in February 2007 Yahoo! – Panama aimed to compete with Google but did not bring any major difference from Google's Adwords Select initial platform, leaving Yahoo! technologically 5 years behind Google. The project was harder than expected and faced problems regarding the integration of Overture's structure. The final outcome was presented with a delay of 3 months and it took 4 more months for all the advertisers to be moved to the new platform.

D1	Low
D2	Low
D3	Low
D4	Medium-Low

Dynamic Capabilities Level: *Low*

4.5. Teaching plan

A plan for an 80 minutes presentation is suggested bellow. The analysis of the case should be divided in 2 parts, each one comprising the following subtopics:

Part I - Period before the dotcom bubble burst		**Proposed Questions**	**Time**
1	Environment of the search business and Yahoo!'s initial success	-	5'
2	Environment of the online advertising businesses and the development of the keywords advertising technology	-	10'
3	Analysis of D1	2 & 3	15'

Part II - Period after the dotcom bubble burst		**Proposed Questions**	**Time**
4	Yahoo!'s new strategy and Analysis of D3	4	15'
5	Google's technological superiority with Adwords and Adwords Select	-	5'
6	Yahoo!'s entrance on search and keywords and Analysis of D2	4	10'
7	Analysis of D4 and relationship between dimensions	4	15'
8	Final Remarks	-	5'

Following this plan students have the chance to:

- Gain knowledge about the environmental context of the emergence of the search providing business and of the online advertising business
- Discuss the importance of management decision making biasses by critically analyzing the decisions initially taken by Yahoo!'s management and its implications to the future of the company
- Observe the impact exogenous shocks can have in organizations
- Understand how Yahoo! ended up in the difficult situation it faces today

- Gain knowledge about the events that led to the online advertising and search providing environments we see today

4.6. Complementary information

- Yahoo!'s peak in profits in the second quarter of 2005 was due to gains in the sale of Google shares. Of the $755 million reported, $563 million came from gains in selling about $1 billion in Google shares which were, in part, in possession of Yahoo! as the result of Google's settlement with Overture for the patent infringement process.
- The peak in the last quarter of 2005 was due to a low level of provisions to income taxes
- The evolution of the online advertising pricing models can be found in appendix on the Exhibit TN 2

4.7. Case update

When Mr Yang took over Yahoo! he lacked executive experience, his former official title was "Chief Yahoo!". His refusal of Microsoft's deal is said to have been done more for personal attachment to the company he had created than for shareholder value considerations. Concerns and activism by some shareholders concerned with the destruction of shareholder value led him to step back as CEO and return to its previous position.[1]

Carol Bratz was appointed CEO in January 2009. She was seen as a possible salvation to Yahoo! because of her tough management style.[2] The outsourcing of the search function to Microsoft was decided aiming to cut costs and increase revenues, by cutting the investments in search and keywords advertising technologies.[3] She was fired in September 2011, after being unable to turn Yahoo! around and monetize its audience in comparison with Google and Facebook.[4] In the end of 2011, Yahoo! lost its lead in US display advertising market to Facebook.[5]

On January 4th 2012, Scott Thompson was appointed to CEO. He had previously been an executive at Pay-Pal.[6] On January 17th, Yang definitely left the company, leading Yahoo!'s

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[1] Anon, 2008. Icahn't; Yahoo!. *The Economist,* 26 Jul.
[2] Anon, 2009. One tough Yahoo!. *The Economist,* 17 Jan.
[3] Anon, 2009. Bingo! A deal between Microsoft and Yahoo!. *The Economist,* 1 Aug.
[4] Anon, 2011. Carol out the portal. *The Economist,* 7Sep.
[5] Anon, 2012. Cheerio to the chief. *The Economist,* 18 Jan.
[6] Anon, 2012. Scott lands. *The Economist,* 5 Jan.

stock price to soar after the news.[7] In March 2012, Yahoo! sued Facebook for several patent infringements in what The Economist called a “when you can’t beat them sue them” move – the decision was seen as desperate and come to hurt the image of the company.[8] In April, Mr Thompson announced its strategy for Yahoo!: he would reorganize the company in three groups: consumer, regions and technology.[9] He would work to correct Yahoo!’s strategic sprawl by shutting down 50 properties, consolidate redundant technology platforms, refocus its media network around the core areas of sports, news, entertainment and finance, focusing resources on commerce-based businesses, and refocusing its R&D resources on owned-and-operated businesses rather than on platforms that serve outside publishers.[10]

