Globalizing venture capital
Global venture capital insights and trends report
Foreword

Amid the fragile economic recovery and highly volatile capital markets of 2011, the venture capital (VC) sector is becoming increasingly globalized. A shift toward the emerging markets can be seen in geographic VC patterns and the growth of new global VC hotbeds. Although the United States will likely remain at the leading edge of VC-backed innovation for many years to come, US VC fund-raising continues its decade-long decline. Elsewhere, in China, India and other emerging markets, vibrant innovation hotbeds and entrepreneurial talents are arising, and investors are focused on less risky, later-stage deals, at least for now.

Although unrealistic valuations may dampen future returns, China’s VC industry reached record heights in 2011 and will soon surpass Europe as the second-largest venture hub for fund-raising in the world. Both China’s and India’s strong VC industries are expected to continue their rapid growth and development as they capitalize on strong GDP growth, growing domestic consumption and a dynamic entrepreneurial ecosystem. At the same time, due to Europe’s sovereign debt crisis and its muted medium-term growth potential, Europe’s VC industry has lost some of its robustness.

Globally, companies are staying private longer, due to large corporations seeking proven business models prior to an acquisition and investors that prefer companies with a proven profitability path both before and after the IPO. As angel investors have become major investors in early-stage start-ups, particularly in the US, the competition has nudged VCs toward later-stage, high-growth ventures.

Broadly speaking, the more mature VC markets of the US and Europe favor earlier-stage investments, while the emerging markets of China and India generally prefer later-stage companies. In China and India, IPOs represent the vast majority of exits for VC-backed companies. But in the US, Europe and Israel, the main exit route for VC-backed companies is acquisitions (M&A), representing more than 90% of all exits. Furthermore, VC firms are also selling companies to private equity firms as a third path to liquidity.

Contrary to the popular perception that global VC investment has been concentrated primarily in the frothy digital media sector, VC funding has been quite evenly spread across sectors and life-cycle stages and has progressed at a reasonable pace.

Worldwide, the VC universe continues to shrink as limited partners focus on top performers or forego VC altogether. However, the sector’s continued long-term consolidation is viewed as good for the sector, with fewer players investing smaller amounts in companies that will reach profitability faster than they do today. Large corporations striving to maintain market leadership are partnering with VC firms to access external innovation and a pipeline of new products and services.

This report explores these themes in our articles and interviews, including:

- Interviews with top VC investors and entrepreneurs from around the globe
- “Paradigm shifts in venture capital,” our keynote article with insights on VC investment, IPO, M&A and valuations, based on data from 2005 to 2011
- Key trends in the global digital media and biotechnology sectors and from global corporate venturing
- An in-depth analysis of the key global VC hotbeds of the US, China, Europe, India and Israel

We hope you find Globalizing venture capital, our ninth annual report on venture capital, to be a source of valuable insight. We look forward to working together with you on the global challenges and opportunities that lie ahead.

Maria Pinelli
Global Vice Chair
Strategic Growth Markets
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Global VC trends
As the economic pendulum swings toward the rapidly developing economies, the venture capital sector is experiencing its own paradigm shifts, reflecting an increasingly globalized world.

The globalization of venture capital is taking many forms, ranging from global fund-raising and cross-border investment, to exits on foreign stock exchanges or by foreign acquisition, to VC firms opening offices overseas and helping their portfolio companies access markets in new regions.

This article analyzes the trends in fund-raising for VC funds, the different investment patterns between the mature and emerging venture markets, the associated exit mechanisms by geography and, finally, the new funding sources going forward.

Top-tier VC funds dominate in the West as VC consolidation continues

Global "dry powder" is US$117.7 billion (capital committed to VC firms but not invested yet) and remains at a level similar to the past few years, as VCs invest at a pace that is reflected by their fund-raising volume.¹

In 2011, 376 VC funds were fund-raising globally, trying to raise US$53.6 billion.² Between 30% and 50% of all the funds in the fund-raising stage are unlikely to make it at all or will do so at a substantially reduced size. VC funds closing in 2011 had a buoyant start but dropped off in the second quarter.³ The top-tier VC firms close much faster than the average fund. The average fund-raising takes 12 to 18 months, while the top decile of funds in the key VC hotbeds manage to close in 3 to 5 months.

In the US, fewer funds are raising more capital. US venture funds that closed during 2011 had 5% more capital than those closed in 2010, hitting US$16.2 billion. However, the number of funds that closed plummeted 12% to 135 funds, and for the first time in three years, the median fund size rose to US$140.0 million.

By contrast, the story for European venture funds was one of struggle, recording the worst volume since 2004. European fund-raising declined 11% to US$3 billion (amount closed) for 41 funds.⁴ In contrast to the US, European funds showed a distinct preference for early stages. (Of the 41 funds that closed, 27 early-stage funds took US$2.1 billion of the total US$3 billion closed.)

Rapid growth of fund-raising in China and India

The Chinese VC market is growing rapidly. In 2011, China saw 382 new VC funds raise a record US$28.2 billion for investments into Chinese VC-backed companies.⁵ This represents 2.53 times of the amount raised in 2010. Twenty of the new funds raised US$100 million or more.

The growth capital venture space in India is getting overcrowded. With about 400 VC funds in operation, this glut has driven up valuations, prompting concerns by many private equity investors.⁶ Yet there is still plenty of room for early-stage VC funds, especially in the almost empty pre-revenue space.

Growing VC trend toward international investment

The next five years (2011-15) should see a major shift in geographic venture investment patterns and substantial growth in the new global VC hotbeds.⁷

Currently, the vast majority of VC firms invest just in their own local home markets; however, more will be investing internationally in the near future. Currently, only about 20% of

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¹ Preqin, March 2012.
² Preqin, January 2012.
³ Of the 20 that closed in 2Q 2011 with US$5.8 billion, the largest five had 66%, or US$3.8 billion. 1Q 2011 had reached 2008 levels with 47 funds at US$10 billion.
⁴ This compares unfavorably to US$2 billion for 26 funds in 2010 and US$2.9 billion for 26 funds in 2009.
⁵ Zero2IPO (January 2012), which covers international and local VC firms in China.
⁶ According to The Economic Times in India (26 September 2011), Marquee Silicon Valley VC Accel Partners has scrapped plans to raise a US$400 million India-focused growth capital fund. Likewise for corporate investors, such as the Jubilant Group, which has shelved its fund sponsorship idea.
⁷ According to the National Venture Capital Association (June 2011) nine-country survey, with 347 Venture Capital Firms.
Amount raised, by hotbed, 2011 (US$m)

Source: Dow Jones VentureSource, 2012
VC firms in Brazil, India, Israel and the UK invest outside their home countries. On the other hand, many more VC firms in Canada (69%), France (82%), Germany (92%) and the US (49%) invest internationally. Of those VC firms investing outside their home countries, 57% plan to increase this activity during the next five years, while 35% plan to maintain their level of international investment.

The distinct global VC trend toward international investment is best illustrated by the example of US firms. Nearly half (49%) of the US VC firms in the survey are currently investing outside of the country. Of all US firms, 42% plan to increase their international activities, 30% plan to maintain the current level, 3% plan a decrease and only 25% have no plans to invest outside the US.

Large-tech-platform plays are becoming increasingly important, with entire funds established around them. Special funds have been established by top-tier VC firms in Silicon Valley to fund applications development, even in China. Tencent, China’s highly profitable multibillion-dollar revenue chat and gaming service giant, is becoming a player on the world stage, starting a massive wave of investments in a number of new strategic platforms, from micro-blogging to online security, as well as in existing businesses.

**While US VC still dominates, Asia is starting to surpass Greater Europe**

The VC hotbeds around the world have seen some major shifts in recent years. Most notably, China and India are beginning to challenge Europe and Israel in investment amounts. However, the US has continued to maintain an almost 70% share throughout the past 10 years, with California, Boston and New York City leading the scene.

The current pace of VC investment varies significantly by region. At the end of 2011, the US surpassed 2009 and 2010 levels and is almost even with 2008 amounts. Canada shows an increase in the number of new investments for every year since 2008; hence, the average investment size continues to increase.

Europe’s number of investments is still in steady decline. However, as in the US, total investment amount by year-end surpassed the 2009 and 2010 levels but fell short of 2008’s. Israel’s VC investments still did not reach the 2010 level and are a far cry from 2008’s levels.

In Asia, China hit an all-time record in 2011, in both number of investments and investment amount, and almost matches Europe’s investment amount for the first time ever. Given China’s new fund-raising record in 2011 and the favorable exit environment, the investment pace will likely continue.

However, the median round size and valuations have risen to historical heights, almost quadrupling the value of 2006-10, which may dampen future returns. India’s investments are slowly picking up and are at a modest level.

**Western VC favors earlier-stage investment, while Asia favors later stage**

The major difference between the more mature VC markets and the rapidly developing economies lies in the key development stage of the investee companies. The global sweet spot of VC investments is the “revenue pre-profit” category (50% to 60% from 2006-10).

The more mature US and European VC markets consistently invest a considerable amount in companies in the earlier “product development” stage (pre-revenue). In contrast, China and India generally prefer later-stage companies. China has a unique pattern of pouring 30% to 50% of its invested capital into profitable companies (a level three to four times higher than the US or European VC sectors). Meanwhile, India’s sweet spot

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8 For Java (Kleiner Perkins Caufield & Byers’ 1996 Java Fund, with US$100 million), for the iPhone and iPad (Kleiner Perkins’ 2008 iFund, with US$100 million) and, most recently, for Google’s Android (DCM’s 2011 A-Fund, with US$100 million).

9 In China, Sina.com established the Twitter Developer Innovation Fund (in 2010, with RMB200 million/US$30 million) for the micro-blogging industry, jointly with Sequoia Capital, IDG Capital, Innovation Works, Yunfeng Fund and Draper Fisher Jurvetson.
centers on the revenue pre-profit stage, where 60% to 90% of its capital was invested between 2009 and 2010.

The four stages of development – start-up, product development, revenue pre-profit and profitable – used in the VC Investments by development stage charts provide an effective way to compare VC investment patterns around the globe.12

M&A remains key exit route in the West

The main exit route for VC-backed companies in Western countries is acquisitions (M&A), representing 80% to 90% of all exits. Fortunately, acquisition prices have stayed at reasonably high levels, even during and after the financial crisis. For example, in the US for 2011, the five biggest acquisitions ranged from US$700 million to US$800 million. Prices should remain fairly high and M&A activity can be expected to remain constant or increase over the next year, given companies’ current option to go public and the fact that the 15 largest tech firms are holding US$300 billion in cash for acquisitions. (Google alone acquired 48 companies in 2010 for US$1.8 billion and 79 companies in 2011 for US$1.9 billion)13

Similar acquisition trends in rapidly developing nations, notably China, will see the emergence of new local leaders in search of highly innovative technologies and solutions (e.g., Tencent, Baidu, Alibaba, Sina, Huawei, ZTE). Such acquisitions help these giants move quickly to stay ahead of fierce competition, both domestically and globally.

It is expected that India will follow suit over the next few years as more large local companies want to add new services, such as mobile and internet offerings – acquisitions of new ventures will provide quicker market deployment.

IPOs make up majority of exits in China and India

In emerging markets (e.g., China, India, Brazil), IPOs represent the bulk of exits, as they do in Japan, Korea and Taiwan. Russia and Eastern European nations have yet to improve their environments for public listings, so for the time being, Western VC firms investing in these countries usually try to have their capital invested in companies listed overseas.12

Venture capitalists believe high returns generated by IPOs are critical to providing superior returns to limited partners and growth capital to developing portfolio companies.13 The vast majority of VCs around the world still look to the NASDAQ and the New York Stock Exchange (NYSE) to provide a healthy and vibrant market;14 yet most US venture capitalists believe that the current level of US IPO activity is too low.

On the other hand, a heavy dependence on IPO exits has its own risk. The examples of Japan and Taiwan in the past two to three years illustrate this point. In those countries, 70% to 90% of exits came through public listings. With the public markets now down and Japanese and Taiwanese major corporations preferring to acquire more proven and mature companies, the entire VC industry in these countries is in serious jeopardy, as pipelines are filled with companies unable to exit. This will result in poor returns for investors and, in turn, make any future funding-raising very difficult.

In China, a similarly high proportion of exits are IPOs, yet its new small and medium enterprise (SME) stock exchanges are listing at global record highs.

An alternative exit route to IPOs and M&A, though generally less lucrative, is the buyout of shares (held by VCs) by private equity firms. While such transactions have occurred for many years in the US and Europe at a low level, they have become increasingly important in certain emerging markets, either because investors want to exit earlier or the local IPO market barely exists.

