

# WHAT GOLIATH CAN LEARN FROM DAVID

*The Hidden Role Models in Value Creation and Entrepreneurship*



# BCG

THE BOSTON CONSULTING GROUP

The Boston Consulting Group (BCG) is a management consulting firm widely regarded as the global leader in business strategy. For 37 years, BCG has worked with companies in every major industrial and global market to develop and implement strategies for competitive success. Founded in Boston in 1963, BCG now operates in 32 countries and 47 cities around the world.

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Growth Plus is the association which brings together Europe's most dynamic, job-creating entrepreneurs.

The mission of Growth Plus is to promote entrepreneurship throughout Europe, to advise policy makers so as to improve the environment for growth companies, and to provide education and networking opportunities for entrepreneurs leading high-growth companies.

For further information visit the Growth Plus Web site at <http://www.growthplus.org>



Europe's 500 is a listing of 500 of the fastest growing companies in Europe. After a rigorous search process during which thousands of companies are studied, these 500 job-creating, entrepreneurial companies are selected according to an employment-creation index.

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## FOREWORD

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All across Europe and in all industries entrepreneurs are launching and managing businesses that achieve above-average growth rates in terms of employment and turnover. Their performance is based on the ability to continuously generate creative ideas about new products, new markets, new technologies, and new solutions and transform these ideas into real business models and hence into real growth.

These dynamic entrepreneurs and their companies have received only little public attention considering their remarkable contribution and performance in terms of job creation and turnover growth.

In 1997, the association Growth Plus was founded with the aim to promote entrepreneurship throughout Europe by identifying the top performers and role models and supporting these dynamic entrepreneurs through specific training offerings, networking opportunities and political lobbying.

In January 1999, The Boston Consulting Group joined Growth Plus as one of the four strategic partners with the objective to support the growth of the organization itself and to gain more insights into the nature of entrepreneurial growth. A broad research program has been started in order to generate benchmarks and new learnings on Europe's most dynamic entrepreneurs and their companies which can be transferred to other companies who have taken up the quest for growth.

This report shows that Europe's most dynamic entrepreneurs not only grow in terms of employment and turnover, they also grow profitably, and they create superior value from the investors' point of view. An increasing number of entrepreneurs have taken their company public. The research results on inputs, effects, and success factors of an IPO may provide some "decision support" for entrepreneurs planning a public offering sometime in the future.

We would like to thank everyone who participated in this study. Special thanks go to the Europe's 500 entrepreneurs and their teams as well as to the whole project team from BCG. Also a particular thanks to the Faculty of Strategic Management of the Business University, Vienna, which has delivered both the academic background and fresh views on entrepreneurial growth. We also acknowledge and thank Growth Plus for supporting this effort.

Achieving sustainable growth is a never-ending challenge. We hope that this report can add some insights on how to master it.



Dr. Antonella Mei-Pochtler  
Senior Vice President  
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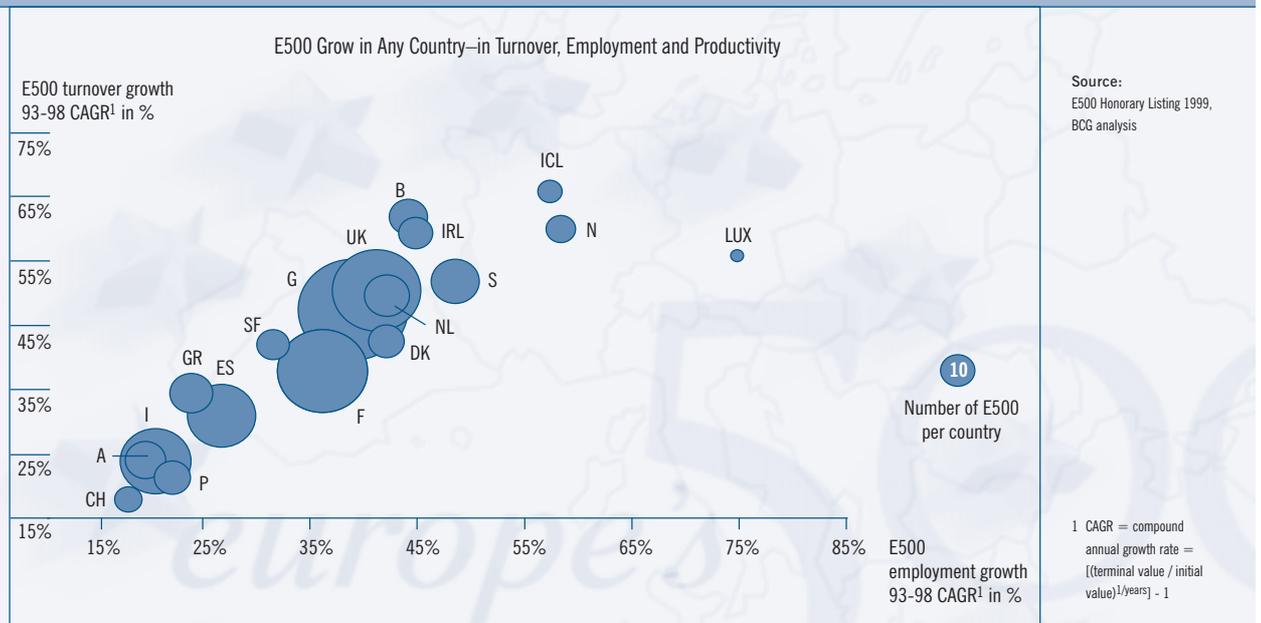
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## INTRODUCTION

There is a group of entrepreneurial companies in Europe that are consistently creating both employment and value at an extraordinary rate. If they were in California, their stories would be widely broadcast. In Europe, however, these companies' remarkable records are virtually unknown.

Every year the organization Growth Plus, a European organization of entrepreneurs, publishes a list of Europe's most dynamic companies based on their employment creation and growth in turnover. The performance of the top 500 of these companies has been remarkable: From 1993 to 1998 they created close to 230,000 jobs and increased their turnover by 30.2 billion euros.

### E500 GROW IN ANY COUNTRY



These companies (the "E500") are to be found throughout Europe, from Ireland to Greece, and in almost all categories of industry—from traditional industries like agriculture and manufacturing to "booming" segments of the service industry like the information technology and Internet sector. The compound

annual growth rate of both employment and turnover of the E500 between 1993 and 1998 was in excess of 15% in each of the 18 European countries with representatives in the group.

#### IN TERMS OF EMPLOYMENT E500 GROW FASTER THAN THEIR INDUSTRIES



The Boston Consulting Group has been studying these companies closely in order to find out what it is that drives their success. What are the key ingredients of their entrepreneurial formula, and can these ingredients be injected into large companies in order to give them an entrepreneurial boost?

One of the key findings of our analysis was the extraordinary performance in terms of value creation of the "listed" E500. The record of the E500 companies that are quoted on a stock exchange is little short of sensational. Many of them have recorded annual total returns to shareholders of over 100%, year after year. As a group, they have consistently outperformed the NASDAQ index and the MSCI Europe Growth index.

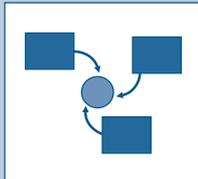
Taking a closer look at the growth and value creation champions we found that these dynamic fast-growing companies successfully manage to build a growth-perpetuating system which—like an incubator—helps transform entrepreneurial ideas into sustained real growth.

The second key finding of the study is that an IPO (Initial Public Offering) sharply accelerates the growth of dynamic companies. The inputs it requires have a positive effect on all growth dimensions. In particular, an IPO promotes the setting up of stock option schemes, which have been found to be closely correlated to value creation.

The results of this report are based on numerous questionnaire surveys and interviews with the entrepreneurs. We would like to take the opportunity to thank the entrepreneurs and their teams for providing us with their data and personal experiences.

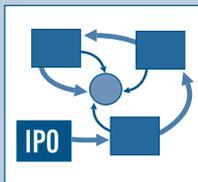
We hope that the report will hold lessons, both for successful companies wishing to grow even faster and for companies working on unleashing their "entrepreneurial potential."

## TEN LEARNINGS FROM THE E500 VALUE CREATORS



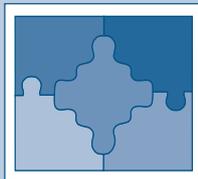
Building the growth incubator requires ...

- 1 clear and dedicated growth vision and strategy
- 2 open and entrepreneurially minded teams
- 3 investment in expandable capabilities and competences



Doing an IPO turns on the growth turbo by ...

- 4 additional cash to finance internal and external growth
- 5 more discipline, increasing professionalism and higher motivation
- 6 increased public awareness and enhanced company brand



Using the right IPO ingredients means ...