On May 4th, doubts emerged over the possibility that Scott Thompson have lied about its educational credentials, and was violating Yahoo!’s bylaws that prohibited him to be in more than one executive board of a public company (other than Yahoo!), hurting its credibility next to employees and investors, and further damaging the credibility of Yahoo!’s turnaround.[11] He resigned on May 13th, leaving Yahoo! under the control of an interim CEO.[12] On May 23rd, Yahoo! announced the sale of a participation it had in the Chinese e-commerce firm Alibaba - this participation accounted for roughly half of Yahoo!’s market value.[13]

[7] Anon, 2012. Cheerio to the chief. *The Economist,* 18 Jan.
[8] Anon, 2012. Making a tough job harder. *The Economist*, 14 Mar.
[9] Anon, 2012. Yahoo! restructures to focus on on-line media, social and e-commerce. *Forbes,* 11 Apr.
[10] Bercovici, J., 2012. Yahoo! CEO’s turnaround plan: Do less, do it better. *Forbes,* 17 Apr.
[11] Jackson, E., 2012. The time’s up for Scott Thompson and the rest of Yahoo!’s board. *Forbes,* 4 May
[12] Efrati, A., Lublin, J. S., 2012. Thompson resigns as CEO of Yahoo!. *The Wall Street Journal,* 13 May
[13] Anon, 2012. The long goodbye. *The Economist,* 21 May; Hartung, A., 2012. Core as Killer: The Demise of RIM, Yahoo, Dell. *Forbes,* 4 Apr.

4.8. Exhibits TN

Exhibit TN 1

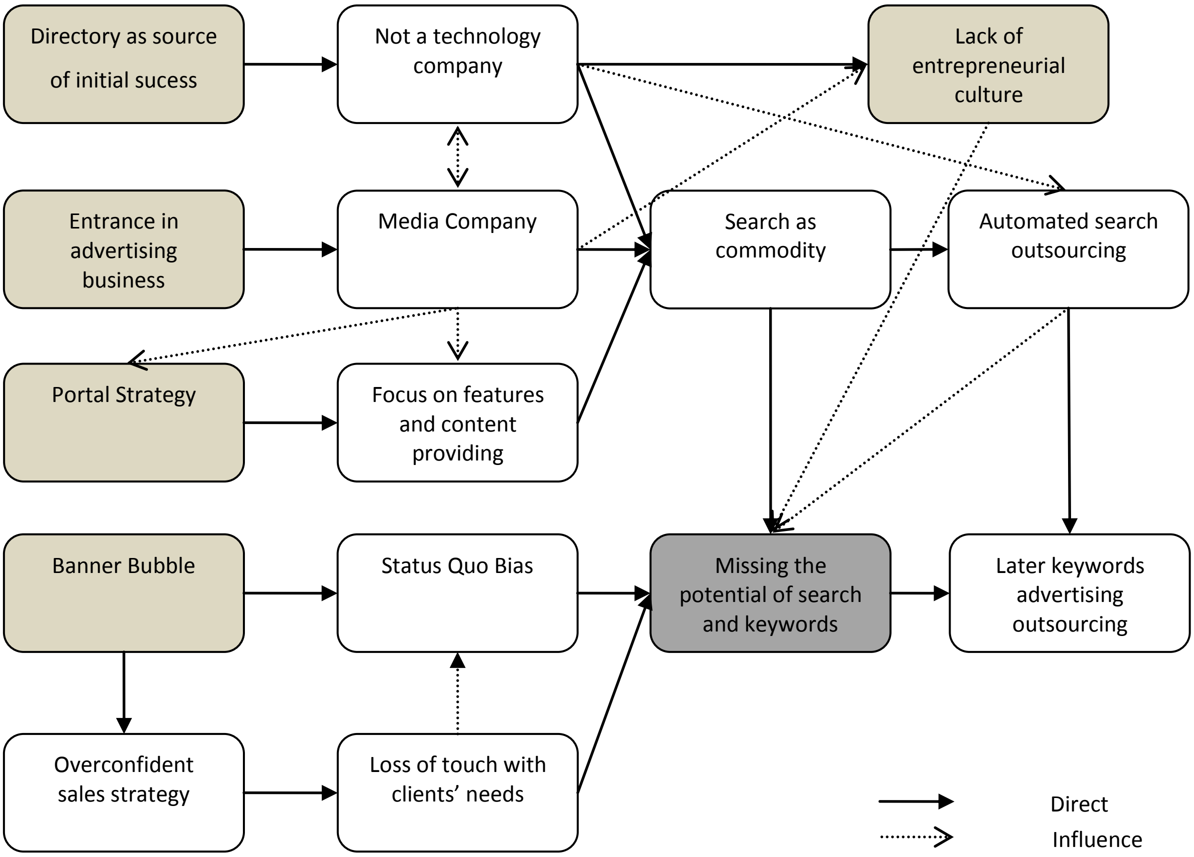
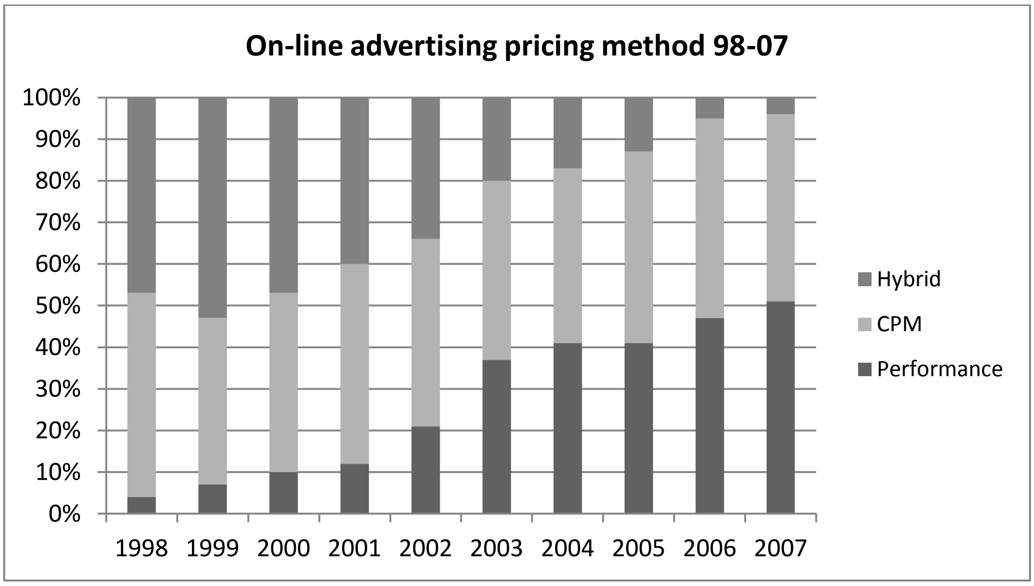