In Latin America and Eastern Europe, this route has become especially important, as the local stock markets are not developed to the point where young high-growth companies find a favorable IPO environment. The private equity route is also becoming more common in Japan.

Exits in China continue to be a success story, although the often overstated valuations of newly listed VC-backed companies have come down substantially in 2011 to more realistic levels. China had a total of 456 exits in 2011, including 41 trade sales and 356 IPOs (68% of all exits). The VC-backed company share represents 48% of all public offerings. Domestic stock exchanges account for the bulk of all Chinese IPOs (93%) and VC-backed IPOs (87%) and boast impressive returns. The

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12Since the large majority of investments in emerging countries go into entrepreneurial companies in the revenue stage (pre-profit or profitable), most VCs and entrepreneurs in emerging markets tend to use the terms “early stage” in an early-stage revenue model, followed by “growth stage” in late revenue pre-profit mode and “late stage” in the profitable phase. This differs from how the terms are used in the more mature VC markets.


14However, the first Russian VC-backed companies have tested the waters recently and listed domestically – for example, Russian Navigation Technologies debuted last year on the Moscow Stock Exchange.

15NVCA June 2011 survey.

16Globally, 87% of respondents selected NASDAQ as one of the three most promising stock exchanges for venture-backed IPOs, while 39% selected the New York Stock Exchange (NYSE) and 33% cited the Shanghai Stock Exchange. The AIM in London (26%) has substantially lost ground over the past three years.

17According to Zero2IPO.
ChiNext was in the limelight with 124 exits and 58 VC IPOs. Some Chinese enterprises went public on foreign exchanges – 13 of them VC-backed – taking place on the NASDAQ, the NYSE and the Frankfurt Börse.

**Angel investors become a growing funding source**

New tax incentive programs for high net worth individuals (HNWI) are under way all over the world (with the UK taking the boldest step in April 2011). These changes are expected to increase the amount of angel investing. Even China and India are seeing their first angel groups established, thanks to a growing number of experienced entrepreneurs who successfully exited their ventures.

Out of Silicon Valley have risen the oft-noted “super angels,” former executives from success stories such as Google, Facebook, eBay and PayPal who have built successful investment track records by investing personal capital in companies at the seed stage.16

But the rise of angel seed investing is driven not only by the existence of wealthy former tech managers. The cost to start consumer web-focused businesses has decreased dramatically in recent years, allowing companies to effectively prove their products on far less initial capital. If these products are subsequently proven, angels’ investments are often written up significantly or acquired for an attractive investment multiple.

**Corporate venture capital in emerging markets expands**

Corporate venturing has been practiced for more than 40 years. Corporate venture capital (CVC) has historically accounted for 6% to 10% of all VC globally. During the dot-com peak of 1999-00, when corporate venturing was often more motivated by irrational exuberance than thoughtful strategy, its share of the VC pie grew. Since then, CVC has returned to its historic share, with the exception of cleantech, where CVC accounts for a slightly greater proportion of all venture capital (10% to 15%).

In China and India, big local corporations are beginning to challenge the local VCs and their foreign CVC colleagues. The major players are new giants (e.g., Baidu, Tencent, Alibaba, Huawei, ZTE, Tata, Wipro, Infosys, Reliance) and leaders in their industries. They look for strategic access to new technologies, business models and entrepreneurs in their highly competitive markets, balancing strategic with financial objectives. At the same time, a significantly larger number of big local corporations will invest directly into later-stage VC-backed companies for pure financial returns because their margins in manufacturing or business process outsourcing are eroding.

Western corporations have already done substantial CVC investment in these rapidly growing nations for years; however, an even larger number are now preparing for it.

They seek not only market access, but innovation. These emerging markets are an increasingly fertile ground for innovation that may be applicable globally or in other developing markets with similar characteristics.

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16Several of these investors recently raised small institutional funds (typically less than US$75 million) to continue this strategy and have invested in about 500 start-ups in Silicon Valley over the past 18 months.
1 Global annual VC investment

The US maintains a strong lead, with about 70% of global investment in any given year, driven by Silicon Valley, Massachusetts, Southern California and New York City. Canada, Europe and Israel are stagnating or contracting, while India shows modest growth patterns and China is close to surpassing Europe as the No. 2 venture hub globally — although most of the investments in Asia will go into revenue-generating and profitable companies.

2 Annual VC investment by geography

The 2011 VC market in the US is recovering to the levels seen just before the irrational dot-com spikes of 1999 and 2000. Levels are now almost back to where they were before the 2008 financial crisis. Europe saw a rapid decline in the number of deals over the past decade but was able to maintain total investment amounts thanks to larger deals. Continental Europe is in danger of dropping below a critical size, which could threaten the entire industry. Israel remains a typical early-stage investment environment and needs to scale. However, its local VC firms are struggling in the current fund-raising environment, while foreign VC firms are moving earlier-stage and increasingly competing head-on with their local VC peers. China has shown rapid growth since 2005 and again reached record levels in 2011, almost surpassing the whole of Europe in investment amount due to its late-stage investment focus.

VC investment by region, 2000-11

- **United States (US$b)**
  - 2005: $25.0
  - 2006: $31.0
  - 2007: $34.3
  - 2008: $32.7
  - 2009: $24.1
  - 2010: $29.6
  - 2011: $32.6

- **Europe (US$b)**
  - 2005: $5.4
  - 2006: $6.3
  - 2007: $7.5
  - 2008: $7.6
  - 2009: $5.2
  - 2010: $6.7
  - 2011: $6.1

Note: chart scales vary for clarity

Source: Dow Jones VentureSource, 2012

(continued next page)
Global VC-backed IPOs

The stock exchanges that list VC-backed companies in the US, Europe and Israel are still recovering from the financial crisis. China has experienced phenomenal growth since opening the SME Board and the high-growth stock exchange ChiNext in Shenzhen. China surpassed the combined rest of the world in 2010 both in number of VC-backed deals and in capital raised in IPOs. Recent signs, however, indicate a cooldown because the P/E ratios are not sustainable and the future earnings by the listed companies have seemed inflated in recent quarters, leading investors to be cautious. Yet, even if a major correction happens, returns may still be staggeringly good by Western measures.
Global VC-backed M&A

The M&A market for VC-backed companies is still very healthy in the Western world, thanks to large companies’ big cash reserves and their drive for growth. This is expected to continue, and as IPO activity for VC-backed companies rises, median valuations and deal sizes will also increase. China, on the other hand, has been focusing on the public markets: more than 90% of its VC-backed exits in recent years have been IPOs. But the new local corporate giants in internet, mobile and telecommunications are likely to become substantial acquirers of young companies in order to stay ahead of the competition. This may fundamentally change the prices and valuations of local companies going forward, making them more attractive for entrepreneurs and their VC investors.

VC-backed M&A by region, 2003-11

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<td>2008</td>
<td>13</td>
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<td>2010</td>
<td>7</td>
<td></td>
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<tr>
<td>2011</td>
<td>N/S</td>
<td></td>
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<table>
<thead>
<tr>
<th>Year</th>
<th>Total transaction value</th>
<th>Number of M&amp;As</th>
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<tbody>
<tr>
<td>2003</td>
<td>$N/A</td>
<td></td>
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<tr>
<td>2004</td>
<td>$5</td>
<td></td>
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<tr>
<td>2005</td>
<td>$11</td>
<td></td>
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<tr>
<td>2006</td>
<td>N/S</td>
<td></td>
</tr>
<tr>
<td>2007</td>
<td>$28</td>
<td></td>
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<tr>
<td>2008</td>
<td>$63</td>
<td></td>
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<tr>
<td>2009</td>
<td>N/S</td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td>$N/A</td>
<td></td>
</tr>
<tr>
<td>2011</td>
<td>$N/A</td>
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</table>

Note: chart scales vary for clarity
Source: Dow Jones VentureSource, 2012

Median years from initial VC financing to IPO and M&A exit

While the holding period in the US and Europe from the initial VC-financing round to an IPO or M&A exit was extremely brief during the dot-com boom in 1999-00, the pendulum has swung to the other extreme, where 6 to 10 years has become the norm in several industry sectors. This causes major concerns for early-stage funds, which are commonly experiencing 10-year holding periods. This means that as of year two or three into a new fund, investment into start-up stage companies in biotech, cleantech or other core technology is less likely to take place, since the company exit would likely come after the 10-year life of the fund had ended. In China and India, the later-stage investments predominantly into more mature, revenue-generating or profitable companies lead to rather short holding times. This may change, as there is pressure to move investors into earlier stages due to the very competitive late-stage environment.
**Global median pre-money valuations**

Uncertainty in the capital markets about the US economic recovery and the situation in the Eurozone has slowed the increase of the median pre-money valuation. However, the situation may improve if large companies’ direct VC-investment activities are strongly driven by strategic considerations rather than purely financial goals. China’s valuations will be driven largely by the P/E ratios on the new local stock exchanges and by the rise of new larger funds investing predominantly into late-stage deals. Unlike in Western markets, Chinese corporate venture groups are not willing to pay a premium when investing into companies for equity. They argue that their value-add warrants a discount, not a premium.

**Figure 6. Median pre-money valuation by region, 2003-11**

- **United States (US$m)**
  - 2003: $10.1
  - 2004: $12.0
  - 2005: $15.9
  - 2006: $18.3
  - 2007: $17.2
  - 2008: $20.0
  - 2009: $19.2
  - 2010: $16.9
  - 2011: $21.2

- **Europe (US$m)**
  - 2003: $4.3
  - 2004: $4.3
  - 2005: $4.9
  - 2006: $6.2
  - 2007: $7.1
  - 2008: $6.4
  - 2009: $5.6
  - 2010: $5.8
  - 2011: $6.6

- **Israel (US$m)**
  - 2003: $8.6
  - 2004: $9.0
  - 2005: $5.7
  - 2006: $14.0
  - 2007: $5.5
  - 2008: $19.0
  - 2009: $11.0
  - 2010: $6.8
  - 2011: $5.6

- **China (US$m)**
  - 2003: $11.1
  - 2004: $32.1
  - 2005: $39.9
  - 2006: $42.8
  - 2007: $44.3
  - 2008: $60.5

Note: chart scales vary for clarity

Source: Dow Jones VentureSource, 2012
Global VC hotbeds
VC trends

Outlook: US fund-raising continues to be challenging

- Despite strong deal flow, market volatility has had an impact on the ability of all but the very best VC firms to raise new funds. In 2011, total capital raised for US venture firms reached US$32.6 billion, a 10% rise from the same period a year ago. However, the number of firms that closed fell to 19 funds, a 38% drop from a year ago. (In 2010, the total US VC investment was US$29.6 billion.) Overall, VC fund-raising continues its almost decade-long decline. While current fund-raising surpasses levels prior to the dot-com bubble years (pre-2000), it has not yet returned to levels reached in the 2000-08 time frame.

- Seven well-known VC funds raised most of the capital in 2011, as wary limited partners invested less and in only a few VC firms. Top VCs were primarily early investors in areas such as social media. And 2011 marked the fewest number of US funds closed in 18 years, with just 135 and amount closed of US$16.2 billion.

- The US still maintains an approximately 70% share of the global VC market, followed by the UK, Beijing and Shanghai. Globally, the top four regions in the world with the most VC activity were all in the US: Silicon Valley retains the lead by far (US$12.6 billion, 977 rounds), followed by New England/Boston (US$3.8 billion, 369 rounds), the New York City metropolitan area (US $3 billion, 367 rounds) and then Southern California (US$3.3 billion, 286 rounds). However, all of these US hotbeds have experienced a decline in the number of active investors.

Fund-raising is shifting toward later-stage

- Many VCs show reluctance to invest in early-stage untested companies. They are altering their investment objectives, seeking greater flexibility, growth equity opportunities and later-stage deals. The average fund size substantially increased in 2011, to US$140 million. Companies in the expansion and later stage of development received most of the funding during 2011. A total of US$18.7 billion in funding was split between 1,103 later-stage companies.