- 7 venture capital prior to the IPO
- 8 professional external advice and support
- 9 "compressed" and tightly managed IPO process
- 10 a committed entrepreneurial team and a sound equity story

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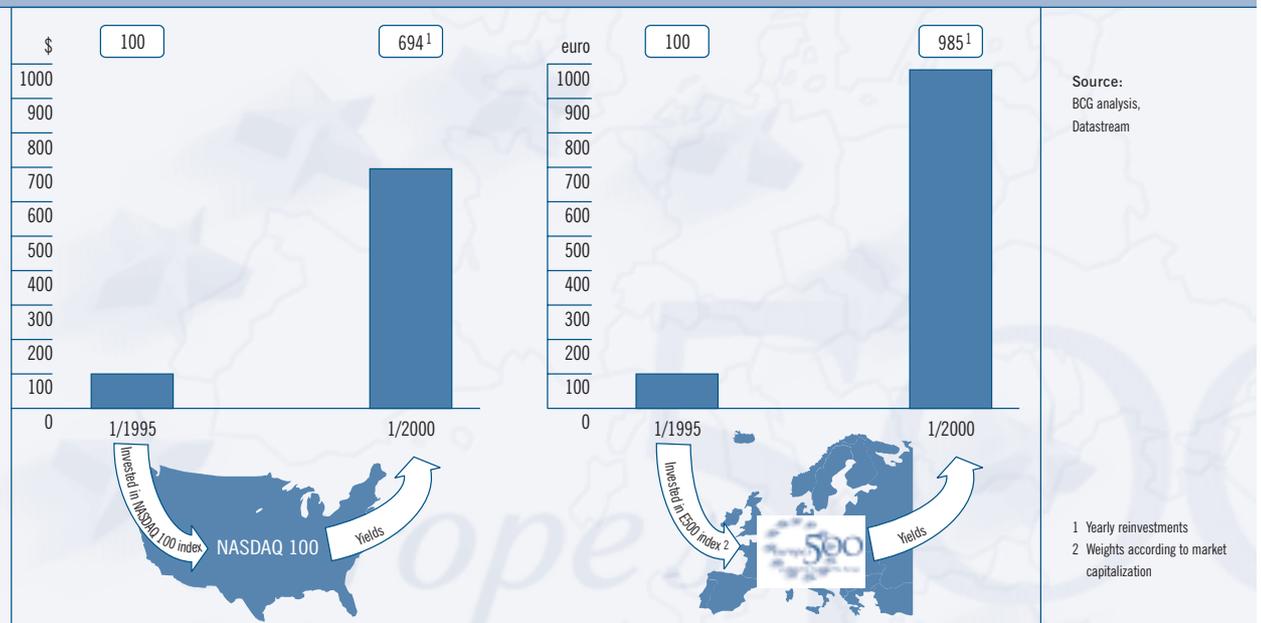
Simon Weinberger

## THE VALUE CREATION RECORD OF THE LISTED E500

Investors in the listed E500 companies have been well rewarded. The top 10 of the listed E500 have shown a remarkable performance and, as a group, the listed E500 companies outperformed the NASDAQ index and the MSCI Europe Growth index.

For example, \$100 invested in the NASDAQ 100 index<sup>1</sup> in 1995 was worth \$694 by January 2000, whereas euro 100 invested in the E500 index<sup>2</sup> in 1995 had grown to euro 985 by January 2000 (assuming in both cases that capital gains were reinvested annually).

### LISTED E500 ARE A BETTER INVESTMENT THAN FAST-GROWING U.S. COMPANIES



1 The NASDAQ 100 index is a value-weighted index of the 100 largest securities quoted on NASDAQ (starting with Microsoft, Intel and Cisco Systems). It is a good match with the E500 by type of company, not so much by industry.

2 The E500 index is calculated by taking the monthly stock prices of all quoted firms in the E500 listing (adjusted for dividends and stock splits) and calculating the market capitalization for all of them. Those values are converted into euros, using the end-of-month exchange rates, and the index is then determined by means of a standard formula.

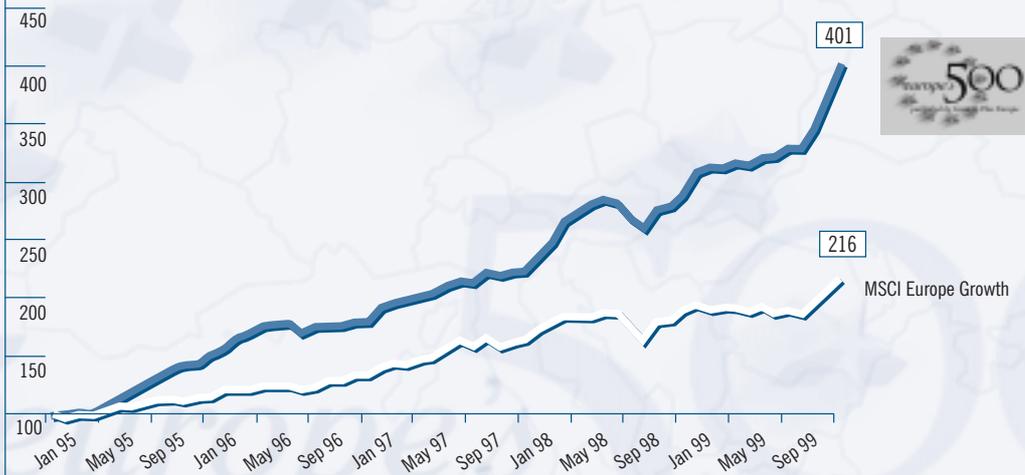
Comparing the E500 index to the MSCI Europe Growth index<sup>3</sup> shows an equally favorable result from the investor's point of view.

#### LISTED E500 SURPASS THEIR COMPARABLE EUROPEAN BENCHMARK

Comparison of Europe's 500 Index with the MSCI<sup>1</sup> Europe Growth Index

Source:  
Datastream,  
BCG analysis

<sup>1</sup> Morgan Stanley Capital  
International

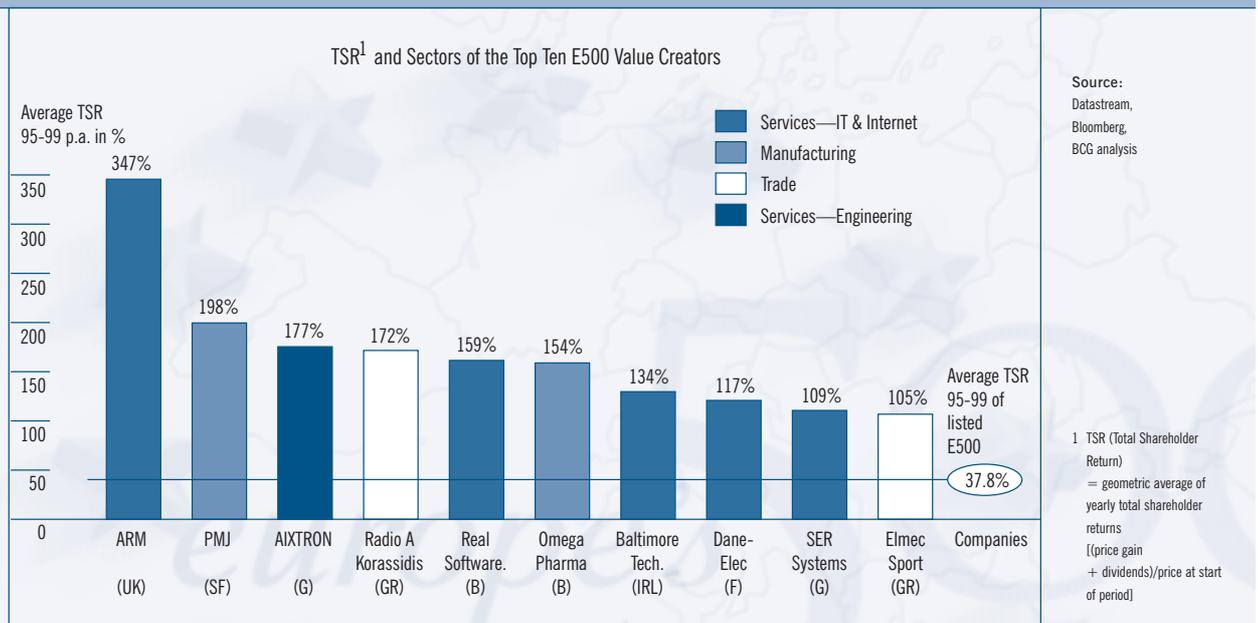


<sup>3</sup> The MSCI Europe Growth index is a good match with the E500 index by country and by type of company. It is a 15-country, value-weighted index (the countries are the members of the EU, excluding Luxemburg and Greece but including Norway and Switzerland). The index includes the top 50% of those securities in the MSCI Europe Growth index as measured by their price-to-book value.

## THE TOP 10 E500 VALUE CREATORS

Of the top 10 E500 value creators between 1995 and 1999 50% come from the information technology and Internet sector. But also companies from more traditional sectors like manufacturing and trade show that superior performance is not confined to the "booming" industries.

### THE TOP TEN E500 VALUE CREATORS PERFORM WELL ABOVE THE AVERAGE



## THE COUNTRY CHAMPIONS

The top value-creating countries over the five years were Greece (with an annual average TSR for its E500 companies of 92%), Belgium (88%), Finland (79%), Ireland (64%), and the Netherlands (55%).

### FAVORABLE EXTERNAL FACTORS MAKE GREECE THE WINNER

The Greek companies among the E500 recorded some remarkable success stories, helped in part by the rapid growth in the Greek economy (a 4.6% rise in GDP in 1998, accompanied by a fall in interest rates, an inflation rate of 2.1% and a rise in manufacturing output of 3.2%) and the increasing liquidity of the Athens Stock Exchange. The top Greek performers among the E500 are Radio Korassidis (with an average TSR of 172%), Elmec Sport (105%), Athena SA (88%), and Silver & Baryte (62%). The main market index there has grown by some 300% since the middle of 1997.

Future prospects in Greece are also good, with the widespread expectation that the drachma will shortly join the EMU and that the generous subsidies that the country receives from various EU funds will continue. The prospect of the 2004 Olympic Games is also helping to develop and enlarge the nation's infrastructure.