Exhibit TN 2 – Source: Interactive Advertising Bureau - Internet Advertising Revenue Reports 98-07



5. Discussion

In the Teaching Note we showed that the failure of Yahoo! can be explained by the lack of dynamic capabilities. In this section, we intend to suggest how the Yahoo! case illustrates several aspects of the dynamic capabilities theory.

The environment where Yahoo! operates and the time at which the main action unfolded, when the business models of the Internet companies were still in development, fits what Teece (1997; 2007) and Eisenhardt & Martin (2002) consider the ideal environment for dynamic capabilities to be applied, and what Zollo & Winter (2002) and Zahra et al. (2000) agree are the environments where dynamic capabilities may be more valuable: environments with a high degree of change.

Given the characteristics of the environment, Yahoo! had all the conditions to benefit from developing dynamic capabilities. However, their dynamic capabilities level was low, raising the question of what factors might have contributed to such a situation.

Dynamic capabilities have their foundations in an organization's knowledge base (Zahra et al. 2006). Furthermore, the starting point of the creation of dynamic capabilities is the firm's entrepreneurial activities that capture external knowledge as new situations arises, to promote organizational learning (Zahra et al. 2006). In fact, if we consider Yahoo!'s environment as a high-velocity environment - where dynamic capabilities rely on knowledge acquired as the environment changes (Eisenhardt & Martin 2000) - that starting point would have been of the outmost importance. At Yahoo!, that process seemed to be compromised.

Yahoo! was presented multiple times with information showing the potential of the search business, the opportunity in keywords advertising and the dissatisfaction with banner ads. However, there was always a misclassification of those elements as not opportunities or not threats. Yahoo! did not fail to become exposed to relevant information – its decision makers consciously disregarded the information as not important in several different occasions. That behaviour seems consistent with the mechanism of entrepreneurial interpretation (Barreto 2012), by which information that is incongruent with the opportunity template of an entrepreneurial actor is rejected when evaluating an opportunity. As Yahoo!'s focus was away from the search business, its decision makers failed to interpret the information necessary to evaluate it as a crucial opportunity. In addition, the status quo led them to ignore the fragilities of the banners advertising as a threat. Yahoo!'s decision makers' bias impaired its propensity to sense opportunities and threats compromising the starting point in the development of dynamic capabilities.