- Nevertheless, the seed/early-stage market is still active, thanks largely to highly valued internet companies. The relatively small amount of capital now required by start-ups due to innovations such as cloud computing has lowered operating costs dramatically, effectively allowing companies to prove their products on far less initial capital. In 2011, 1,339 companies received a total of US$5.8 billion in first-time financing (an increase of 7% in capital raised and a increase of 19.5% in deal numbers, compared with the same period in 2010).
United States VC trends

Key US VC statistics

<table>
<thead>
<tr>
<th></th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Invested capital (US$m)</td>
<td>$24,084</td>
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<tr>
<td>Investment rounds</td>
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<td>Median round size (US$m)</td>
<td>$5.0</td>
<td>$4.3</td>
<td>$5.0</td>
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<tr>
<td>Number of VC-backed IPOs</td>
<td>8</td>
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<td>45</td>
</tr>
<tr>
<td>IPO capital raised (US$m)</td>
<td>$904</td>
<td>$3,255</td>
<td>$5,358</td>
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<tr>
<td>Median time to IPO (years)</td>
<td>7.9</td>
<td>8.1</td>
<td>6.5</td>
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<tr>
<td>Number of VC-backed M&amp;As</td>
<td>416</td>
<td>560</td>
<td>477</td>
</tr>
<tr>
<td>Median M&amp;A valuation (US$m)</td>
<td>$25.0</td>
<td>$40.4</td>
<td>$70.7</td>
</tr>
<tr>
<td>Median time to M&amp;A (years)</td>
<td>5.6</td>
<td>5.4</td>
<td>5.3</td>
</tr>
</tbody>
</table>

Source: Dow Jones VentureSource, 2012

- **Companies are staying private longer**

- **Angel investors are financing** many of these early-stage companies, particularly in digital- and mobile-related investments. Subsequently, such angels’ investments are often written up significantly or acquired for an attractive investment multiple. The proliferation of angel investors is helping fill the void left by the consolidation of VC firms.

- **The “super angel” phenomenon involves former executives** from high-profile consumer internet companies who have invested personal capital in companies at the seed stage. Several of these investors recently raised small institutional funds (typically less than US$75 million) to invest in about 500 start-ups in Silicon Valley over the past 18 months.

- **The average time a company remains private** has roughly doubled in recent years. As some highly successful companies refrain from pursuing an IPO for much longer than used to be the norm, this has led to the rise of private secondary stock markets, which provide early investors and employees a chance to sell out before an IPO. This has reduced the need to go public because liquidity needs have been lessened.

- **The rise of more liquid private exchanges** reflects a big change in financing sources. For instance, the inflated frothy valuations in the tech market have been forming largely out of sight in private markets. Professional investors are putting billions in private capital into late-stage investments, such as social media businesses like Facebook and Groupon. They are enabled by private exchanges such as SecondMarket (see interview on page 18) and SharesPost, which allow investors to trade the equity of private companies more efficiently.

### The exit environment remains fragile

- **Investors are moving further out the risk spectrum** in search of companies with strong growth stories. Since 1Q 2010, the VC-backed company exit environment has improved for mature start-ups, driven by relatively stronger aftermarket IPO performance and greater strength in M&A, divestitures and emerging market growth. The improved exit environment has raised VC funds’ hopes that they may finally be able to cash in some investments at better valuations, thereby reducing the pressure from impatient investors.

- **The VC-backed IPO market has been soft**, but social media companies have substantially improved volumes, stability and aftermarket performance. Despite the ongoing uncertainty, in 2011, 45 VC-backed IPOs valued at US$5.4 billion came to market, a 64% increase in dollar value and a decrease in the number of offerings compared with 2010 by one IPO. The US VC-backed IPO market first experienced a significant turnaround in 2010, when IPOs raised US$3.3 billion, or 267% more than in the previous year.

- **Another exit route for VCs** has been to sell portfolio companies to PE firms. This path to liquidity is driven largely by the relative weakness of the IPO market. PE firms can create some liquidity for good companies and their investors.

### US investment hotbeds

<table>
<thead>
<tr>
<th>Hotbed</th>
<th>2010 investment (US$m)</th>
<th>2011 investment (US$m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silicon Valley</td>
<td>$11,377</td>
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<tr>
<td>New England</td>
<td>$2,605</td>
<td>$3,818</td>
</tr>
<tr>
<td>Southern California</td>
<td>$2,919</td>
<td>$3,327</td>
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<tr>
<td>New York Metro</td>
<td>$2,420</td>
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<tr>
<td>Texas</td>
<td>$1,779</td>
<td>$1,015</td>
</tr>
<tr>
<td>Potomac</td>
<td>$819</td>
<td>$1,224</td>
</tr>
</tbody>
</table>

Source: Dow Jones VentureSource, 2012
However, the primary exit route remains the trade sale

- **M&A makes up close to 90% of US VC-backed exits.** With many cash-rich US businesses focused on organic growth, companies are expected to look to acquisitions and increase their focus on divestitures as a way to maximize shareholder value, raise capital or generate growth. M&A deal activity is expected to moderately strengthen for 2012 and beyond.

- **Larger deals but fewer transactions** characterize the M&A market. In 2011, there were 477 VC-backed M&A deals worth an aggregate US$47.8 billion, representing a 23% rise in capital and an 15% decrease in deal numbers compared with the same period in 2010. (In 2010, the venture-backed M&A market in the US recorded its first rise in both deal numbers and value since the peaks of 2007, with 560 deals generating $39.0 billion, almost 69% higher than in 2009.) M&A valuations are quite strong and offer broad investor participation, with capital efficiency on par with the pre-internet bubble period.

- **Driving the acquisitions momentum** is the recognition by large corporations that they cannot generate all of the innovation they need internally, and that they need to partner with VC firms and their portfolio companies to access external innovation relevant to their businesses. In addition, with a generally soft IPO market, valuations for many companies are low, making acquisitions attractive to large cash-rich corporations.

- **Corporate VC makes up nearly 3% of all capital being committed to US start-ups**, and 2011’s total was just under US$1 billion. Large companies are launching seed funds to boost their bottom lines and scope possible acquisitions. Corporate venturing units have an important role in acting as in-house strategic advisors and helping portfolio companies accelerate their businesses. The reduction in the number of traditional VC firms has helped open new opportunities for corporate venturing.

**IT, health care and cleantech make up half of all VC capital raised**

- **With funding in various sectors and life-cycle stages**, the pace of US VC investment has been reasonable and deliberate, contrary to popular perceptions.

- **The IT sector, especially software, saw an upswing.** In 2011, software companies raised US$4.6 billion in 743 deals, a rise of 12% from 2010. Software companies, which had plummeted in 2009, bounced back in 2010 with US$4.1 billion in investments over 671 deals, a 21% rise in capital from 2009.

- **Health care rebounded** in 2011 with US$8.4 billion raised, although the number of deals – 738 – represent a slight decline from 2010. Many innovative venture-backed biotech companies are being acquired by large incumbents.

- **Cleantech venture has slowed down.** In 2011, US cleantech with 297 energy companies received US$4.9 billion. (Cleantech venture investment in the US had registered a sharp upturn at the end of 2010, with total investment for 2010 reaching US$5.1 billion from 300 deals.) US venture investment in 2011 continued to see large investments in the solar and energy storage sectors.

**Longer-run VC horizons are brightening**

- **Longer-term trends suggest a positive direction** for VC, including more VC money funding start-ups, the proliferation of angel investors, the fast growth of private secondary markets, the emergence of new overseas investors and growth opportunities in new and innovative segments such as cleantech, cloud computing, social networks, wireless and information security.

- **The VC universe continues to shrink** as US institutional investors focus on top performers or forego VC altogether. However, the VC industry’s continued long-term consolidation is viewed as good for the industry, as it weeds out weaker firms, reduces excess competition and improves returns. Better returns will in turn attract more capital to venture funds as the cyclical process continues.

- **Limited partners were asked for their prerequisites for re-engaging** with the VC industry as an asset class in our US limited partner sentiment survey of 2010. Currently, all of the prerequisites cited by limited partners are being exhibited in current markets: 1) more successful exit track records by VC firms, including both IPO and M&A activity; 2) continued contraction of VC firms so as to weed out weaker firms; and 3) fewer dollars into VC funds, creating a focus on more capital-efficient company investments and better returns for limited partners.
**Q&A**

**Lawrence Lenihan**

Founder and Managing Director

FirstMark Capital

New York City

“Bubbles pop, but they’re like forest fires: in the end, they’re healthy. This market is going to come back stronger and much bigger 5 to 10 years from now.”

**Ernst & Young: What is your perspective on the current VC environment in the US?**

Lawrence Lenihan: Nationally, right now we’re in a venture bubble. Not so much A-round money, but lots of later-round money. There’s too much money chasing the next Facebook. Bubbles pop, of course, but they’re kind of like forest fires: in the end, they’re healthy. This market is going to come back stronger. There will be something much bigger in terms of the entrepreneurial market 5 to 10 years from now.

**Ernst & Young: What sectors do you see as increasingly active in VC in the US?**

Lawrence Lenihan: I think a lot of people thought advertising technology was over. Our belief is that it’s really in a third inning. We’re also going to see a lot more games. Games as entertainment, content, engagement. We are also big, big believers in data, and with that, analytics. You need very sophisticated analytics to really drive key decision-making across all industries.

We’re also seeing a whole new development of security, from the highest-level enterprise all the way down to the personal. We also think that application technology for very specific industry problems, such as finance, insurance, pharma and health care, will do well. Retail is a gigantic opportunity, but it is incredibly bubbly right now — there are many investors chasing this space, but most of them don’t really know or appreciate the industry.

**Ernst & Young: What do you think about the prospects for the exit environment over the next few months?**

Lawrence Lenihan: There has been a massive appetite for IPOs over the past 12 months. But what’s going to happen 6, 12 months from now? I think these markets are no longer the financing vehicles for venture companies that they once were. Companies need to be large, mature and have predictable revenue streams that fund earnings and future development. Companies with a longer outlook in terms of their development will be slaughtered in the public markets because these markets have such a short-term focus.

Nevertheless, everybody is still driving for that IPO – we’re doing it, too. We’ve got a company that recently filed for an IPO. We’re going to cross our fingers and hope that the markets hold together for six months after its offering so we can exit in an orderly manner. But in the end, we would much prefer to exit in an M&A process. It’s nice to get it all done at once and then you don’t have to worry about it.

**Ernst & Young: Are you seeing corporates more willing now than they were a year or so ago to do deals?**

Lawrence Lenihan: Yes. Without a doubt. But that can change on a dime in an uncertain environment.

**Ernst & Young: Whether it’s national initiatives like Startup America to provide funding for start-ups or other state or local initiatives, will we see more government, wealthy private individuals or large companies trying to play a catalytic role for start-ups?**

Lawrence Lenihan: Yes, I think we’re going to see it more, and I also think it will end abruptly. I just don’t think these incubators and accelerators do much. The best thing they do is provide community, a good central point where expertise can gather.

**Ernst & Young: What do you think the optimal VC fund looks like three to five years out?**

Lawrence Lenihan: After 15 years of doing this, I think venture capital is the most unscalable business on the planet. You can’t just hire somebody and say, “Hey, you’d be a good investor.”

You find out over many years. So I think the perfect A-round venture fund is small, a US$200 million to US$250 million fund. It’s four or five partners. I think VC funds are going to be smaller going forward, using more of the GP’s own money, because new companies need less money to figure it out and grow.

**Ernst & Young: Do you see venture becoming more globally focused in the US?**

Lawrence Lenihan: Actually, I think it’s going to be increasingly local. And concentrated. I think that, for example, New York’s gains have come at the expense of Boston.

**Ernst & Young: Would you see start-ups, on the other hand, going more global?**

Lawrence Lenihan: Absolutely. And every company we’re looking at, we talk about being global from the beginning. How can your product be purchased anywhere? How do you service your customers anywhere? For us, customer acquisition is the most important determinant of success, and those customers can be anywhere in the world.
Ernst & Young: What general trends are you seeing in venture investing in the US?

Jeffrey Glass: I’m seeing two major trends. The first is a move toward later-stage investing. Some firms that traditionally only did early-stage investment have either switched to late-stage or are employing a multistage approach. Some of these are even investing in very late-stage, high-value, mezzanine rounds. I think VCs have seen some spectacularly big valuations created and are therefore less afraid to invest at a later stage. Sometimes they’re even willing to enter at what used to be considered untouchable valuations.

Also, many start-ups today require much less capital than they used to, so I think some larger funds – depending on how they are structured – are finding that it can be harder to compete for early-stage opportunities. So they migrate to later stage, where there is more need for the kinds of capital they are looking to deploy.

The second trend is a massive proliferation of seed and angel investing, particularly in digital- and mobile-related investments. Here, again, the driver is the relatively small amount of capital that’s now required. In some cases, you can put your infrastructure in the cloud and use open-source tools.

Ernst & Young: How do you see the exit environment evolving right now?

Jeffrey Glass: Clearly, the last couple of years have seen some improvement. In fact, the last two years have been the most prolific for us, both in terms of number of exits and total dollar returns. These have included IPOs, M&A, as well as a couple of investments where larger private equity firms bought some of our companies. This last is an interesting third path to liquidity these days.