## THE SECTOR CHAMPIONS

### BEING IN THE IT SECTOR IS NOT A GUARANTEE OF SUCCESS

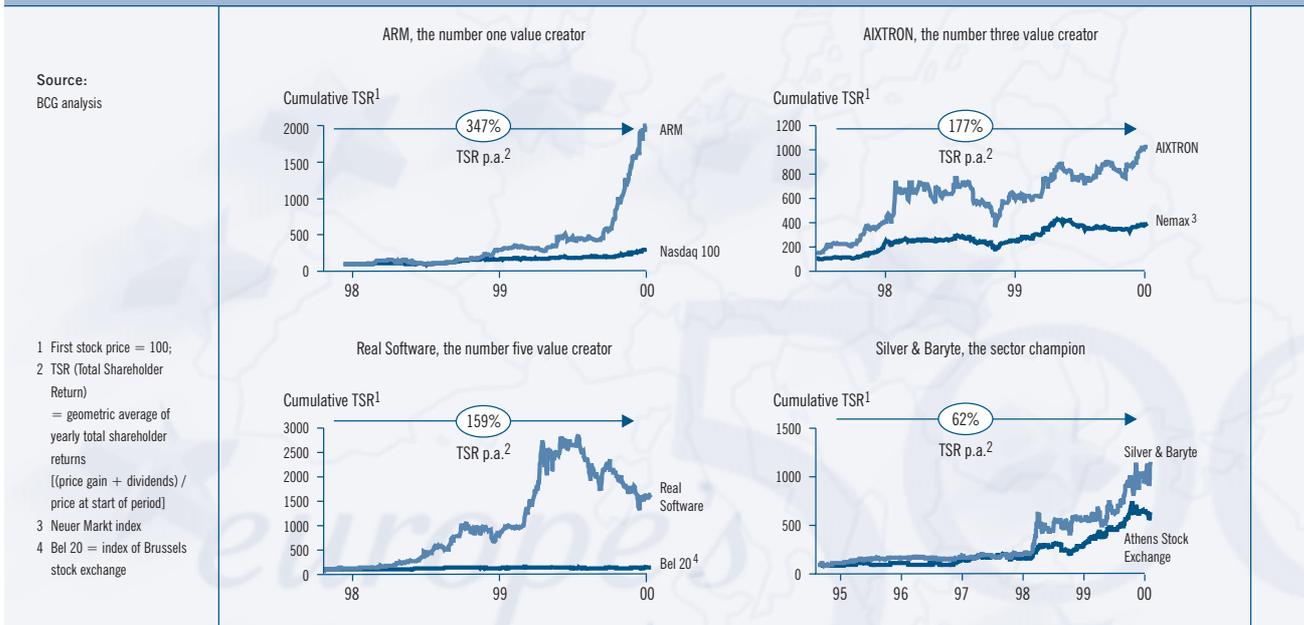
In the first half of 1999, 21 IT and Internet companies from among the E500 went public, and nine of them generated more than 100% in external value by the end of the year. Eight of them, however, failed to create any value at all. The best performer in 1999 was the French company Integra with a 620% increase in value.

The industrial sector which created the greatest value was the information technology and Internet sector. The average annual TSR from 1995 to 1999 of companies in this sector was 59%. But other more traditional sectors also did well. Engineering averaged 46%, chemicals 45%, construction 51%, and agriculture 40%. Even in traditional sectors like wood, paper and plastics, the Swedish company HL Display recorded an average annual TSR of 34% between 1995 and 1999.

### Selection of cases

Four E500 listed companies are featured in more detail to illustrate how top performers manage their growth and how they use their IPO to accelerate this growth. These companies come from different countries and various sectors. What they have in common is their remarkable record of value creation.

### FOUR COMPANIES SELECTED AS EXAMPLES FOR SUPERIOR VALUE CREATION



Backed by the results of our analyses and interviews, they serve as role models in value creation and entrepreneurship.

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## THE VALUE CHAMPIONS AND THEIR GROWTH INCUBATOR

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Fast-growing companies successfully build a growth-perpetuating system—which, like an incubator, helps transform entrepreneurial ideas into sustained real growth. At the "core" of the incubator we found innovation, a clear growth vision and growth strategy to be the fundamental "seeds" or drivers of growth.

In BCG's continuing work on entrepreneurial growth, a number of such "seeds" have been identified in entrepreneurial firms. The main one is innovation. Innovation is not just a matter of coming up with new products or new technologies. It also means "reinventing the rules of the industry" in the form of new business solutions and new business models.

One key to continuous innovation is the existence of a clear and challenging vision of growth and a strategy that is communicated unequivocally throughout the firm. The close examination of mistakes is another important source of innovation and company learning. Entrepreneurs in dynamic companies understand that mistakes can be a source of innovation, especially when they arise from regular everyday operations. Dynamic enterprises analyze their mistakes and communicate the lessons gained from them throughout the organization.

"Budgeting and numbers can help you to understand where you are going," says one of the entrepreneurs questioned as part of the study. "But only a vision makes you go." That vision can be many different things. It can be a desire to create a global technical standard, for example, or to be a market leader. Or it can be an ambition to become an international business, or to develop environmentally friendly products and services. Visions, however, have to be dynamic. They help a company to focus on a common goal, but they must not be allowed to inhibit growth by forcing the firm onto a predetermined track.

*"Budgeting and numbers can help you to understand where you are going. But only a vision makes you go."*

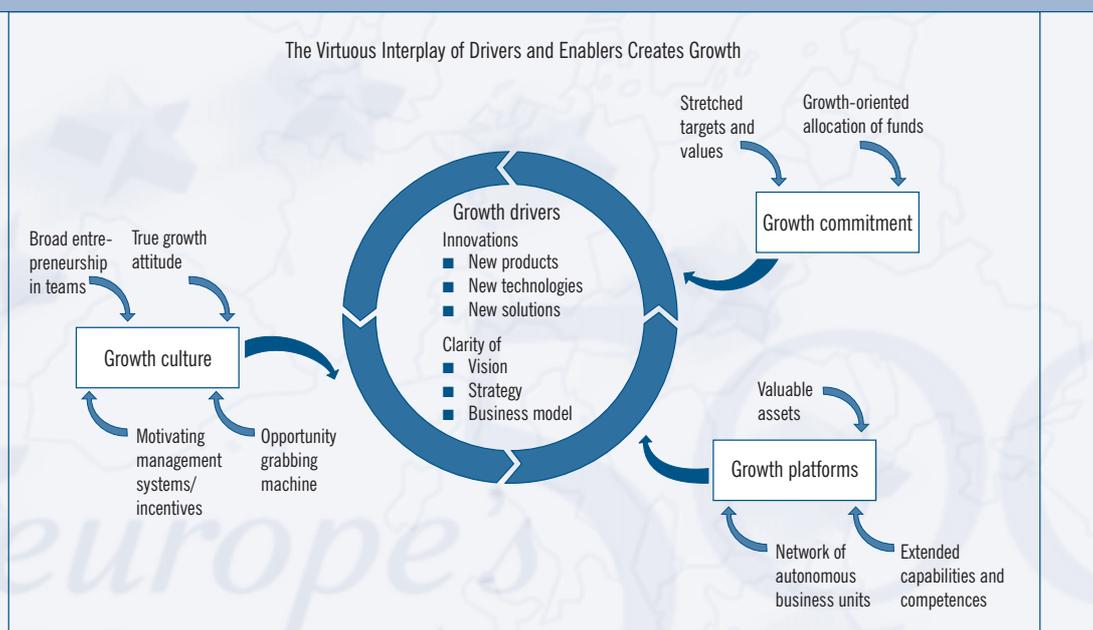
Within most E500 there is frequently one key personality who stands out as the main "motor" of entrepreneurial action. It is his or her own "personal" vision of him-or herself as a financially independent individual and the owner of a highly successful business that drives the whole company. Part of this personal vision almost invariably includes taking the company to the stock market by launching an IPO. This is one way of instantly measuring the value of what the entrepreneur has created.

The "seeds" need to be embedded in the right "environment"—a situation that includes a number of dimensions that we refer to as "growth enablers." BCG has identified several enablers that are common to the majority of Europe's most entrepreneurial companies. These include

- an appealing and motivating growth culture,
- appropriate growth platforms,
- a true growth commitment.

## BUILDING THE GROWTH INCUBATOR

Source:  
BCG analysis



## BUILDING AN APPEALING AND MOTIVATING GROWTH CULTURE

The existence of a growth culture is critical. It comes from developing a "dedication to growth" throughout the firm, a dynamic frame of mind that enables all members of the firm to fight the incipient inertia that is always lurking at the edges of success. A true dedication to growth will enable a company to retain the lively entrepreneurial spirit that pervades in a business' early years.

A true growth culture means sharing the vision, strategy, responsibility, and ownership of the business with the employees. This calls for open and efficient internal communication systems.

*"Every minute of your life you develop something. And every minute of your life you must communicate it to your team."*

A growth culture is also based on team spirit. This requires a charismatic leader to share the firm's strategic vision with a team of action-oriented, forward-looking people who are willing to take risks and responsibility.

*"The right team behind an idea is the key success factor."*

Entrepreneurs choose their key management team on the basis of exceptional commitment, high skills and entrepreneurial thinking. These key people are frequently promoted from within the organization, helped in most cases by a program of almost continuous training. All entrepreneurs emphasize that non-stop learning is a core competence of their organization. Offering extensive training opportunities (even as far as a fully financed MBA) is vital if companies are to retain their most entrepreneurial people. Firms also need to provide these people with frequent job rotations and the early opportunity to take on full responsibility for a whole business unit.

*"You can build and retain the right team only with the right incentives."*

Setting up a system of management incentives that truly motivates is also crucial. This involves sharing ownership of the company with its employees and introducing stock option schemes. The effect of stock options on entrepreneurial companies is dramatic. The average total shareholder return (TSR) of those companies quoted in the BCG sample that had stock option schemes was 53% per annum. For those without stock option schemes, the average TSR was actually negative.

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#### ESTABLISHING APPROPRIATE GROWTH PLATFORMS

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Growth requires the development of suitable partnerships with customers and with suppliers. Partnerships help firms to understand their marketplace better and to follow market changes more efficiently.

*"Partnerships provide a secure ground on which to grow. They allow you to focus on the future instead of fighting for survival on a day-to-day basis."*

We have found no special type of network or contractual agreement between partners as being particularly well suited to growth. The key element is the "network ability" of the company and especially of the entrepreneur—i.e., the ability to think and act with others on an equal basis. Strong partnerships are particularly vital for R&D-intensive companies.

Dynamic enterprises tend to build a network of autonomous business units. BCG found that E500 companies tend to have few levels of hierarchy, and that they work predominantly in project teams. The communication and decision-making processes with the business units are fast, open and they are increasingly supported by sophisticated intranet-based solutions.

*"I never liked hierarchy. I prefer a flat organizational structure, high levels of responsibility and flat communication structures."*

**BY OFFERING "ONE-STOP SHOPPING" REAL SOFTWARE BUILDS ON LONG-TERM PARTNERSHIPS WITH CUSTOMERS**

The Belgian company Real Software is able to offer "one-stop shopping" for industry-specific solutions in a variety of sectors thanks to the fundamental expertise it has acquired. This industry expertise is the result of long-standing partnerships with the customers who continuously provide Real Software with the sector-specific know-how that enables them to stay ahead of the market and to offer their clients tailor-made state-of-the-art IT solutions.

The advantage of this kind of organization is the existence of independent business units which are closer to their markets and attract entrepreneurially minded managers.