However, an organization's knowledge base is understood as the set of all that is known or understood by the organization and its members (Zahra et al. 2006), meaning that it does not include only the knowledge or the interpretation of an organization's upper decision makers, but of everyone in the company. The bias of Yahoo!'s decision makers might have been enhanced by a broader problem that was the way information was managed and decisions were taken within the company. It is important to notice that signs of opportunities and threats, and divergent opinions regarding Yahoo!'s strategic choices did not come only from sources external to the organization, but also from internal sources – one can consider, for instance, the integration of Paul Graham into Yahoo!'s staff, the fact that Yahoo!'s programmers were not using Yahoo! Search or the positions of the VP in his memo. This means that despite the fact that the right information was within the organization's knowledge base, it was not being successfully included into the decision making – fact that further compromised Yahoo!'s potential to have a high level of dynamic capabilities. In practical terms, it is the knowledge available to those who detain the decision making power and what they do with that knowledge that matters to the development of dynamic capabilities.

During Koogle's period as CEO, Yahoo! had 44 business units and analysts commented the insular nature of Yahoo!'s management team. By 2007, there is information that, internally, Yahoo! was separated into silos that did not communicate, there was a lack of accountability that was forcing decisions to "pushed-up", and that the organization was overly bureaucratic and not an entrepreneurial culture. This points to what seems a highly centralized decision making process that may be the cause to why Yahoo!'s decision-makers, in addition to the intrinsic bias of the entrepreneurial process, were failing to integrate available information and failing to take advantage of the full organizational knowledge base and learning. This further leaves room to assume that a link between dynamic capabilities and organizational structure may be significant, as the organizational structure impacts the information and knowledge flow throughout an organization.

This situation reinforces the benefits that can derive from formal mechanisms like knowledge articulation and knowledge codification (Zollo & Winter 2002) to enhance the organizational learning process and to ensure that the knowledge that exists and is created within the firm (deriving from internal or external sources) reaches its decision makers and is included in their decisions. The lack of communication and information circulation severely impairs the ability of a firm to develop a high level of dynamic capabilities, as the firm will fail to leverage on its whole knowledge base and entrepreneurial capabilities, both when sensing opportunities and threats and when making decisions.

A final topic this case succeeds to illustrate is the interrelationships between the individual dimensions of dynamic capabilities. As Barreto (2010) points, it is not only the correlation across all the dimensions that matters but also the individual variances and the covariances shared by some dimensions only. Yahoo! had problems regarding its propensity to change its resource base – the ultimate goal of dynamic capabilities. Nevertheless, it is clear that even if it had not, the decisions that would have driven that change in the right way were not done, and that those decisions were not done mainly because Yahoo! was failing to sense the opportunities and threats that would expose the need to make them. These relationships among dimensions may be particularly relevant in firms with a low level of dynamic capabilities, as a low score in one of the dimensions compromises the value of higher scores in the subsequent dimensions. For a company to have a high level of dynamic capabilities, it is essential that every dimension exhibits a sufficient level that allows the following dimensions to perform well.

6. Conclusion

In conclusion, the lack of dynamic capabilities successfully explains the abrupt end of Yahoo!'s success. Yahoo! failed at sensing opportunities and threats and, consequently, at making timely and market-oriented decisions to respond to the changes in its environment. In addition, when it changed its resource base to react, it also failed, exposing a lower propensity to change its resource base than its history of continuous acquisitions would suggest. When, with the burst of the dotcom bubble, Yahoo!'s client base changed to one demanding more measurability and more effective means of online advertising, it failed to evolve in the right direction and became an underperformer until today. That was caused by a multitude of factors from bad initial strategic decisions and bias of Yahoo!'s decision makers to possible organizational structure and knowledge management problems.

This dissertation illustrates how dynamic capabilities are a concept of extreme importance and with deep practical implications. As continuous competitive advantage resembles an optical illusion - as it is rather formed by a series of temporary independent advantages - dynamic capabilities are the lens that allows us to zoom in, and see how a company gradually moves from one scene of its life to the next, in what, to the naked eye, seems either a constant success or a sudden failure.

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