In 2008 and 2009, a lot of larger companies tightened their belts. They did a nice job at it, too, creating record amounts of cash on their balance sheets. But in the process, they cut R&D. Then, in need of innovation and flush with cash, these companies enabled a nice surge of strategic exits. This was followed, at least for a little bit, by a wide-open IPO window where public investors were looking for growth opportunities and where a number of IPOs did quite well. My sense is that, even though markets have been volatile lately, it’s a pretty good time for exits, both IPO and M&A. We expect to be active over the next year.

Ernst & Young: What trends are you seeing in the relationships between start-ups and big corporations?

Jeffrey Glass: One thing we’re seeing a lot of in tech is development partnerships: an early-stage software company will develop its product by partnering with a larger corporation and creating the initial version or building out the platform to fit the particular requirements of that customer. I’m also seeing an increase in foreign corporate activity – as investor, as acquirer and as customer.

Ernst & Young: You mentioned VC firms selling companies to PE firms as a third path to liquidity. Do you see a trend there?

Jeffrey Glass: The extent of it is largely driven by the weakness of the IPO market. When there are good companies that have been around for several years but the IPO market is weak, that’s a good time for PE to move in and create some liquidity for the companies and their investors. We’ve been seeing this recently because, overall, the IPO market has not been strong. As long as that continues, PE will be a significant exit route for venture investors.

Founders, of course, are still looking down the road toward that IPO. But we always advise companies to focus on developing their company, keep running their offense. You can’t control the vagaries of the market, so you need to focus on your company. So if this handoff to a larger PE firm gives the young company more time and cash to keep developing, it’s good for them.

Ernst & Young: What do you think the venture fund landscape will look like five years down the road in the US?

Jeffrey Glass: It’s a cyclic process. Right now, certain sectors that have done well are attracting too much funding. It creates a highly competitive environment in which no start-up can build a big, profitable business, so there will be lower returns for investors. When LPs are disappointed, they’ll start pulling their money, and the environment will be less competitive, leading to better returns. Better returns will in turn attract more capital to venture funds, and the cycle continues. This cycle is probably the nature of the beast and what we can expect to see continue. It’s worth noting, though, that the top quartile of VC firms is less prone to the ups and downs of this cycle.
Ernst & Young: What was your inspiration for SecondMarket?

Barry Silbert: Our idea was to create a marketplace for the many assets that are not traded on any exchange. There are tens of trillions of dollars’ worth of these “alternative investments,” including restricted stock, private company stock, certain fixed-income securities, bankruptcy claims and others.

Ernst & Young: As a market for private company stock, what do you see as SecondMarket’s role in the development of young companies?

Barry Silbert: One important role is to provide them with liquidity. But we also help them stay private longer, which some of them want to do. I think eventually we will serve as an alternative to going public at all.

Ernst & Young: When the IPO market improves, do you think SecondMarket will be of less interest to these companies?

Barry Silbert: In truth, there has been a general decline in the IPO market since 2000. Even before the financial crisis, a good year for IPOs had fewer than half the number seen in the ’80s and ’90s. And the sizes of the companies are much bigger, so that small companies are left to find other sources of funding. I don’t think a pickup in the IPO cycle is going to alter this more general trend. There needs to be a better capital formation process to enable these small companies to develop to even have the chance of going public. That’s the gap I want SecondMarket to fill.

Another general trend that makes it attractive to be private is the short-term focus of public investors. Forty years ago, the average investor held public stock for five years; today, it’s 2.8 months. As an entrepreneur, that’s not the kind of market I want to be a part of. Companies that trade on SecondMarket get more control over who trades their stock and when, allowing them to create conditions that favor the long-term investor.

Ernst & Young: What has been the reaction to SecondMarket from the venture capital community?

Barry Silbert: At the start, they thought there would be no need for this service because the IPO market would come roaring back. They thought that at that point, only the bad companies would list privately. Well, we’re now approaching US$1 billion in transactions, Yet VCs have turned out to be big supporters because we’re helping their portfolio companies grow to the point where they can go public successfully. Nowadays it can take 10 years for a company to go public. We not only help the company raise capital, we also provide the VCs a way to take a little off the table during that time, which they can invest elsewhere and spread their risk.

Ernst & Young: What are your thoughts on some of the current regulatory developments that may affect SecondMarket?

Barry Silbert: Currently, companies with 500 or more shareholders have to publicly report their financial results. Right now, there is a bill before Congress to increase the cap to 1,000 while also excluding from the count current and former employees (high net worth and institutional investors). This is a very positive development. With companies taking longer to go public, the 500-shareholder rule has prevented additional employee hiring, recruiting, and has prevented acquisitions by companies that didn’t want to exceed the limit. So this change could be very good for small companies.

Ernst & Young: How has the environment since the financial crisis affected SecondMarket?

Barry Silbert: Many people have been less comfortable investing in the public markets. Trust has been damaged. And if you think about how Wall Street works, it really makes most of its money off of inefficiency, taking advantage of a lack of transparency to charge as much as possible. So it’s an industry ripe for disruption. SecondMarket has been attractive to people because it brings transparency in a central market. It has been very exciting to see it embraced by the investment community.

Ernst & Young: What types of companies or sectors will you be approaching about listing on SecondMarket?

Barry Silbert: We started with venture-backed companies, but there are many other opportunities. One of our next focuses is private community banks, which often have many shareholders. There are people who want to invest locally, and these banks already make a lot of information public because of bank regulatory requirements. Also, there are many multigenerational family-owned businesses that need liquidity and could benefit from listing on SecondMarket.

Ernst & Young: Going forward, how do you see the market for venture capital changing?

Barry Silbert: I think VCs — especially good VCs — will always be an important part of the capital formation process. They can provide more capital than angel investors, and they provide much more than just capital. SecondMarket’s own venture investors provided us with a great board member, mentor and friend — and that’s incredibly important, especially for a first-time entrepreneur.
Ernst & Young: What is your picture of the history of the VC industry in Brazil?

Clovis Meurer: In Brazil, we can separate the VC history into major phases: the early 1980s to 1995, 1995 to 2005, and 2005 to the present. During the 1980s, we saw the first VC firms arise, characterized by many pioneering efforts, challenges and a very unfavorable environment for long-term investments, due to high inflation and very high interest rates. Inflation had a remarkable impact on nominal return rates for short-term investments, which could grow a lot in just one day.

Since 1995, the VC outlook for Brazil has been improving, thanks to the currency plan known as the Real Plan, the reduction of inflation and the likelihood of lower interest rates. Another important factor has been the privatization of public enterprises. This has improved the prospects for small businesses that could supply these large companies. We’ve also seen the first regulations of VC funds from CVM (the Brazilian SEC), as well as the emergence of several incubators. In 2000, the Brazilian Venture Capital and Private Equity Association (ABVCAP) was created, bringing together industry players (managing directors, audit firms, lawyers, investors, etc.). Increasingly, we noticed a more favorable environment for new entrepreneurial companies that provided investment opportunities and strengthened the VC and PE funds.

Finally, since 2005, we have seen a new generation of VC funds. The Brazilian pension funds and other institutional investors began to dedicate more resources to VC funds. In addition, the Brazilian stock market was booming, with a lot of new IPOs and a very good exit environment.

Ernst & Young: What opportunities does Brazil face now? What are the main growth drivers?

Clovis Meurer: There are many factors contributing to our growth: the appreciation of the currency, interest rate reductions, the C and D share classes, huge infrastructure projects, the government housing program, investment in the oil and gas industry, the real estate boom and more.

Where there is growth, there are investment opportunities for VC funds. The World Cup, the Olympics and all the logistics and infrastructure that need to be developed for these events have attracted more and more resources. Investors are monitoring these needs and directing more investment to meet them.

Ernst & Young: Who are the main investors of venture capital in Brazil?

Clovis Meurer: The major investments still come from local investors, mostly pension funds, the BNDES (Brazilian National Development Bank) and other institutional investors. There is not yet a strong presence of foreign investors in the country’s VC industry.

Ernst & Young: What are the main challenges to increasing the investment in VC funds in Brazil?

Clovis Meurer: The global funds look everywhere, and to choose to invest in Brazil they need to see more liquidity than there is currently. Also, the exit opportunities, especially by way of the local stock exchange, are still maturing. When global investors evaluate the exit possibilities for Brazilian VC investments, they opt for PE investments, where the largest deals take place and there are more options for exiting. Most foundations and international funds have very high standards of investment, and the team dedication needed to create value for a small company is usually the same as what’s needed for a large company. But the development of a new access market for younger companies (the Bovespa Mais), the opening of representative global funds in Brazil, and the investment of corporate investors are tending to reverse this reality and attract more venture capital to Brazil. One of the most important exit options for venture investors is to sell to PE firms. The heat of the Brazilian PE industry has expanded this exit option and helps to make VC investing more attractive.

Ernst & Young: How has the average maturation period for VC investments evolved recently?

Clovis Meurer: In Brazil, it tends to last about five to seven years, which is more than the global average. These longer periods of maturation reduce the internal rate of return. However, the average has been decreasing rapidly and should reach international standards soon.

“When global investors evaluate the exit possibilities for Brazilian VC investments, they opt for PE investments, where the largest deals take place and there are more options for exiting.”
VC trends

Outlook: VCs on pace to reach all-time record in 2011

- China's VC industry set new heights in 2011 in both number of investments and investment amount. Due to its late-stage investment focus, China will likely surpass Europe as the second-largest venture hub globally by investment amount by the end of 2012. Given China's new fund-raising record in 2011 and the favorable exit environment, the investment pace will likely continue. However, the median round size and valuations have risen to historical heights, more than doubling the value of 2006-09, which may dampen future returns.

- The Government supports VC by issuing policies in 2010-11 to stimulate the continued rapid growth of the VC industry, more investment in the middle and western regions of China and the emergence of high-value-added and environment-friendly products in seven fields for VC investors, namely energy conservation and environmental protection, next-generation IT, biotech, advanced manufacturing, alternative energy, innovative materials and new-energy-powered vehicles. Thus, the IT and cleantech sectors are likely to dominate VC activity in the years to come.

Strong fund-raising growth, especially pre-IPO

- The VC industry has seen strong growth in 2010-11. In 2011, US$5.9 billion was raised in 323 rounds. (In 2010, China saw US$5.5 billion in 315 rounds, exceeding the record peak of US$3.8 billion in 381 rounds in 2007.) Furthermore, 2011 saw 73 new funds raise a record US$8.1 billion for investments in Chinese VC-backed companies (13% more than was raised in 2010). Twenty of the new funds raised US$100 million or more.

- Key growth drivers include China's high GDP growth (at least five times higher in 2010 than in the US and Europe), a booming IPO market, high P/E multiples, strong investor demand for shares in newly listed companies, a favorable policy climate and a huge pipeline of strong private companies looking to raise equity capital before an IPO.

- VC financing of pre-IPO, late-stage investments dominates and continues to increase. Growth funds experienced a sharp rise in 2010 as domestic equity investors much preferred pre-IPO, revenue-generating or profitable companies. Indeed, in 2011, revenue companies made up 94% of investment, while pre-revenue companies accounted for just 6% of investment.

- The soaring corporate valuations of A-share listed companies and substantial ROIs of their IPOs attracted more and more funds into pre-IPO projects. In 2011, the median pre-revenue valuation jumped to US$60.5 million (up 30% from 2010, when the median was just US$46.4 million, and up 354% from 2006, when the median was US$13.3 million).

- China's valuations will be driven largely by the P/E ratios on the new local stock exchanges and by the rise of new larger funds investing predominantly into late-stage deals. Unlike in Western markets, Chinese corporate venture groups are not willing to pay a premium when investing into companies for equity. They argue that their value-add warrants a discount, not a premium.