Growth-oriented firms also have to have expandable capabilities and competences. This is vital if a firm is to grab new market opportunities as and when they arise. But it demands a high degree of market know-how and the ability to rapidly translate external changes into the company's own internal structure.

Most of the entrepreneurs in the survey view their core competences from a process point of view—i.e., they are organized in a way that allows them to set up specialized project teams at short notice. These teams combine the skills of all the traditional business functions and are, thus, able to manage the whole of a new operation. These highly flexible and specialized teams are, literally, up and running from the word "Go."

**POWERFUL PARTNERS ARE THE BASIS OF THE "INTELLECTUAL PROPERTY" BUSINESS MODEL OF ARM**

ARM was the number one value creator among the E500 in the second half of the 1990s. It designs the architecture/technology for 32-bit microprocessors. In its market, ARM has a 21% share, second only to market leader Motorola, which has 35%.

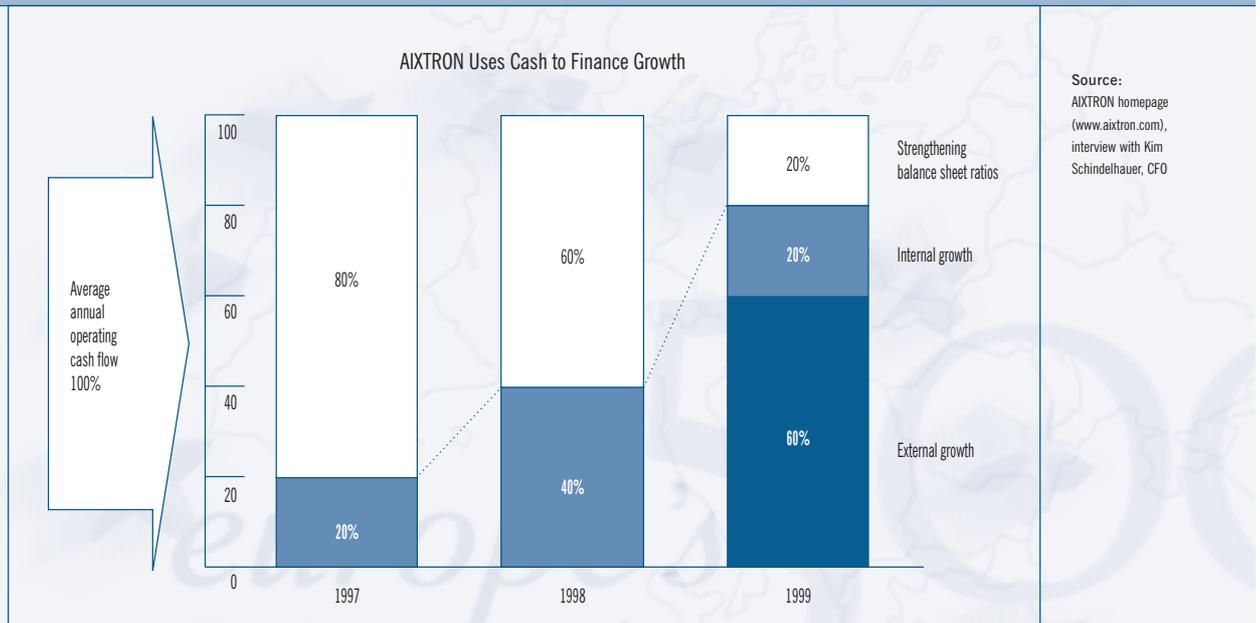
ARM is in a growing business sector. Demand for RISC microprocessors is expected to increase by between 400% and 500% over the next five years, driven by the enlargement of the applications for microprocessors (in automotive and digital/audio areas, for instance). The keys to the firm's success are cross-industrial product development, a powerful brand, technological know-how, and marketing and distribution.

Powerful partners are central to the firm's business model. ARM has 130 licensees as partners, a veritable Who's Who of the electronics industry—from IBM to Yamaha. New, high-quality licensees are continually coming on board (Mitsubishi in 1999, for instance), and the firm has a growing amount of repeat business (with groups like Ericsson) for successor generations of microprocessors.

## TRANSLATING THE GROWTH VISION INTO A CLEAR GROWTH COMMITMENT

Another "enabler" that we have found is the commitment to growth demonstrated by having demanding targets and a growth-oriented allocation of funds—using cash flow in order to finance organic growth or acquisitions, is one such example. This involves focusing on key ratios that do not inhibit growth. And it means having an internal or external financial sponsor who is committed to the long-term growth of the firm.

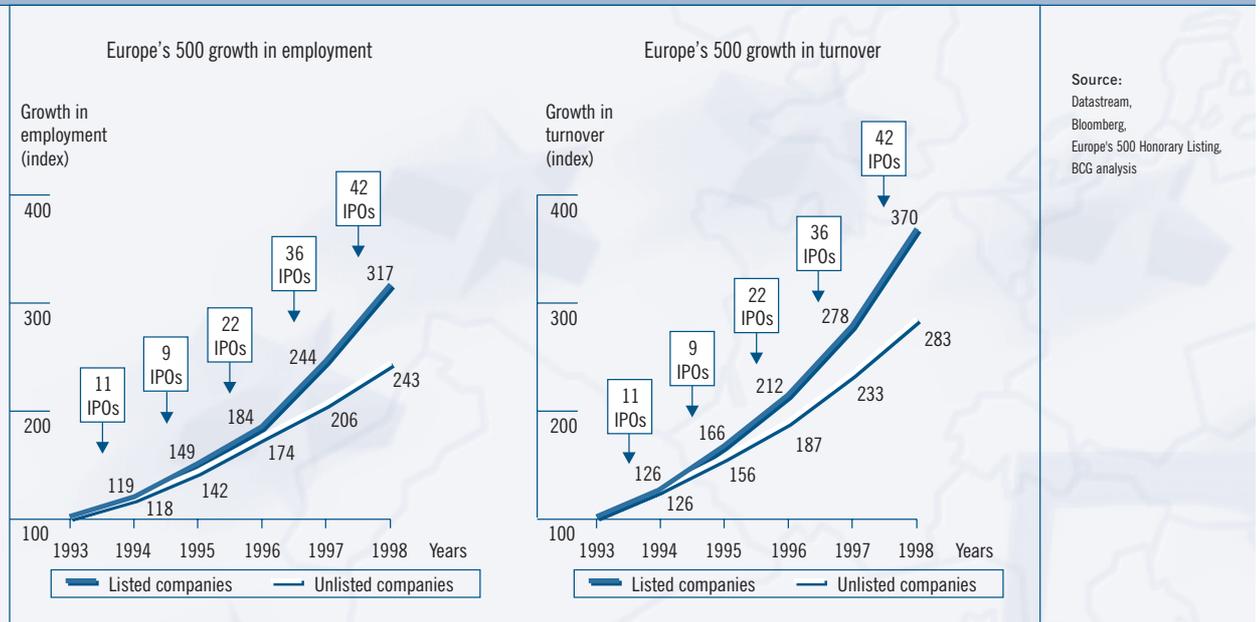
### CLEAR GROWTH COMMITMENT HAS HIGH PRIORITY AT AIXTRON



## THE IPO AS A GROWTH BOOSTER

Those companies among the E500 that are listed on a stock exchange grow distinctly faster than those which are not. Of the 1999 E500, 177 are listed. And these 177 have been growing at a consistently faster pace than the 323 unlisted ones. Between 1993 and 1998, their turnover grew by 270% on average, compared with a growth for the unlisted companies of only 183%. Likewise in terms of employment, the listed companies grew by 217% between 1993 and 1998, while the unlisted ones grew by only 143%. In 1999, eight out of the top ten companies in terms of BIRCH index<sup>1</sup> were listed.

### LISTED E500 GROW AT A HIGHER PACE THAN UNLISTED E500



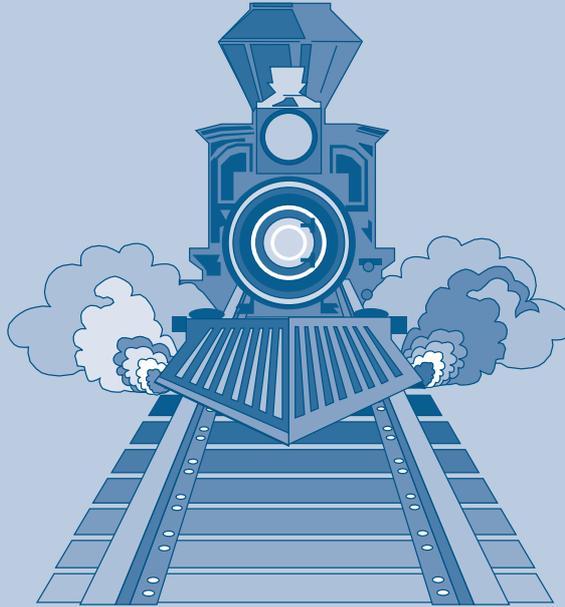
An increasing number of successful entrepreneurial firms are taking advantage of the growth-enhancing effects of an IPO. The number of E500 companies choosing to have an IPO has increased from nine in 1995 to 39 in 1999.

<sup>1</sup> The BIRCH index is a measure of the relative growth in employment. The index is calculated by multiplying the absolute growth in employment by the relative growth.

## THE IPO BOOM CONTINUES DUE TO<sup>1</sup>

- creation of new segments on stock exchanges for dynamic mid caps
- establishment of the venture capital sector in Europe
- growing number of spin-offs as a result of the installation of new company structures of large groups
- ongoing privatization of the public sector

More than 200 IPOs expected on  
"Neuer Markt" by the end of  
the year 2000<sup>2</sup>



<sup>1</sup> Wirtschaftswoche  
Feb. 2000, "Die Besten  
finden,"  
Going public-online.de  
Feb. 2000

<sup>2</sup> Jentzsch (Goldman Sachs),  
Klein (Deutsche Bank equity  
research)

An IPO warms up the growth incubator because the inputs it requires enhance all the dimensions of the incubator.

## AN IPO PROVIDES THE NECESSARY CASH TO FINANCE ORGANIC AND EXTERNAL GROWTH

An IPO provides cash today (the net proceeds of the issue) and the promise of more cash tomorrow (from further public offerings in the future). This cash increases the organization's commitment to growth. It

can, for instance, be used to finance R&D and/or market research that will help the company to expand organically. It can also enable the company to grow through acquisition and the purchase of new assets—state-of-the-art technology, for example, or state-of-the-art people.

### HOW TOP VALUE CREATORS USE THEIR CASH

AIXTRON, a German producer and developer of industrial equipment for the compound semiconductor industry, used 40% of the net proceeds of its IPO in 1997 to finance internal growth. Most of the funds were allocated to the enlargement of capacity. AIXTRON used its further capital increase in 1999 to finance external growth.

Cash needed to finance further growth was the key reason for Silver & Baryte, a Greek producer of ores and industrial minerals, to do an IPO in 1994. After reimbursement of debt, S&B used 15% of the net proceeds to finance capacity enlargement and 15% for external growth.

IPOs greatly increase the opportunity for mergers and acquisitions (M&A), and sometimes they can be the key to mergers through share swaps—a key feature of the new economy. M&As themselves foster growth by enabling companies to get hold of complementary assets and capabilities at a faster pace, and, thus, to accelerate their entry into new markets.

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## AN IPO FACILITATES THE INTRODUCTION OF STOCK OPTIONS

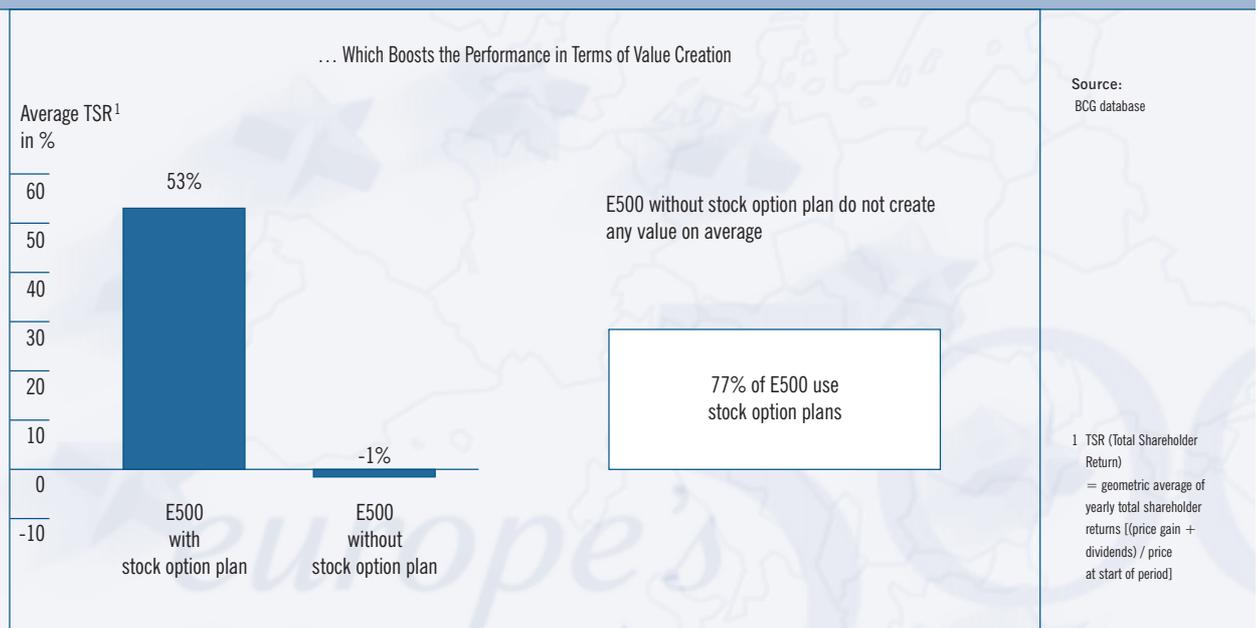
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An IPO also makes it much easier to set up solid stock option schemes for employees and to issue bonus shares. This has two key effects on the entrepreneurial culture: in today's fast-moving, high-tech young businesses, offering stock or stock options is a key ingredient in the packages necessary to retain and motivate the best-qualified people. In addition, our study found a highly significant correlation between stock option plans and value creation.

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## AN IPO FACILITATES THE INTRODUCTION OF STOCK OPTION PLANS ...

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## AN IPO "FORCES" THE ENTREPRENEUR TO HAVE A CLEAR EQUITY STORY

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An even more important element of an IPO is linked to those activities that have to take place before the IPO. The sharpening of the "equity story," the business rationale for an offering that is a standard part of the documentation drawn up to persuade investors to take an interest in the company, has a positive effect on the dimensions of the growth incubator. Drawing up such documentation forces the organization to become clearer about its strategic position and about the business model that it intends to follow.

This clarity helps to build a strong network of autonomous business units by reducing any tendency for individual units to pull in separate and independent ways. Moreover, the equity story's investment plans foster a growth-oriented allocation of funds. The strategic review that it requires helps the organization to accumulate a deeper understanding of its markets.

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## AN IPO INCREASES PUBLIC AWARENESS AND CREATES A COMPANY "BRAND"

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An IPO is also an opportunity to strengthen the company's brand name through the considerable publicity that it engenders. A strong brand name has a positive impact on several growth enablers. For example,

### **"BRANDING" IS A GROWTH ISSUE**

- The image of being a high-tech company listed on NASDAQ was the major reason for ARM's dual listing.
- Investors demand a long-term perspective from technology companies. One of the reasons for AIXTRON's IPO was to demonstrate this long-term commitment.
- Increased name recognition among clients in Belgium and enhanced trust among potential foreign customers were among the reasons underlying Real Software's decision to do an IPO.

it helps to give the network of business units a strong corporate identity, and it helps to attract highly qualified employees (who prefer to work for a "known" name). It also reassures potential partners (who are more attracted to a strong brand than they are to a complete unknown). At the same time, it acts to build up the brand equity that is today a part of most companies' strategy.

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### **AN IPO PROFESSIONALIZES THE COMPANY**

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#### **AN IPO REQUIRES DISCIPLINE AND PROFESSIONALIZATION**

- The strategic input of its venture capitalists and the process of preparing for the ISO 9001 certification in 1994 turned AIXTRON into a highly professional company before its IPO and, thus, enabled it to prepare its offer in only three months.
- The fulfillment of the strict admission criteria for listing on NASDAQ led to an upgrade of ARM's internal and external reporting systems.
- Its IPO in 1994 enabled Silver & Baryte to become a highly professional company operating on a truly international scale.

IPOs also help by imposing discipline on companies. This they do, for instance, through their requirement that a company's accounts meet international standards, and through the scrutiny of brokers' analysts that comes as a consequence of having a listing. These have a positive effect on enablers in a number of ways. They put pressure on management to achieve promised targets and they introduce growth accounting into the corporate culture. They also encourage more professional structures for corporate governance and better communication systems, all of which help to motivate managers.

## THE PERFORMANCE OF E500 IPOs

The top ten IPOs of the E500 have achieved remarkable performance levels. Eight out of the top 10 IPOs of 1999 come from the IT and Internet sector. The company with the best IPO performance in our sample was AIXTRON, the German engineering company whose share price rose by an extraordinary 630% during the first six months after its IPO.

The other non-IT and Internet company was Ibersol, a Portuguese fast-food company.

Company	Country	Industry	IPO performance <sup>1</sup>
AIXTRON AG	Germany	Engineering & Management	630.00%
Integra	France	IT & Internet	372.50%
Lintec Computer	Germany	IT & Internet	355.40%
Brokat Infosystems	Germany	IT & Internet	352.30%
Option International NV	Belgium	IT & Internet	325.00%
Readsoft	Sweden	IT & Internet	312.90%
Kalisto Entertainment	France	IT & Internet	304.60%
Ibersol	Portugal	Other services	275.00%
Heyde Beratung Software	Germany	IT & Internet	270.60%
BVRP Software	France	IT & Internet	268.20%

<sup>1</sup> Six-month IPO performance = (price after six months - closing price of first trading day) / closing price of first trading day

The six-month performance of the very best IPOs was way in excess of the average (of 49%).

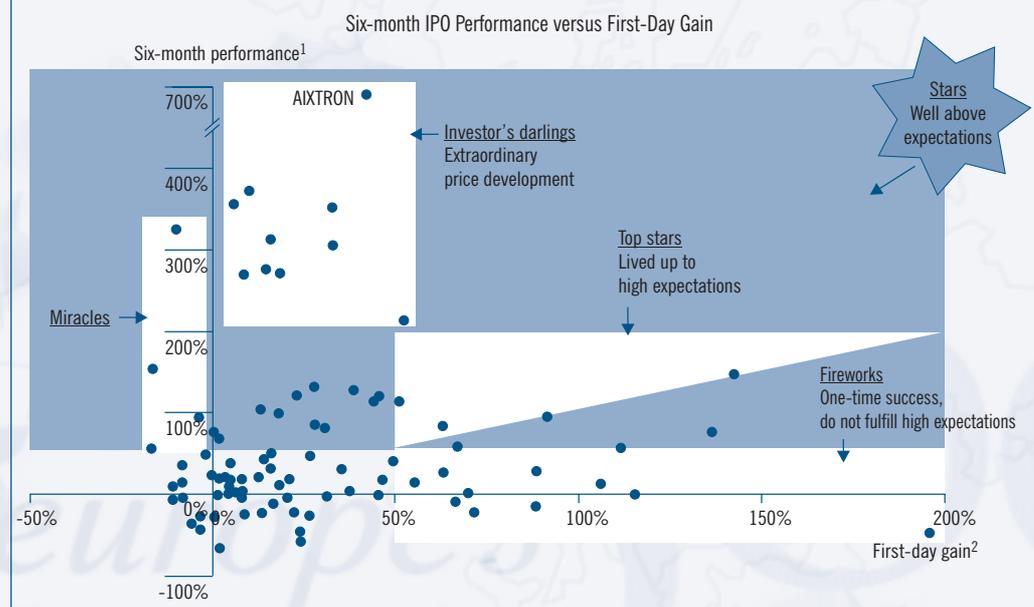
Based on the two performance ratios, "first-day gain" and "six-month IPO performance," BCG classifies IPOs in groups according to their different performance patterns.