- Early-stage opportunities are growing as rising levels of innovation within China assist the growth of early-stage firms. Government-sponsored incubators, university R&D centers and formal business angel groups are also springing up. Furthermore, there is pressure to move investors into earlier stages, due to the very competitive late-stage environment.
Key China VC statistics

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<th>2009</th>
<th>2010</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Invested capital (US$m)</td>
<td>$2,731</td>
<td>$5,481</td>
<td>$5,933</td>
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<tr>
<td>Investment rounds</td>
<td>291</td>
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<td>Median round size (US$m)</td>
<td>$5.9</td>
<td>$7.5</td>
<td>$12.5</td>
</tr>
<tr>
<td>Number of VC-backed IPOs</td>
<td>45</td>
<td>141</td>
<td>97</td>
</tr>
<tr>
<td>IPO capital raised (US$m)</td>
<td>$4,448</td>
<td>$21,961</td>
<td>$15,328</td>
</tr>
<tr>
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<td>2.3</td>
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<td>2.5</td>
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<td>Number of VC-backed M&amp;As</td>
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<td>Median M&amp;A valuation (US$m)</td>
<td>$27.6</td>
<td>$62.7</td>
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</tr>
<tr>
<td>Median time to M&amp;A (years)</td>
<td>3.5</td>
<td>3.6</td>
<td>4.1</td>
</tr>
</tbody>
</table>

Source: Dow Jones VentureSource, 2012

Domestic VC industry expands rapidly

- **VC investment in China has expanded geographically.** Beyond fiercely competitive eastern China (including Beijing, Shanghai, Guangdong, Fujian, Zhejiang and Jiangsu) into new areas in central and western China, as investors seek better opportunities and local governments offer preferential policies, such as establishment of governmental guidance funds. Currently, Beijing is the leading Chinese VC investment hotbed, raising the most capital — US$2.9 billion in 2011 — followed by Shanghai, which raised US$1.3 billion.

- **The Chinese VC industry has been led by global brand name investment funds that have established China-based funds** (e.g., The Carlyle Group, Sequoia Capital), but domestic VC firms are emerging and growing much faster. In this period of transition, the market continues to mature, and new legal structures and commercial arrangements are emerging.

- **Consolidation of the VC industry is inevitable.** The abundance of VC money available around China has enhanced the VC industry’s boom and rapid development. However, as the competition has grown fiercer, some entrants may be eliminated and an industry reshuffle will be inevitable. Only those VCs that have a strong, professional team for project selection, cost control and risk management can survive. The number of participants will increase severalfold, and so will the scale of the industry. Many VC funds in China started with reputable foreign limited partnerships. But limited partnership composition is in transition now that there are funds set up in local currency (renminbi, or RMB), which enjoy natural advantages.

- **Many RMB funds operated by foreign institutions** have been launched. Strong local preferential policies in tax and foreign currency exchange to foreign RMB funds from the Chinese Government contributed (e.g., Blackstone Group, IDG Capital, KPCB China, Sequoia Capital China, Qiming Venture Partners). For most foreign institutions operating in the Chinese capital markets, being subject to foreign-exchange capital account controls is now a small price to pay for the often exorbitant returns on investments.

- **Private capital is becoming increasingly important.** Although bank loans are difficult to obtain, start-ups still have a number of alternatives to VC, including financial leasing, micro-funds, capital markets (e.g., IPO, bonds), private placement, angel investors and debt financing. As elsewhere in the world, Chinese angel investors have become major investors in early-stage start-ups. The competition has nudged VCs toward later-stage, high-growth pre-IPO ventures.

“Given China’s new fund-raising record and favorable exit environment, the investment pace will likely continue, but unrealistic valuations may dampen future returns.”

Lawrence Lau, China VC Leader, Ernst & Young
China VC trends

Highly active exit environment

- **The high-growth stock exchange ChiNext** provides a much-needed domestic exit route. Launched in 2009, ChiNext enables China’s portfolio companies to raise money, invest and exit within the country.

- **IPOs make up more than 90% of all VC-backed exits** in China, reaching a record high. In 2011, China saw 456 exits, including 356 IPOs (78% of all exits) and 41 trade sales. Of the IPOs, 171 (48%) were venture-backed companies. In 2011, the VC-backed IPOs saw US$15.3 billion in capital raised from these transactions. The median number of years from initial financing to IPO is extremely short in China compared with the West – just 2.5 years in 2011.

- **Domestic stock exchanges are playing a big role** in supporting IPOs, accounting for 79% (281) of all VC-backed Chinese IPOs. SMEB and ChiNext garnered 115 and 128 listings each. Shanghai Stock Exchange had 38 IPOs. From a VC/PE-backed perspective, the 171 IPOs were backed by 2.61 firms on average. And 75 IPOs of VC-backed Chinese enterprises took place on foreign exchanges, namely NASDAQ, NYSE and the Frankfurt Börse.

- **China’s VC-backed M&A market rose sharply** in 2010, both in the number of announced deals and the amount of capital raised, hitting an all-time high. There were 17 deals disclosed, up 31% from 2009, and worth a total of US$6.091 billion, up 392% from the prior year. In 2011, the pace quickened with 41 trade sales. For M&A exit, the median time from initial financing to M&A was just 4.1 years.

<table>
<thead>
<tr>
<th>Hotbed</th>
<th>2010 investment (US$m)</th>
<th>2011 investment (US$m)</th>
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<tbody>
<tr>
<td>1 Beijing</td>
<td>$3,087</td>
<td>$2,860</td>
</tr>
<tr>
<td>2 Shanghai</td>
<td>$816</td>
<td>$1,278</td>
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</table>

*Source: Dow Jones VentureSource, 2012*

- **Corporate investors have become more active buyers** in recent years in China, contributing to the increase in M&A. Going forward, the major acquirers of young companies will likely include new Chinese corporate leaders in the internet, mobile and telecommunications sector as they strive to maintain their competitive edge. Additionally, with the recent easing of regulatory barriers to market entry, foreign companies looking to enter China have found existing Chinese businesses to be attractive acquisition targets. Compared with VC investors, these local and foreign corporate investors are more focused on strategic returns — new technologies or market access — but many also have a purely financial objective.

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1 According to Zero2IPO, January 2012.
2 Zero2IPO, February 2012.
3 Ibid.
Ernst & Young: What do you see as the key trends, opportunities and challenges for the VC industry in China in the next few years?

Gary Rieschel: The Chinese Government policy is focused on increasing innovation, increasing consumption and improving quality of life. Add to this that there is still a great amount of wealth being created in China, and these are huge drivers of the country’s venture capital activity.

In terms of opportunities, Qiming looks at three things. We look at China’s young, very social and internet-savvy consumers, and in the areas of health care and the environment. Both areas are a current source of social unrest, where the Government recognizes a strong need and demand for change as the society grows wealthier. For example, China is now the top place in the world for the commercialization of most of what’s happening in cleantech worldwide. And that’s going to continue for the next 10-plus years.

Ernst & Young: From a VC perspective, what roles do the Government’s 11th and 12th Five-Year Plans play?

Gary Rieschel: I think the Plans are becoming better at achieving their objectives. We align ourselves with the Five-Year Plan, not because it directly tells us where to invest, but it does indicate with which companies and industries Government is going to play favorites. The Plan is really China’s attempt to organize itself, to improve some of its own internal resource allocations and to focus more of that state-owned capital, or it won’t achieve the innovation it desires.

Ernst & Young: What’s your outlook for early, pre-revenue-stage VC activity in the next few years?

Gary Rieschel: I think you’re going to see an increasing number of firms, namely foreign funds and the angel market, try to do earlier-stage venture investing in China because of the price pressure, because of the uncertainty of the exit markets. The entry price or valuation is very important.

Ten years ago, the Chinese angel market was virtually nonexistent, but now it is rapidly evolving and highly aggressive, which I think is very healthy for China. We’ve even developed super angels in China that not only are investing their own money but raise institutional money, primarily from foreign investors.

Ernst & Young: Exits in China in the last two years have been predominantly IPO-driven. Will that continue, and is the M&A market also going to eventually take off as a second exit route?

Gary Rieschel: I think IPOs will continue to be a much higher percentage of the exits in China than they are in, for example, the US — partly because of the drive of the Chinese CEOs to be independent, and partly because the financial markets worldwide still have a pretty healthy appetite for high-quality domestic Chinese companies.

That said, the markets are becoming increasingly volatile and investors are becoming much more selective about what can go public. The high percentage of IPOs includes Chinese companies listing overseas but also domestic IPOs. The Chinese Government has a very clear focus on increasing the number of companies listed in China. It also has a five-year goal of having 1,000 companies listed on the small, start-up-focused GEM exchange.

As for M&A, it’s only in the last two years that we’ve seen significant M&A activity by domestic Chinese companies, such as Tencent and Baidu, acquiring start-ups and other companies to fill out their product or services portfolios. And I think you will gradually see more and more companies being acquired for just their technology or their particular product before they are profitable.

Ernst & Young: With all the local-currency, RMB funds that have been created recently, in addition to the dollar funds, is too much money being plowed into the system in China?

Gary Rieschel: Thus far, the RMB and dollar funds have pursued generally different targets in the VC world. The PE world I think is going to see far more head-to-head competition. The VC world has been in internet technology, electronic commerce, etc., and those companies have listed primarily offshore, on NASDAQ. The RMB funds of later-stage deals will have substantial competition from PE dollar funds.

It used to be that a good, profitable company in China didn’t have a very attractive domestic alternative for listing. But the government policy and the increasing coverage, the growing sophistication of the financial markets in China, the increasing number of financial instruments and mutual funds in China — all these things are bringing more liquidity into the market, which makes domestic listing more attractive. I think the real route for alternative financing is at the very early stage. For technology companies, that’s still primarily foreign capital.
VC trends

Outlook: strong with continued growth

- High VC investment levels are anticipated for the next few years, with India’s 8% GDP growth rate, existing VC funds making attractive exits and an increasingly active VC/angel investor community seeding young companies. Overall, 2012 and 2013 should be exciting years for India’s VC investing as new innovations and business models in areas such as e-commerce, mobile applications, health care delivery, medical devices and technology, financial inclusion, clean technology and IT are likely to drive most of the activity. The availability of ample funds for India investments augurs well for the VC industry in the next few years.

- However, the growth capital venture space in India is getting overcrowded. With about 400 VC funds in operation, this glut has driven up valuations, prompting concerns by many investors, although there is still plenty of room for early-stage VC funds.

VC industry is healthy and active

- VCs have been particularly lively since 2006, with the industry just a little more than a decade old. In 2011, US$1.5 billion was raised in 155 rounds, while in 2010, US$1.1 billion was raised in 103 rounds. Recently, the country has been primarily a growth-capital market, with a median deal size of about US$5.5 million in 2011 and US$7.9 million in 2010 across PE/VC investments, making it difficult to distinguish between pure VC and PE investments in India. If VC is defined as seed and early-stage funding, since 2008, India has seen close to or above 100 deals each year.

- VC deals make up 7% to 10% of the total annual PE/VC deal value in India. At least 610 VC deals, worth more than US$6.5 billion, have occurred since 2006. After the slowdown due to the global financial crisis, investment activity is again picking up.

- A hybrid strategy of growth and late-stage investments has been adopted by many VC firms recently, expanding the field of businesses they can support and diversifying risk. The smaller growth-capital check sizes in India have supported this trend.

- Key growth drivers include high GDP growth, a growing middle class, a large and vibrant entrepreneurial ecosystem, entrepreneurs and fund managers paying increased attention on early-stage investments, and the emergence of a domestic network of angel funds. Thus, both demand- and supply-side factors should support healthy activity in the industry.

- Bangalore remains the hotbed of the VC industry, but activity is spreading across the country, especially to Mumbai, Hyderabad and Chennai.
“VC funds are trying to invest across sectors that allow them to tap into the rapid growth in domestic consumption.”

Mayank Rastogi, India VC Leader, Ernst & Young

### Key India VC statistics

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<th>2010</th>
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<td>Invested capital (US$m)</td>
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<td>IPO capital raised (US$m)</td>
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<tr>
<td>Number of VC-backed M&amp;As</td>
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<td>Median M&amp;A valuation (US$m)</td>
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<td>Median time to M&amp;A (years)</td>
<td>4.2</td>
<td>3.5</td>
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Source: Dow Jones VentureSource, 2012

### IT and other domestic consumption sectors prevail

- The technology sector has led VC activity in India since the advent of the PE/VC industry in India in the late 1990s, and it still accounts for more than 50% of deal activity. VC activity has focused on the internet and telecom-related businesses. In the last couple of years, health care, financial services and cleantech have also been active.

- Domestic consumption is a key theme. VC funds are closely pursuing companies that are capitalizing on the proliferation of wealth, a burgeoning middle class, greater financial inclusion and superior and differentiated health care delivery models. Such trends are expected to continue, with VC funds trying to invest across sectors that allow them to tap into the rapid growth in domestic consumption.

- Fund managers’ confidence in India is apparent in their willingness to seed and help manage new businesses in their formative years. This is especially true for sectors that have not seen much VC activity in the past, such as consumer products, financial services and logistics. This is a departure from the conventional VC model of “find and fund."

### Trade sales dominate exits

- More profitable exits of VC-backed companies have renewed interest in venture investing in 2011, and we expect this trend to continue for the foreseeable future. Corporate venturing is playing a significant role, as a growing number of big businesses seek new products and technologies by investing in and eventually acquiring start-ups.