"Stars" are those companies whose share price performance was excellent in the first six months after the IPO. All stars have a six-month performance over 50%. One third of all the E500 IPOs of the E500 sample were stars.

### ONE THIRD OF E500 ARE STAR IPOs

Source:  
BCG database,  
Datastream,  
BCG analysis

- 1 Six-month IPO performance = (price after six months - closing price of first trading day) / closing price of first trading day
- 2 First-day gain = (closing price of first trading day - issuing price) / issuing price



A small cluster of these companies recorded a truly extraordinary gain over six months (in excess of 200%), and these we call "investor's darlings." Another cluster of the stars saw their share price fall back on the first day, but then rallied to record a substantial gain over six months. These we call "miracles", firms which start with low expectations in the market, but which subsequently confound those expectations. A third cluster of stars we call "top stars." These companies record first-day gains over 50% and achieve a six-month performance well over their first-day gain.

The "fireworks" spurt off to a large first-day gain (of over 50%), only to fail to sustain the effort and fall back later. By the end of the first six months, the gain in the share price of a firework is under 50%. In a number of cases it has even been negative.

# THE INGREDIENTS OF A SUCCESSFUL IPO

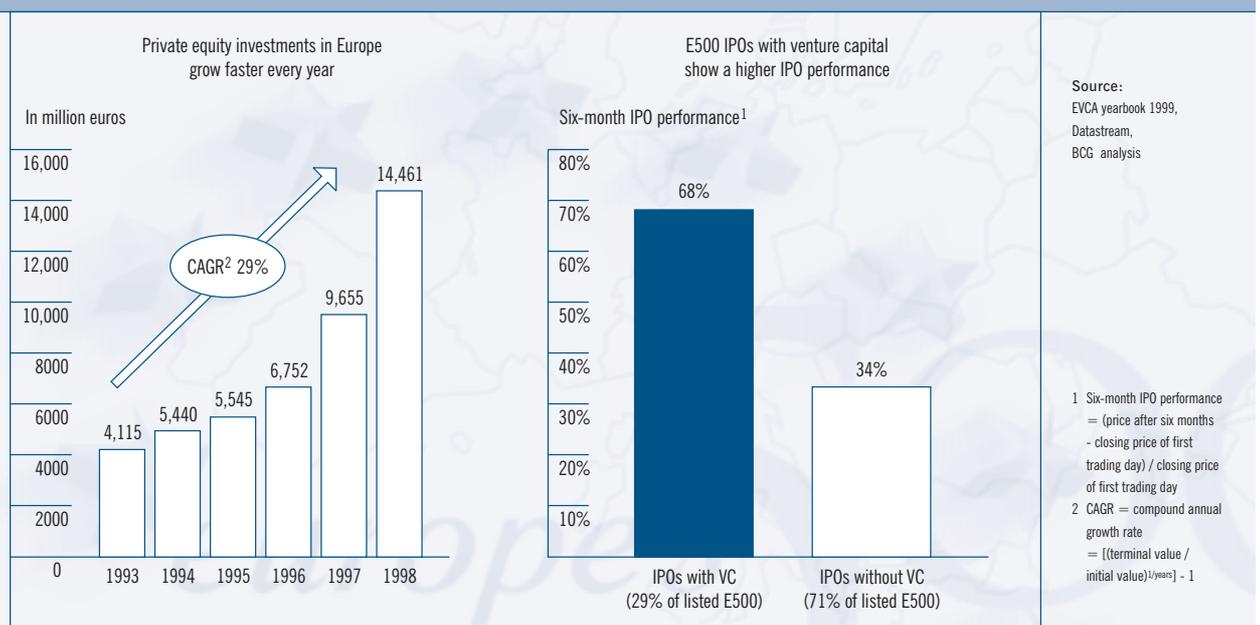
BCG believes that there are five key features to a successful IPO:

1. The existence of venture capital in the early life of the company
2. An entrepreneur who is sold on the idea
3. A sound and motivating equity story
4. A tightly managed and "compressed" IPO process
5. Professional IPO advice and support

## VENTURE CAPITAL

Venture capital enhances a company's performance in an IPO by imposing financial discipline at an early stage. Moreover, venture capital is more than just money and discipline—ideally it also improves the quality of advice and the strength of the managerial team. In the six months after their IPO, those E500 com-

### VENTURE CAPITAL ENHANCES IPO PERFORMANCE BY DISCIPLINING THE COMPANY



panies not having venture capital before the IPO saw their share price increase by only 34% on average, whereas the share price of those with venture capital increased by twice as much.

The amount of venture capital available to European companies is increasing year by year. In 1993 private equity investment in Europe was estimated to amount to 4.1 billion euros. By 1998 this increased to 14.5 billion euros—a compound annual growth rate of 29%. This growing availability should enhance the chances of European companies having successful IPOs in future.

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## THE IPO-MINDED ENTREPRENEUR

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We have found that entrepreneurs who are sold on the idea of an IPO answer "Yes" to certain questions regarding their personal owner strategy. Only when the entrepreneur has the right "IPO mindset" does an IPO make sense for him or her.

### PERSONAL ATTITUDES ARE VALID INPUTS FOR THE IPO DECISION

Source:  
BCG analysis

#### IPO friendly attitudes

- I love presenting my ideas to the general public
- I want to get cash
- I am a multiple founder type of person
- I am ready to switch jobs
- I am willing to share control

#### IPO allergic attitudes

- Business has always belonged in my family—for generations now
- My kids should be involved in the business
- Personal PR is ridiculous and childish
- I have never had a partner—I never will have a partner
- I personally do not need the cash
- This business is my lifetime job

Taking a company public means becoming what we have called a "public entrepreneur." A public entrepreneur has to deal with outside investors and analysts, and needs to communicate the company's performance and standing to shareholders. This requires a new kind of transparency and adequate information systems.

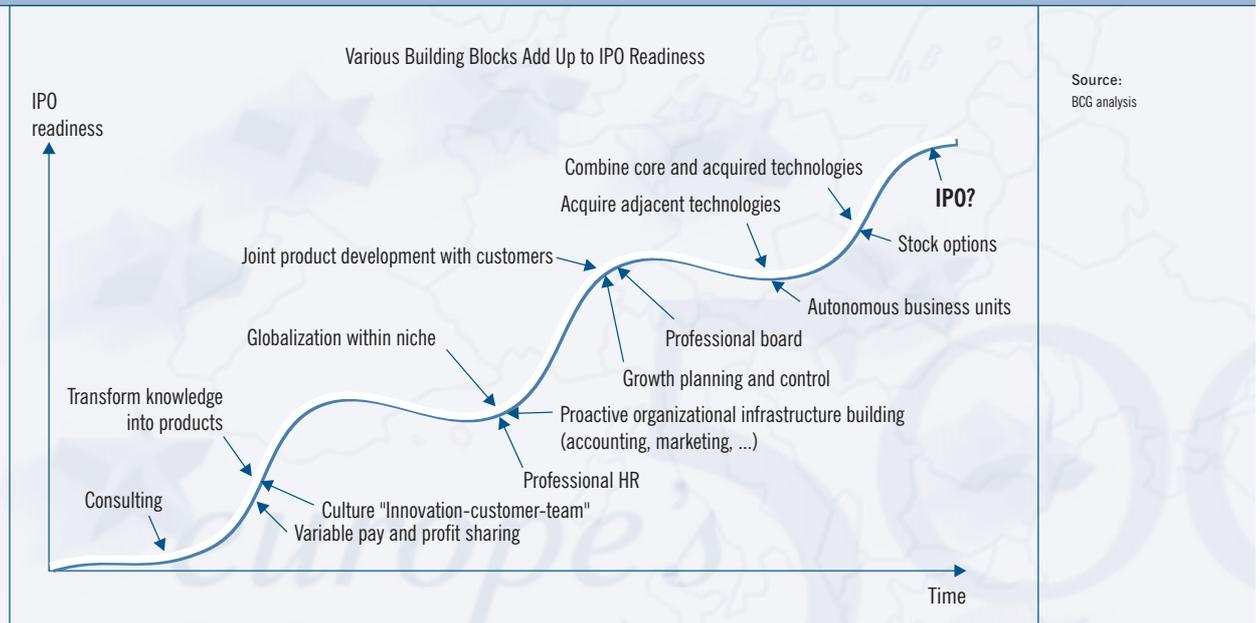
Being a publicly owned company may mean that top executives from outside the company become part of the top management team. This not only raises the question of family succession, but also the issue of leadership. The entrepreneur must decide whether he or she is willing to share decision-making power and even to change the style of leadership within the organization.

Finally, an IPO offers the opportunity to spread risk (not to "put all your eggs in one basket") by diversifying the entrepreneur's personal portfolio.

But it is not only the entrepreneurs themselves who need to be "ready" to do an IPO. The IPO-minded entrepreneur also needs to decide whether an IPO makes sense for the company. Four questions arise here:

1. Does the company need cash to finance growth?
2. Does the company intend to become a market leader?
3. Does the company want to enhance its corporate brand?
4. Does the company intend to become a global player?

## GETTING EVERYTHING IN PLACE FOR THE IPO



If the answer to all the questions is a resounding "Yes," then the entrepreneur and the company are ripe for an IPO.

## A SOUND AND MOTIVATING EQUITY STORY

Any entrepreneur with an eye on an IPO has to have a sound equity story. This not only creates great enthusiasm outside the company, it also generates great motivation inside the company.

A "sound" equity story has four crucial chapters:

- An analysis of the company and its market. This must include a market analysis, an analysis of the firm's competitors, a list of success factors, details of the products and services to be sold, and a description of the company's core competences and capabilities.
- An evaluation and selection of strategic growth options. This involves looking at existing and new customers, at existing and new geographies, at existing and new products and services, and at existing and new business models.

- A translation of the analysis into a viable business plan. In this, the main elements are: a concrete idea, a quantification of the strategy, financial planning, a profile of the management, and a definition of the company's targets and milestones. These lead to an initial valuation of the company.
- The first three essential chapters of the equity story are fact-based, but the final chapter is the communication of the story itself and actually of making it happen. Good communication is vital for the success of an IPO, and to achieve it a company has to have a credible and outgoing management team.

## A TIGHTLY MANAGED AND "COMPRESSED" IPO PROCESS

Firms should not spend too much time on the IPO process. Of the E500, on average, those who took less than four months saw their six-month share price rise by 112%; those who took between four and eight months saw their price rise by only 25%; whilst those who took more than eight months over the process experienced a share price increase of only 15%.

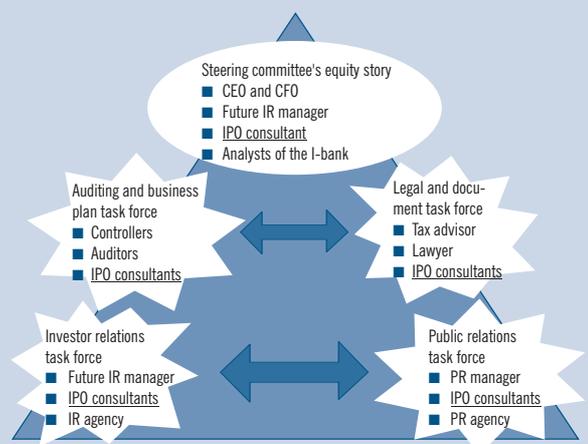
### TIPS FROM ENTREPRENEURS ON HOW TO KEEP THE IPO PROCESS SHORT

- Set up a dedicated and competent IPO team.
- Keep and integrate existing tax advisors, lawyers and auditors. "They know you and a change looks bad."
- Outsource the management of the IPO process to external advisors (a PR company and an IPO consultant).
- Be well prepared before seeing the investment bank—also for the long run.

## PROFESSIONAL IPO ADVICE AND SUPPORT

### WORKING WITH A PROFESSIONAL TEAM TRANSLATES INTO A SUCCESSFUL IPO

Source:  
BCG database,  
Datastream,  
BCG analysis



Companies that have sought professional advice on their IPO performed significantly better than those that did not. The six-month average increase in the share price of E500 companies using a strategy consultant and a public relations company was 85%; that of those which chose not to use either was 35%.

Professional advisors make the IPO process more effective by driving the five standard task forces that have to be set up to oversee the planning of an offer and by managing the timeline. IPO consultants (who can be general business consultants or IPO-specific business consultants) should be integrated in all committees and task forces in order to drive and coordinate the IPO activities.

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## LESSONS FROM THE E500

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Interest in entrepreneurs and entrepreneurship has been growing rapidly in Europe in the last few years. Especially the success stories of "start-up" companies and their founders have attracted lots of attention from policy makers, the finance world, the media, and also broad sections of the general public.

What makes Europe's 500 companies so special is the fact that they are not typical start-ups anymore but still show a remarkable growth record. The average E500 company in our sample is 23 years old, and the average listed E500 is not much younger (20 years on average). The 177 listed E500 went public, on average, three years ago.

Attaining these kinds of above-average growth rates for a short period of time can be quite a challenge. It is, however, even more challenging to achieve sustainable growth, i.e., to grow at a continuously high level. Our analysis of the E500 of the four listings (1995, 1997, 1998, and 1999) shows this quite clearly: Only very few of the companies managed to maintain the basic prerequisite for their success—an "innovative" core and a growth-stimulating environment in the company—for a longer period of time.

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### EMPLOYING THE GROWTH LEVER TO CREATE VALUE

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Our analysis has shown that the listed E500 are not only champions of growth but put in a remarkable performance in terms of value creation for their investors. The top 10 E500 value creators achieved a TSR of over 100%, and as a group, the E500 outperformed challenging U.S. and European benchmarks. Realizing such a performance requires the generation of strong cash flows and the commitment to use this cash in investments that yield returns above the costs of capital.

Looking at the top value creators per country and sector, we have found that superior performance is possible in every country and—even more strikingly—in traditional industries like agriculture and mining as well as the paper and plastics sectors.

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## BUILDING AND SUSTAINING THE ENTREPRENEURIAL GROWTH INCUBATOR

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The objective of BCG's continuing work on entrepreneurial growth is to identify those factors which account for the E500's growth performance. The growth incubator model is the first step to capture the many dimensions that need to be managed to create and sustain growth. The numerous interviews with the entrepreneurs have revealed that dynamic entrepreneurs concentrate their "entrepreneurial capacity" on similar dimensions.

The levers of entrepreneurial growth—quotes from the E500 entrepreneurs	
A clear and challenging growth vision and growth strategy	<p>"Budgeting and numbers can help you understand where you are going. But only a vision makes you go."</p> <p>"The budget limits are important to monitor ... but they will never constrain our strategy and be a barrier for us."</p> <p>"Without a clear vision, planning and budgeting are useless."</p>
A committed, skilled and entrepreneurially minded "key management team"	<p>"The right team behind an idea is the key success factor."</p> <p>"There will never be one person building a company; without good people the entrepreneur is nothing."</p>
Shared responsibility and ownership	<p>"People must decide, make mistakes, learn, go beyond them, become managers, develop an entrepreneurial spirit."</p> <p>"You can build and retain the right team only with the right incentives."</p> <p>"Every minute of your life you develop something. And every minute of your life you must communicate it to your team."</p>
Strong partnerships with customers and suppliers	<p>"Partnerships provide a secure ground on which to grow. They allow you to focus on the future instead of fighting for survival on a day-to-day basis."</p> <p>"Loyalty and respect are the most important characteristics of a partnership because they create trust."</p>

Achieving sustainable growth requires the will for continuous change, a constant "reinterpretation of the world." Our study has shown that this is the motor that drives these highly dynamic and entrepreneurial companies.

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## BOOSTING GROWTH BY DOING AN IPO

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177 of the E500 companies have used the positive effects of an IPO to boost their growth performance. They have grown distinctly faster than their unlisted "counterparts" in terms of employment and turnover. We have identified the five key inputs for an IPO:

1. **Cash to finance internal and external growth.** The net proceeds of the IPO provide the necessary financial basis to invest in new product development and capacity enlargement and to expand the business internationally. To become a global player the company needs to reach a "critical mass" which is often only possible by M&As. In this case, IPOs are sometimes the key to mergers through share swaps.

2. **Introducing stock option plans.** Offering stocks or stock options has a motivating effect on the management and employees. In fast-moving high-tech businesses today it is also the key ingredient for attracting and retaining highly qualified and entrepreneurially minded people.
3. **A clear and convincing equity story.** The clear vision and dedicated growth strategy need to be broken down into a convincing equity story and a business plan that can be communicated to potential investors and advisors.
4. **Enhancement of the company brand.** Taking your company public significantly raises the notoriety of the firm. This mobilizes new customers, reassures potential partners and attracts highly qualified people. It also builds "brand equity."
5. **A professionalized company.** Fulfilling the admission criteria of the respective stock exchange is the first step towards professionalizing the company. The scrutiny of the analysts and the obligation to meet not only international accounting standards but also the promised targets impose further discipline on the entrepreneur and the management team.

An IPO is a great challenge for every company. Looking at the IPO performance of the listed E500 we found that the top performers employ similar levers of success: They have venture capital before their IPO, their IPO process is short and tightly managed, and they have professional external IPO advice and support. The most important ingredients, though, are the entrepreneur and his or her equity story.

## APPENDIX

### TOP 20 VALUE CREATORS

Company name	Sector	TSR	Market cap. <sup>1</sup>
ARM Holdings Plc (UK)	Services—IT & Internet	347.33%	12,691.97
PMJ Automec OYJ (Finland)	Manufacturing—Electronic & Other Electrical Equipment	198.43%	365.99
AIXTRON AG (Germany)	Services—Engineering & Management	176.73%	2,163.00
Radio A Korassidis SA (Greece)	Trade—Retail	171.50%	880.76
Real Software (Belgium)	Services—IT & Internet	158.84%	1,182.29
Omega Pharma (Belgium)	Manufacturing—Chemicals/Rubber/Plastics	154.22%	380.60
Baltimore Technologies Plc (Ireland)	Services—IT & Internet	134.33%	2,993.77
Dane-Elec Memory SA (France)	Services—IT & Internet	116.94%	145.52
SER Systems (Germany)	Services—IT & Internet	109.13%	593.72
Elmec Sport SA (Greece)	Trade—Wholesale	104.55%	510.44
Titus Interactive (France)	Services—IT & Internet	102.58%	281.68
Eurofins SA (France)	Services—Other	100.55%	125.11
Silicom (France)	Services—IT & Internet	100.00%	153.58
Modul 1 Data (Sweden)	Services—IT & Internet	97.59%	185.65
UCC Holding (Netherlands)	Services—IT & Internet	97.22%	201.18
BVRP Software (France)	Services—IT & Internet	95.11%	104.78
Know it (Sweden)	Services—IT & Internet	92.24%	130.32
Goldshield Group Plc (UK)	Manufacturing—Chemicals/Rubber/Plastics	90.60%	376.32
Athena SA (Greece)	Construction & Materials	87.76%	362.12
Guide Konsult (Sweden)	Services—IT & Internet	87.14%	340.94
<b>Total E500</b>		<b>37.76%</b>	

<sup>1</sup> Market capitalization is in million euros.