- Trade sales are almost 50% of VC fund exits. In 2010, there were 17 VC-backed trade sales, with a median of US$63 million each. In 2011, India saw five trade exits and the median time to exit grow to 4.0 from 3.5 in 2010.

- IPOs and secondary sales to other PE/VC funds have been few in number, making up not quite 20% of exits each. In 2011, there were no VC-backed IPOs, while in 2010, there were VC-backed IPOs worth a total of US$46 million. Thus, exit preparedness is expected to account for a significant part of Indian fund managers’ time as they exit their 2005-08 vintage investments.

### India’s investment hotbed

<table>
<thead>
<tr>
<th>Hotbed</th>
<th>2010 investment (US$m)</th>
<th>2011 investment (US$m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Bangalore</td>
<td>$277</td>
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</table>

Source: Dow Jones VentureSource, 2012
Ernst & Young: What’s your outlook for the Indian VC industry, and what have been the key growth drivers?

Sudhir Sethi: We believe that from 2010 to 2015, total venture investments will be US$10 billion. From 2004 to 2009, total venture investments were US$3.3 billion; from 2004 to 2009, total technology investment was US$2.4 billion. We expect this to grow in the next five years to approximately US$7.5 billion. This is where the opportunity lies.

The number of VC exits is very good, the multiples on return on technology investment have been excellent and, more importantly, the majority of the exits were in valuations of US$100 million to US$500 million.

From 2004 to 2010, there were 142 venture-based exits in India. Out of those exits, 100 were technology companies, including IT services, software products, business process outsourcing/knowledge process outsourcing and the internet. Most importantly, the average multiple on invested capital was 5.9, and in non-technology, it was 3.3.

M&A made up 63% of exits, while 14% were through IPO. The rest was secondary market offerings. On strategic sales, the average multiple of invested capital was 6.5, and on secondary markets it was 4.1.

The supply chain of risk capital investors and the ecosystem of venture have matured significantly in the last three years. We have high net worth individuals, or super angels. We have institutional angel funds between US$20 million and US$60 million. And the majority of the angel investments are in pre-revenue companies.

In the completion ecosystem, we have more key players coming into venture B and C rounds.

Ernst & Young: Have exits in India been mainly domestic or international?

Sudhir Sethi: Foreign corporations made up half the M&A. The exit multiple for foreign corporations was 7.6, while for Indian corporations the multiple was 3.0. When we raise capital as a technology fund today, we are in a US$7.5 billion market with over 100 exits in the last five to six years and a 5.9 multiple on return through M&A, secondary offerings and IPOs. I think that’s a great mix to have.

The success rate through incubators could be less than what we find through angels. That’s the nature of the business. We have engaged with incubators, but we’ve found nothing so far.

Ernst & Young: Of the technology deals between 2004 and 2010 leading to an IPO, what proportions were in the various aspects of technology?

Sudhir Sethi: Out of the 100 deals, 22 were in software products. The greatest opportunities are in digital consumers, software products, medical devices, high-tech manufacturing, cleantech and energy. These are some of the niche services for security, business intelligence and analytics.

I think e-commerce is very visible because lots of capital is going there, but there is more to technology investing than e-commerce alone. There are software products, medical devices — you will see more medical device companies coming from India.

India is skipping the PC revolution and hopping onto the mobile bandwagon with approximately 750 million mobile users. You will see a lot of new mobile companies on the consumer side and some on the enterprise side still riding this wave.

One challenge India faces today is the lack of local limited partners investing in the rupee. More rupee investment would encourage international LPs to invest more in the country.

Ernst & Young: Do you think technologies created to solve emerging-market problems will be exported to other emerging markets, or do you think it will be a smaller, venture-financed portion?

Sudhir Sethi: To build a global company, we believe that we need a three-pronged approach to the three largest markets: the US, India and China. If our companies are able to grow in these three markets, then we believe they will be successful.

This three-pronged approach is especially important in India because, unlike China, most Indian entrepreneurs are used to being global entrepreneurs. They built global companies themselves because in the past it was very difficult to build companies only in India. Today, we can build a US$75 million to US$100 million company in anywhere from four to six years.

Ernst & Young: In India, there are more than 110 incubators, some university-related, some government-related and some private, with about 1,600 companies. How does the Indian VC industry engage with incubators?

Sudhir Sethi: I think the success rate through incubators could be less than what we find through angels. That’s the nature of the business. We have engaged with incubators, but we’ve found nothing so far.

Ernst & Young: What is your advice to entrepreneurs wanting to form an international company?

Sudhir Sethi: You must be adequately capitalized. In the India venture market, 60% of the companies in series A that were funded for less than US$2 million failed. Also, you must be local. Don’t have Indian professionals heading up your US operations — hire locally.
Ernst & Young: What do you see as the key trends, opportunities and challenges for the VC industry in Japan in the next couple of years?

Toshihisa Adachi: Since 2008 or 2009, the Japanese VC industry has been having a difficult time. Total investment last year, for instance, was about one-third that of 2008. This is chiefly because of the financial crisis, but it’s also due to Japan’s depressed stock market. Portfolio companies can’t find a good reason to go public given the market’s weakness. But the situation seems to be improving. We had only 22 IPOs last year, but I expect we may have 30 or 40 next year and a gradual increase for the next two or three years after that.

As for M&A, this has not been a main exit route, and while that’s changing, it’s changing slowly. Big companies still don’t like to acquire small, risky businesses. They’re much more comfortable in the corporate venture capital (CVC) role. CVC is a big part of venture investment in Japan, and that will continue.

We need more success stories and a more innovative business model, moving completely away from the legacy models. There is a new generation of globally focused, digitally sophisticated young entrepreneurs in their 20s that we need to rely on to aggressively generate new business globally.

Ernst & Young: Is Japan trending more into early-stage or more into late-stage investment, and how about your firm in particular?

Toshihisa Adachi: We’re continuing to focus on early-stage VC. I know JAFCO and some others are trying to invest in the late-stage, growth space. But I don’t think there are enough good opportunities to rely on that. It would be better to do both early- and late-stage investment. When I talked with the President of JAFCO recently, he indicated they are trying to increase early-stage investment as well.

Ernst & Young: Is the angel industry going to be significant in the early stage?

Toshihisa Adachi: There’s almost no angel investment in Japan because there’s too much aversion to risk. That said, for the past 12 months or so, I have seen many boutique VCs that are focusing on start-ups and investing with just $100,000 or $1 million and playing the role of angel, then we take over the next stage.

Ernst & Young: What industry segments are most likely to generate the venture-backed market leaders in the next two to four years?

Toshihisa Adachi: I believe that information and communication technology will be the major sector in five years’ time. And additionally, green technology. Health care technology and services will be a growing area. Japan has an aging population and is facing a decline in the number of students, so we need to optimize our health care services to handle this.

Ernst & Young: In the West, a VC investor typically takes the lead and manages the entire investment on behalf of the co-investors. Is it accurate to say that this leadership role rarely exists in Japan?

Toshihisa Adachi: Yes. This has to do with Japan’s mentality – few want to take on the risk. Part of the problem is that business-oriented VC investment managers are in short supply in Japan. Many VCs still come from a financial background, but to take the lead, you need deep business and operational experience.

Ernst & Young: What kind of advice do you give entrepreneurs to help them grow their businesses?

Toshihisa Adachi: I tell them to act locally first, but to design their businesses based on the global market. Most of the IT ventures in the last several years just focused on the local market because we have a reasonably big market. But as a result, they designed their systems and services only for Japanese specifications and were not able to reach beyond Japan.

Ernst & Young: How do you view the role of government in relation to the VC industry, now and in the next few years?

Toshihisa Adachi: For the time being, we need some money from government, as in Korea, where the majority of the money comes from the government. It’s currently very hard to raise new VC funds here, as the big banks have completely stopped investment into young companies – partly because of Basel III. Second is the tax system. We need a more dynamic or aggressive new tax system to support venture business.
Europe

VC trends

Outlook: resilience in the face of volatility

- The European VC industry showed surprising robustness in the face of highly volatile capital markets. In 2011 and 2010, European VC showed signs of a tentative recovery after a particularly challenging 2009, although activity is still significantly below pre-crisis levels. However, equity will be the principal source of capital for the next five years, with more companies looking to VC to finance growth. European VC and PE firms hold a staggering US$138 billion of “dry powder” and are seeking opportunities before their investment periods end.

- Medium-term growth potential remains muted due to sovereign bond tensions and a prolonged period of pressure on small businesses, including tax increases and a very high cost of capital. Because risk appetite is unlikely to return to pre-2008 levels, the availability of external finance will continue to be affected. Additionally, VC houses have to operate in a more demanding regulatory environment with increased reporting and capital obligations.

Fund-raising declines

- Fund-raising declined as limited partners focused on top-quartile performers with proven track records. 2011 saw the worst volume since 2004, as European fund-raising fell 11% year-over-year to US$2.9 billion for 41 funds (compared to US$3.0 billion for 51 funds in 2010). In 2011, US$6.1 billion was raised in 1,012 rounds. (At the same time, 2010 had 51 funds closed worth US$3.4 billion off the high of 2008, which had 119 funds close worth US$10.5 billion. US$6.7 billion was raised in 1,253 rounds.)

- In 2010, the UK and Ireland continued to raise the most capital in Europe, while France came in second, followed by Germany and Switzerland. In 2011, the UK raised US$1.7 billion through 274 deals (down from US$2.6 billion raised from 331 deals in 2010). France raised US$1 billion in 217 deals in 2011 (compared with US$1.1 billion of investment raised through 266 deals in 2010).
“Equity will be the principal source of capital for the next five years, with European VC and PE firms holding a staggering US$138 billion of ‘dry powder.’”

Julie Teigland, EMEA VC Leader, Ernst & Young

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<th>Key Europe VC statistics</th>
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<th>2010</th>
<th>2011</th>
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<td>Number of VC-backed IPOs</td>
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<td>Median M&amp;A valuation (US$m)</td>
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<td>Median time to M&amp;A (years)</td>
<td>5.6</td>
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Source: Dow Jones VentureSource, 2012

VCs skewing to early-stage deals

- **In 2010 and 2011, there has been continued consolidation and specialization of funds, whether it be in stages of financing or industry, as fierce competition for quality assets persists.**

- **Europe shows a preference for early-stage VC funds.** Of the 41 funds, 27 early-stage funds took US$2.5 billion of the total US$3.0 billion raised in 2011. The 27 early-stage funds tended to focus on higher-potential areas, such as cleantech. Despite the early-stage preference, VCs are also channeling significant later-stage capital into their mature portfolio companies to ready these businesses for exit.

- **Angel investors and private placements have been seeding European companies, especially in IT subsectors.** Fueled by some high-profile company returns as well as the low start-up costs and quick exits possible in IT, angels are filling the void left by professional VC firms. As a result, VC investment is being pushed out to an acceptable risk level for angel investors (i.e., increasing the level of returns that a VC firm can afford to request commensurate to the risk they take at a later stage). Also contributing to the expansion of the angel investor market are new governmental tax schemes in countries such as the UK and France that encourage high net worth individuals to invest in start-up companies.

Growing number of exit opportunities

- **The VC-backed IPO market saw a turnaround in 2010 and 2011, although the number of IPOs coming out of Europe is still low.** In 2011, Europe had 14 VC-backed IPOs with total volume at US$990 million, well beyond 2010’s full-year volume. After a dearth of European VC-backed IPOs in 2008-09, Europe saw 18 venture-backed deals in 2010, a surprisingly high number, and volumes also experienced a healthy rebound, rising to US$564 million in 2010 (from a mere US$170 million in 2009). The median time from initial financing to IPO jumped to 8.9 years in 2011, compared with 3.8 years in 2010. For M&A exit in 2011, median time is 5.7 years.

- **In 2011, European M&A transaction values rose:** US$42 billion was raised from 168 deals (down from the 2009 total of $7.5 billion in 193 deals). In 2010, US$23 billion was raised from 191 deals.

- **Some attractive returns are expected for the VC industry out of the growing number of exit deals,** even though there is recognition that earlier levels of returns will no longer be achievable in the medium term.
Europe VC trends

Innovation spread across sectors

▶ **Health care attracted the greatest share** of VC investment in 2011. In 2010, health care attracted US$2.1 billion from 294 deals, up 24% from 2009, while in 2011, the sector raised US$1.7 billion in 227 deals, down 22% from 2010. This continued VC strength reflects the industry’s mix of capital intensity and potentially high returns, as well as the aging population and growing demand for drugs. Development time for new products in health care has lengthened, causing VCs to focus on later-stage opportunities that are further along in the product approval process and changing the structure of deals to be more milestone-based with smaller up-front payments.

▶ **The IT sector capital level is rising again**, although it is still below its 2007 peak, as it was particularly affected by the economic downturn. In 2011, the sector saw US$1.5 billion in 270 deals, a slowdown from its pace of 2010, when the industry received US$2.2 billion in capital, 61% more than the 2009 total (US$1.3 billion). European IT investors focused on software.

▶ **The European cleantech sector slowed** during 2011, suffering from a lack of exits, with US$808 million from 113 deals, and investors holding back from injecting significant capital into this sector. For venture-funded cleantech companies, all successful exits were M&A. Nonetheless, cleantech has now firmly established itself as a new investment category, and when cleantech company valuations improve, the IPO route will reopen and VCs will increase their investment. Offering high potential returns, the cleantech sector is currently a focus of European policy-makers.

<table>
<thead>
<tr>
<th>Europe investment hotbeds</th>
<th>2010 investment (US$m)</th>
<th>2011 investment (US$m)</th>
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<tr>
<td>1 United Kingdom</td>
<td>$2,587</td>
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<tr>
<td>2 France</td>
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<td>$665</td>
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<tr>
<td>4 Switzerland</td>
<td>$301</td>
<td>$347</td>
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*Source: Dow Jones VentureSource, 2012*

▶ **A region on the rise, Central and Eastern Europe (CEE) emerged** in 2009 as a destination for venture investment. In 2010, the CEE countries continued to attract a larger share of capital – the combined PE and VC fund-raising growth in the CEE was 60%, far exceeding that of continental Europe (13%), with a preponderance of VC fund-raising. In 1H 2011, CEE saw US$123 million raised in 17 deals, while in 2010, US$76 million was raised in the region through 23 deals. Russia no longer accounts for the lion’s share of VC capital invested in the CEE. Poland, the Czech Republic, Estonia, Malta, Romania, Ukraine, Bulgaria and Hungary are also increasingly attractive to venture capitalists.
Ernst & Young: What’s your take on the current key trends in the European venture capital industry?

Simon Cook: I think the key theme will continue to be globalization of venture capital. A lot more US VCs are investing in European deals, for instance. This began probably in 2007, then stalled due to the financial crisis, but in 2010 and 2011 it’s picked up again. Many of the top US firms are now doing deals in Europe. This is not so much early-stage but rather later-stage investing.

In the other direction, you have very large investments by European firms such as Index Ventures and Balderton Capital that are investing probably half their time and money in the US. I think this trend is because European venture investing doesn't really exist as an asset class for LPs anymore.

Venture investing in Europe is primarily Silicon Valley-style in that we are trying to build global businesses – the best and biggest opportunities we can find.

Venture capital only really works by itself in certain regions in the US, where there is the right ecosystem and the critical mass such that successes can make up for the losses. In the US outside those regions, there is as much desperation to find funding as there is in Munich or Manchester. It’s good that these other US regions can now get help in the form of 50-50 matching via the US Government’s Startup America campaign. This sort of government help is definitely useful.

I think we are investing in companies like we used to 10 years ago, where the two main exit routes are M&A and an IPO on the NASDAQ. NASDAQ has replaced AIM as the growth market of choice in the global world. I see this trend continuing.

Here in Europe, I do not think we have capital efficiency. We do nearly as many small deals (under US$5 million) in Europe as they do in the US, but in the US there is plenty of follow-on capital, while in Europe there is very little.

If you look at the data so far this year, the average exit value in the US is US$1.5 billion, while in Europe (including Russia) it’s about US$1.2 billion – yet both territories are putting US$100 million to work in each company.

Ernst & Young: How is VC activity varying by sector today in Europe?

Simon Cook: What’s interesting is that there’s this myth that it’s all about capital-efficient internet investing, that nobody does semiconductors or life sciences. First of all, if you look at the NASDAQ and US exit data last year, it’s pretty evenly matched. And the same is true in Europe. The innovation is really quite broadly spread.

Second, while in theory you can build an internet company with little money, the ones that are successful raise a lot more than any semiconductor company would raise. So I don’t particularly see capital efficiency in the internet sector. What’s true is that a shift to later-stage investing in Europe is driving money into more obvious business models that are more rapidly monetizable, such as internet and software, because they’ve already proven themselves.

Ernst & Young: What is the situation for angel investing in Europe?

Simon Cook: Data suggests that where there are new tax schemes encouraging high net worth individuals to invest in young companies, the market has transformed. The data is difficult to analyze, but it appears to me that angel investing is huge in Europe and is related to tax schemes that are put in place. For example, in the UK, I estimate the limited partnership money invested in UK deals is probably £400 million a year, while £1 billion a year goes into tax-driven angel investing. And I think that with that change, particularly in the UK, that market will dramatically expand.

Ernst & Young: Between now and, say, 2014 or 2015, what do you see as potentially interesting sectors for venture investment?

Simon Cook: Digital media looks strong. The Silicon Valley model is probably more about distribution than it is about content. Facebook, for example, is a distribution platform for other people’s content. But in Europe, we have some incredibly strong content businesses which I think will become more valuable as time goes on (e.g., the Premier League, Formula 1, UK television).

Cleantech really kicked off in Germany a decade ago. It’s taking longer and is maybe more dependent on infrastructure decisions by government than some people expected. But in Europe, we have some incredibly strong content businesses which I think will become more valuable as time goes on (e.g., the Premier League, Formula 1, UK television).

Cleantech really kicked off in Germany a decade ago. It’s taking longer and is maybe more dependent on infrastructure decisions by government than some people expected. But Europe is more likely to make those types of decisions than the US, so Europe could be a favored region for cleantech activity.

But I think medical technology is the next big wave for Europe. The people with the money are getting older, and breakthroughs in genetics and other medical advances could come quite rapidly now over the next 5 or 10 years.
Outlook: difficult but improving

- In 2011, Israel’s VC investment levels continued to dwindle from their 2008 peak levels, and closing just below 2010 levels. Israel remains a typical early-stage investment environment, and its local VC firms are currently struggling. The ability of Israeli VC firms to raise follow-on funds in 2012 and 2013 will have a strong impact on the overall performance and future of Israel’s high-tech sector, especially start-ups.

- However, cash-raising prospects may be improving, as some funds can show a track record of profitable investments. Furthermore, as a result of the new government incentive program to stimulate the local VC industry, domestic institutional investors are expected to invest about US$200 million in Israeli VC funds, mostly in 2012.

Fund-raising still a challenge

- In 2011, 141 companies raised $1.6 billion from venture investors, both local and foreign. In 2010, Israeli VC funds were severely affected by the broad decline in the global and US VC industry that began in 2008. In 2010, less than US$1.8 billion was raised (compared with US$1.9 billion in 2007), with just US$1.4 billion in reserve for future investments. Fund-raising difficulties caused many VC funds to focus on late-stage investments seeking fast exits. While top VC firms will raise more funds, many lower-tier firms will not.

- US VC funds supplied most of the capital (75%) in 2011, particularly for larger Israeli companies in transactions of US$50 million or more. However, local VC funds have recently been more active and did more than half of the deals. This continues a decade-old trend of seed rounds in Israel followed by later-stage rounds in the US, where larger investments and higher valuations – often with the establishment of US operations – might be achieved. The median pre-revenue valuation in 2011 was just US$5.6 million.

VCs focus on later-stage investments

- Later-stage deals prevailed in 2011, accounting for 46% of deals and 69% of total capital raised. Israeli and foreign VCs are raising special funds to target larger deals or even initiate PE activity in Israel. This will be a crucial test for whether the VC industry in Israel will support mature companies.

- Israeli seed and first-rounds accounted for 25% (33) of deal numbers and 10% (US$138 million) of capital invested in 2011, a significant change from 2007, when early-stage rounds claimed 50% of deal activity and 38% of capital raised. (However, in light of the strong global internet market and impressive Israeli media exits, more traditional funds are taking risks and investing in seed media companies in order to take part in the internet boom.)

- This early-stage funding gap has led to the rise of super angels and micro VC funds. These investors target seed-stage companies that will use less capital to (often quickly) reach substantial milestones. Super angels and micro VC funds play an important role in the Israeli new investment environment, enabling VCs to invest in more mature companies, which are often relatively low-risk and have strong business models.
“The ability of Israeli VC firms to raise follow-on funds will have a strong impact on the performance and future of Israel’s high-tech sector, especially start-ups.”

Oren Bar-On, Israel VC Leader, Ernst & Young

Key Israel VC statistics

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<th>2009</th>
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Source: Dow Jones VentureSource, 2012

Acquisitions are a more feasible exit

- **IPOs are difficult due to low valuations** for Israeli companies, especially in foreign markets. In 2011, just two IPOs worth US$24 million were completed. In 2010, only two IPOs worth US$42 million were completed, because companies receive better valuations from acquirers. Although the Israeli high-tech market has managed to give rise to strong and mature companies in the last few years, few Israeli companies are expected to go public in the next 12 months.

- **Acquisitions are seen as the most viable exit** alternative for Israeli companies and their investors. So far this year, volume is strong: in 2011, acquisitions totaled US$885 million, while all of 2010 saw US$1.4 billion and 2009 totaled US$1.5 billion. The number of deals is close to last year, with 2011 seeing 15 acquisitions versus 2010’s 17 acquisitions and the previous five-year average of 23.2. At the same time, the median time from initial financing to M&A exit was just 7 years in 2011, a substantial drop from the median of 9.5 years in 2010. As a result of extensive M&A activity, many multinational new media companies now identify Israel as an innovation center and maintain R&D facilities in the country.

IT raised the most capital

- **IT raised the most capital.** The IT/software sector raised the most capital, with 46 companies raising US$348 million, followed by the cleantech sector, with eight companies raising US$110 million.

- **The new media sector has developed quickly** in recent years and now boasts more than 700 companies whose offerings span the range of new media possibilities, including content creation, delivery and management, gaming, e-commerce, iPhone and iPad applications, online advertising, search engines and others. Innovative Israeli start-ups have answered increased demands in the US market for new media solutions for both content and infrastructure. In 2010, Israeli new media companies were acquired by giant US companies such as Yahoo!, AOL, Google, Facebook and others.

Israel investment

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<th>Hotbed</th>
<th>2010 investment (US$m)</th>
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<tr>
<td>Israel</td>
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Source: Dow Jones VentureSource, 2012
Q&A

Globalizing the VC industry

Ernst & Young: What do you see as the current trends, opportunities and challenges for Israel’s VC industry?

Daniel Cohen: First of all, we continue to see large US VCs entering the market. These firms are focused on all stages and create a competitive pressure on local firms. Second, the incumbent VC firms are consolidating. More and more of the traditional Israeli VC firms will not raise a new fund in the next few years. Finally, we are seeing the emergence of local micro-funds. These are small (US$15 million–US$30 million), focused funds that invest in seed-stage opportunities.

Second-tier funds have a lot of competition for the quality deals. Consequently, we’re seeing a cycle effect, where the better VCs get the better deals and have a better chance to open a larger gap on the second-tier firms – the same dynamic that characterizes a mature VC industry anywhere. Capital-raising for VC funds is very selective. In Israel, the top five firms will raise additional funds, but some second-tier funds will have a hard time raising their next funds. The great shakeout is well under way.

A local challenge – and opportunity – for the entire VC ecosystem in Israel is to produce large, self-sustaining tech companies. The leading local tech companies have been the same for the past 15 to 20 years. Israel needs the next Check Point or NICE Systems. If Israel is able to continue to produce larger companies, this will boost local VC returns and enhance the local ecosystem. The great shakeout is well under way.

Ernst & Young: How has investment strategy been evolving recently in Israel’s VC industry, and where do you see it headed?

Daniel Cohen: In Israel, local VCs remain cautious. They’re writing smaller checks and focusing on capital-efficient start-ups. The gap between the Israeli VC strategy and the US VC strategy has pushed some entrepreneurs to search for capital in Silicon Valley, hoping to get larger investments at better valuations. If this trend continues, we will see a tendency toward early-stage, seed investment being done in Israel but B- or C-round investments occurring in the US. This would in fact continue a trend we’ve seen over the past 10 years.

Ernst & Young: How do you view the current exit environment in Israel?

Daniel Cohen: It’s excellent and provides a real opportunity for our portfolio companies. In Israel, the exits have always relied mostly on NASDAQ IPOs and trade sales to large multinationals. We expect 2011-12 to be excellent years for M&A, as many large companies are very active in Israel. Regarding IPOs, we still need to see larger companies emerge. The IPO window is always open for Israeli companies, but it’s small-cap stocks.

Ernst & Young: Looking forward 5 to 10 years, what does the optimal Israeli VC fund look like?