## VALUE CREATION PER COUNTRY

Country	TSR	Top value creator per country	Sector
Greece	92%	Radio A Korassidis SA (172%)	Trade—Retail
Belgium	88%	Real Software (159%)	Services—IT & Internet
Finland	79%	PMJ Automec OYJ (198%)	Manufacturing—Electronic & Other Electrical Equipment
Ireland	64%	Baltimore Technologies Plc (134%)	Services—IT & Internet
Netherlands	55%	UCC Holding (97%)	Services—IT & Internet
United Kingdom	49%	ARM Holdings Plc (347%)	Services—IT & Internet
Sweden	43%	Modul 1 Data (98%)	Services—IT & Internet
France	33%	Dane-Elec Memory SA (117%)	Services—IT & Internet
Germany	29%	AIXTRON AG (177%)	Services—Engineering & Management
Switzerland	22%	Phonak (41%)	Manufacturing—Electronic & Other Electrical Equipment
Portugal	17%	Ibersol, SGPS (28%)	Services—Other
Italy	17%	Safilo Spa (51%)	Manufacturing—Metal Industry/Industrial Machinery
Austria	8%	SEZ Semiconductor AG (34%)	Manufacturing—Electronic & Other Electrical Equipment
Spain	3%	Tele Pizza (52%)	Services—Other
Denmark	2%	Sondagsavisen A/S (41%)	Services—Engineering & Management
Norway	-9%	Hitec (36%)	Services—IT & Internet

<sup>1</sup> Luxemburg and Iceland are excluded as they have no (LUX) or only one (ICL) listed company in the sample

## VALUE CREATION PER SECTOR

Sector	TSR	Top value creator per sector	Country
Services—IT & Internet	59%	ARM Holdings Plc (347%)	UK
Construction & Materials	51%	Athena SA (88%)	Greece
Services—Engineering & Management	46%	AIXTRON AG (177%)	Germany
Manufacturing—Chemicals/Rubber/Plastics	45%	Omega Pharma (154%)	Belgium
Agriculture, Forestry, Fishing & Mining	40%	Silver & Baryte Ores Mining (62%)	Greece
Manufacturing—Metal Industry/Industrial Machinery	34%	Sarantis (64%)	Greece
Services—Other	33%	Eurofins SA (101%)	France
Services—Finance, Insurance	32%	April (73%)	France
Manufacturing—Electronic & Other Electrical Equipment	29%	PMJ Automec OYJ (198%)	Finland
Trade—Retail	26%	Radio A Korassidis SA (172%)	Greece
Manufacturing—Other	16%	Global Graphics (65%)	France
Trade—Wholesale	7%	Elmec Sport SA (105%)	Greece
Manufacturing—Transportation	3%	Industrie Pininfarina SPA (23%)	Italy
Manufacturing—Wood/Paper Products/Plastics	-1%	HL Display (34%)	Sweden

# SAMPLE AND METHODOLOGY

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## THE SELECTION PROCESS OF THE EUROPE'S 500 LISTING

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The E500 is an annual listing of Europe's 500 fastest growing entrepreneurial firms published by Growth Plus, an association whose mission is to "promote entrepreneurship throughout Europe and to advise policy makers on ways to improve the environment for growth companies." The association is organized into country chapters. Growth Plus organizes research projects and fosters local networking.

The process of selection for each year's E500 begins with the compilation of a database from existing national lists, databases, individual nominations, the previous E500 listings, and from searches on the Dun & Bradstreet databases.

The first lists including approximately 7,000 companies from across Europe are then reviewed by various country experts (consultants, media and leading business executives) using both negative evaluation (exclusion of companies) and positive confirmation criteria (nomination of specific companies), reducing the preliminary list to some 4,000 companies.

The 4,000 are then whittled down to 700 on the basis of a questionnaire sent to the entrepreneurs themselves in order to verify the data.

These 700 are further reduced to the final 500 after another expert review and after consideration of their BIRCH index. To be included in the list, a company's BIRCH index  $[(e1 - e2) \times e1/e2]$ ;  $e1$  being the level of employment in the latest reference year and  $e2$  being the level of employment in the first reference year] must be higher than 100.

The E500 companies of the 1999 listing come from 18 different countries. The biggest contingent (108) comes from Germany, and the smallest (2) from Luxemburg. 40% of the companies are in the IT and Internet sector.

### IN ORDER TO BE INCLUDED IN THE E500, COMPANIES MUST MEET THE FOLLOWING CONDITIONS

- Entrepreneurs must own at least 15% of the equity (or 5% where the company is listed on a stock exchange).
- No industrial shareholder may own more than 50%.
- The company's turnover must have grown by at least 50% in the past five years.
- Growth in the company's employment and turnover must have been largely organic—i.e., not achieved by merger or acquisition.
- The company must have had fewer than 5,000 employees in its first reporting year, and more than 50 in the last year of reference.
- The company must be at least three years old.
- The company must be profitable.

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## METHODOLOGY OF THE STUDY

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As one of the strategic partners of Growth Plus, The Boston Consulting Group has started an extensive research program to conduct in-depth studies of these dynamic entrepreneurial companies. The objectives of this report are to

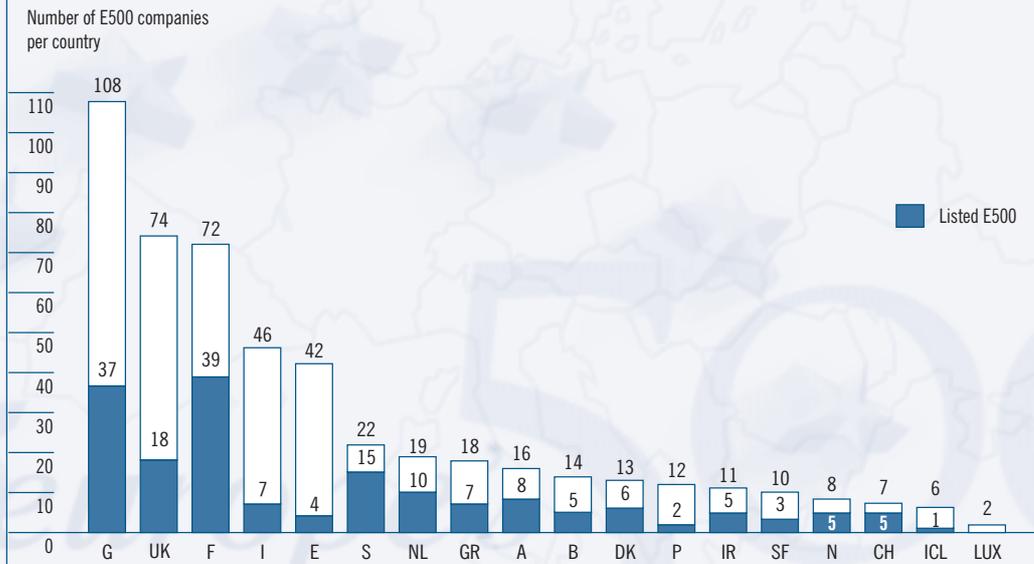
- gain new insights on the nature and success factors of entrepreneurial growth,
- analyze and explain the growth-accelerating effects of an initial public offering (IPO),

- present role models showing how the E500 companies have managed to achieve superior performance, both in terms of growth and value creation.

The sample of the study was the Europe's 500 Honorary Listing 1999. Special focus was placed on the 177 E500 companies listed on a stock exchange.

### BREAKDOWN OF THE E500 BY COUNTRY

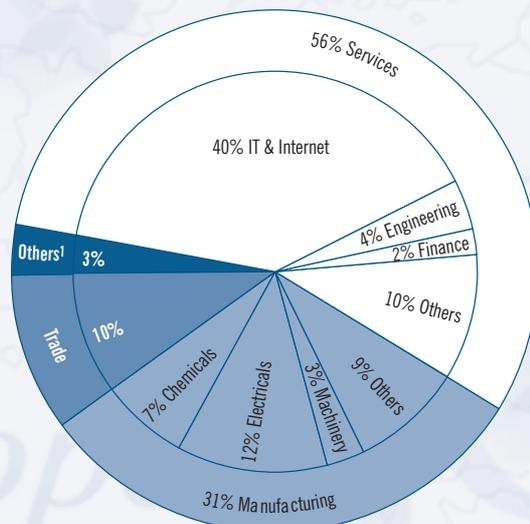
Source:  
Honorary E500 Listing 1999,  
BCG analysis



### BREAKDOWN OF THE SAMPLE OF THE LISTED E500 BY SECTORS

Source:  
E500 Honorary Listing 1999,  
BCG analysis

Services and Manufacturing Companies Dominate the Sample of the Listed E500

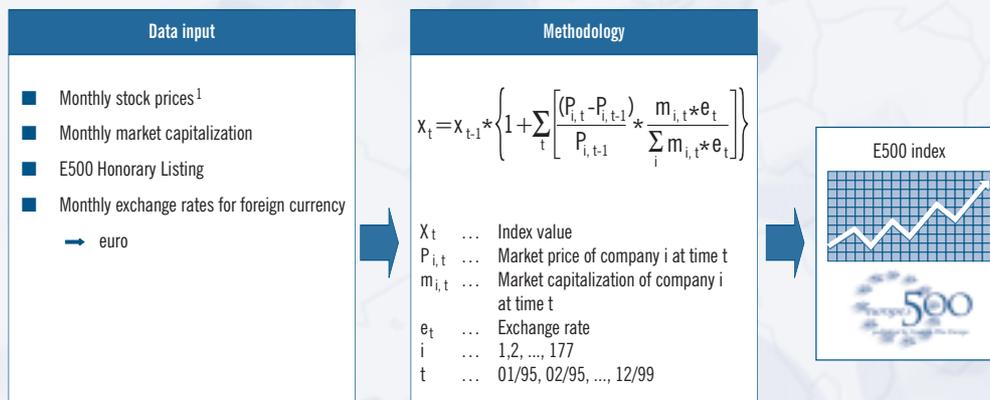


<sup>1</sup> Other sectors  
= agriculture, construction  
and transportation

To compile the necessary data BCG conducted desk research—collecting data from Datastream, Bloomberg, company brochures, annual reports, press releases, and issuing reports. In addition, several interviews were conducted with the entrepreneurs and a questionnaire was sent to the companies' investor relations departments.

Several measures were employed in the study		
Measure	Calculation	Objective
The E500 growth index	100 = employment and turnover of listed and unlisted companies in 1993	To compare the growth performance of listed and unlisted E500
First-day gain of the IPO	= (closing price of first trading day - issuing price) / issuing price	Identify top performers, identify company types
Six-month IPO performance	= (price after six months - closing price of first trading day) / closing price of first trading day	Identify top performers, identify company types
The E500 index	See box below	To compare the listed E500 to benchmarks like NASDAQ and MSCI Europe Growth indices
Total shareholder return (TSR)	= (price gain + dividends) / price at start of period	Identify top performers <ul style="list-style-type: none"> <li>■ by country</li> <li>■ by sector</li> </ul>

## CONSTRUCTION OF THE E500 INDEX



Source:  
BCG analysis

<sup>1</sup> Adjusted for dividends and stock splits

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