Daniel Cohen: I think it will be a US$100 million–US$200 million fund with a strong local presence complemented by excellent global access – in the US, Europe and the BRICs. And it will be vertically focused, most likely a dedicated health care, tech or cleantech fund. I would also expect it to be mostly early-stage, with some growth investing, though the trend will be to become stage-agnostic. As far as LP structure, I would like to see 40% of LPs from the US, 30% from Europe, 30% from Asia and 20% from Israel.

Ernst & Young: What advice are you commonly giving your portfolio companies now about financing?

Daniel Cohen: We push management to take one of two clear financing strategies. For companies that require substantial investment in order to reach milestones (networking, tech heavy, semiconductors), we advise them to create a consortium at the seed stage and then use internal financing until they create real value. For SaaS (software as a service) and internet companies, we help define a clear financial milestone based on a small amount of money (typically less than US$2 million). We believe that with such financing, they can create enough value to be able to raise a subsequent round at a higher valuation.
Ernst & Young: What do you see as the key trends, opportunities and challenges for the VC industry in Russia in the next few years?

Yan Ryazantsev: Our VC ecosystem is in an early stage of development. Our VC firms are relatively inexperienced, and we need more professional fund managers. But I think we will see them come from foreign venture funds.

At the same time, the open market system is still new here, so many sectors have untapped potential and are very undervalued. There are plenty of potential investors in Russia who see the untapped potential of Russia’s sectors and will be increasingly interested in venture investing as the VC industry matures. Another trend we will see at the same time is less government involvement.

Ernst & Young: Tell us a bit about Russian Venture Company, how the fund works, your investment focus, performance and pipeline.

Yan Ryazantsev: RVC is a government fund of seven VC funds, each one a public-private partnership. Most of these funds have capital of about US$100 million, 51% from private investors and 49% federal money. Our deal sizes are in the range of US$2 million to US$5 million.

RVC also has a separate, purely supervisory role in a number of regional public-private funds capitalized with a mix of federal, regional and private money. These regional funds are 50% private capital and are managed by independent Russian management companies. The total portfolio for these funds is about 100 companies, most of which are pre-revenue. Our charter capital is now more than US$1 billion.

If we look in the pipeline, we see a lot of innovation in energy efficiency, cleantech, biotech, laser technology, some oil and gas, and of course IT, where we will see great companies in sophisticated services like embedded system programming. Consumer software is also demonstrating good growth.

We have a few big companies, such as Mail.ru and Yandex, that have started to evaluate such companies and may be good buyers in a few years. The Government is interested in promoting corporate venture, so I think we will eventually see a very big wave of growth in it.

Also, RVC has a plan to attract more foreign VC professionals into Russia. We will be approaching foreign VC firms about partnering with them to set up large Russia-focused funds registered in their countries, perhaps 10 or 15 such funds. These needn’t be completely Russia-focused, but largely. We think that if the funds are registered in the VC firms’ countries, the idea will be more appealing to them.

Ernst & Young: What sort of exits have you seen, or do you foresee, for your portfolio companies?

Yan Ryazantsev: The portfolio is very young, and so far we haven’t had any exits. We had one IPO, last year, on the Moscow Stock Exchange, but we remained majority owners. This was Russian Navigation Technologies Company (RNT). We invested slightly more than US$2 million two-and-a-half years ago, and now they have more than 35% of the Russian market in fleet management. They raised about US$10 million in the IPO.

Ernst & Young: For venture-backed exits, is Russia more an acquisition market or an IPO market?

Yan Ryazantsev: It’s hard to predict, but it seems to me that the Russian VC market will first evolve to be mostly a management buyout market.

Ernst & Young: I often hear that Russian entrepreneurs have great technical abilities and are very smart and creative, but lack “Western-style” business and management experience. Do you agree with that?

Yan Ryazantsev: I absolutely do. And actually I think that the Russian market is the next big thing because of this lack of experience – it keeps the valuations of start-ups low and masks their great potential. This means that deals could be much more profitable, because these management issues can be addressed and value will increase dramatically.

Ernst & Young: Are you pushing your entrepreneurs to think more globally?

Yan Ryazantsev: Yes, we are pushing hard. This is part of promoting the Russian VC industry, which is our mission. And when we look at prospective portfolio companies and talk to entrepreneurs, to the team, we ask them for their vision of the globalization of their business. We want to hear their intellectual property protection strategy, we ask them to make multilingual websites, and we talk about and help them with foreign market penetration. We also want a specialist in global markets on their board, and we may soon adopt a rule requiring this. Additionally, we require our portfolio companies to use international accounting principles.
Global VC hot topics
Corporations are becoming the new backers for entrepreneurs

Corporations are now playing a bigger role as backers of entrepreneurs. This trend reflects the declining numbers of managers and fund-raising concentrated in a handful of top-tier firms and current general upheaval in the venture capital industry.

This is the first time in corporate venturing’s 40-year, often turbulent history when many funds are starting at the beginning of an economic cycle, and when there was not a mass exodus of corporate venturing groups during the recession.

Corporate venturing (CV) programs and corporate venture capital (CVC) funds launched in 2010–11 show that investment spans all sectors, sizes of parent organization and regions, including emerging markets. Moreover, the scale and scope of fund-raising and historical investment data reveals distinct investment trends among the new VC leaders.

CV’s volatile history is rooted in developed markets

Over the past 40 years, CV’s direct and indirect investment in entrepreneurs’ privately held companies has been punctuated by extreme volatility. Historically, the vast majority of CV programs have been managed on behalf of established companies from developed markets in the US, Europe and Japan.

From the 1960s to the dot-com bubble, most CV programs were set up at the end of the economic cycle only to be closed a few years later at the nadir of the downturn. But between 2000 and 2009, there were more than 350 corporate investors. More than 40% of them operated for four years or longer (nearly double the average time for those in the previous three waves in the 1960s, 1970s and 1990s). Furthermore, there have been very few CV program closures in the past two years.

But now, more CV is coming from emerging markets

The current, or fourth, wave started around 2005. In the last 18 months, as economies recover, it has been building momentum, and we’re seeing an increasing number of CV programs started by companies from emerging markets, especially in Asia (excluding Japan). Of the 49 programs and fund launches in 2010 by corporations, 17 came from US-based businesses and 19 from emerging markets (the rest were from Europe and Japan). And in the first 8 months of 2011, 20 of the 62 fund launches had come from US-based corporations and 16 from emerging markets.

VC investors interviewed

Toshihisa Adachi  
President and Chief Executive  
Itochu Technology Ventures  
Tokyo

Akhil Awasthi  
Managing Partner  
Tata Capital Growth Fund  
Mumbai

Michael Dolbec  
Managing Director  
LG Innovation Ventures  
San Francisco

1 “Corporate venturing” refers to a corporation’s reaching out for innovation beyond its in-house R&D centers in order to in-source innovation by collaborating with universities, national research labs, incubators, VC firms and entrepreneurial, innovative venture companies, or also by acquiring such companies, either for accessing technology, market access or talents.

2 “Corporate venture capital (CVC)” in this context refers to corporations making direct investments by taking minority equity stakes in often privately held innovative companies. The rationale behind the equity stake can be strategic, financial or both. The equity can be either held directly after investment by a team sponsored by the corporation but managed either within the group or more independently as a separate company, or held indirectly through a commitment to a third-party venture capital fund. Corporate venturing typically includes larger technology corporations, service companies and financial institutions. In Japan, it also includes trading houses’ investment units and banks’ venture capital divisions.

3 According to research on more than 110 corporate venturing programs and corporate venture capital funds by Global Corporate Venturing.

4 Combined with original analysis by Dr. Martin Haemmig at Stanford University of data provided by Dow Jones VentureSource.

5 Global Corporate Venturing.
Silicon Valley pros are being hired to staff CV groups

Many of these CV programs have been staffed with professionals drawn from internal business units and M&A divisions, as well as from VC firms, particularly for overseas offices. But there’s now a trend in a different direction, bringing in experienced Silicon Valley professionals. According to Mike Dolbec, California-based head of CV for Korean conglomerate LG Electronics, international corporations often “mature through three stages of the CVC model.”

They begin by investing in someone else’s fund. But they eventually find that this fails to yield the kind of insights, perspective and deal flow they’re looking for. “The next stage is CVC 2.0,” says Dolbec, “where corporations set up a local office in Silicon Valley but staffed with people whose careers have been in the home company and recently transplanted here. But because the innovation culture in Silicon Valley is so relationship-driven, it is very difficult to penetrate.

Finally, 3.0 is now the current trend: hiring native Silicon Valley people, especially experienced venture investors with previous operating experience here, who have spent their careers in the network of people that you need to know. The savviest international corporations are now skipping the earlier CVC stages and going straight to CVC 3.0.”

CVC investment goals and fund sizes are growing larger

CVC funds have become much larger in both emerging and developed markets. The top 10 fund launches last year committed US$2.5 billion, while for the 8 months of 2011, the top 10 had US$5.4 billion in program expansions. In 2010, the biggest fund was Korea Telecom’s US$830 million fund, while in 2011, the biggest has been nearly twice that size: US$1.5 billion, committed by Tencent, the China-based online services provider, to its Industrial Collaboration Fund. These large funds frequently aim for a hybrid of strategic and financial returns with teams specifically focused on each.

Source: Dow Jones VentureSource, 2012
The corporations are also able to attract other investors to commit to their funds as a way of leveraging their money. Akhil Awasthi is a managing partner at Tata Capital Growth Fund for the India-based industrial conglomerate Tata. “We bring to the table a completely different execution from financial investors. We understand the businesses and the industrial sector as well as the cyclical growth cycle,” Awasthi says.

**CV groups’ involvement in venture capital deals has fallen**

Historically, CV’s role in supporting entrepreneurs has been relatively limited. Given their often short-term lives and their interest in deal-making at the end of an economic cycle, CV units have had a reputation for being fickle and “dumb money.” But with about 50 CV programs now having more than a decade’s experience—and given these programs’ resilience through the most recent economic downturn and their increased investment since last year at the start of the latest cycle—this impression is starting to change.

Notwithstanding this trend, the proportion of investments involving CV units as a percentage of all VC deals has broadly fallen over the past five years. In the US, it has dropped 4% to 12%, and in Israel, it has dropped 7% to 17%. In Europe, it has dropped from 13% to 9%. China was down in most years, having started in 2006 with 11% of all VC deals being CV.

The US remains the biggest market for venture deals overall, and this extends to CV. The US saw 1,830 deals involving CV units in this five-year period, while Europe saw fewer than half as many (692), and Israel and China saw between 83 and 160 in the same period.

But while CV units were involved in less than a quarter of deals, some sectors were significantly more active. In the cleantech sector, CV units were involved in deals more often—up to 10 percentage points more than the average across all sectors. This higher involvement is usually seen as a consequence of cleantech’s higher capital expenditure requirements to achieve product development milestones, revenues and profitability, as other investors have fewer resources to support capital-intensive businesses for a long time.

**CV groups now looking at early-stage investments**

In emerging markets, CV groups and other investors are beginning to look more at early, less-competitive stages of investment. Sarbvir Singh, head of the US$50 million Capital18 corporate venturing unit sponsored by India-based media group Network18, says the unit was set up in 2007 during the height of the previous venture capital bubble in India. “We looked early-stage because when we started in 2007, any company with revenues and profits was being chased by at least five funds at what seemed like very high valuations,” says Singh. “It made more sense to back seasoned professionals to build organically, and this approach has paid off for us,” he added. Of the first 10 portfolio companies at Capital18, 4 have been incubated.

But if there is a trend toward more investing in start-ups, it’s gradual. China is the most extreme, with 80% of the money invested from the 36 CV deals last year going to profitable companies, and almost all the rest going to businesses with revenues.

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6 Global Corporate Venturing
7 According to analysis by Stanford University’s Martin Haemmig using data supplied by Dow Jones VentureSource.
8 Dow Jones VentureSource data.
Corporate acquisitions are common in West, rare in China

In developed markets, an increase in corporate acquisitions of venture-backed companies as sources of innovation is expected. Western corporations are increasingly expanding into the high-growth regions with their own teams and investments, as well as indirectly through limited partnerships managed by third parties, occasionally buying up their portfolio companies. India and Japan are also seen as relatively open to foreign investment and acquisitions. Yoshinori Ito, head of value-added investing at Japan-based JAFCO (which made 106 venture deals in the 12 months ended in March 2011), says, “In Japan, we expect corporations to be an exit alternative so they can get access to the technology, and because the Japanese IPO market is very sluggish.”

However, other emerging markets, in particular China, are seen as having more constraints on overseas acquisitions or buoyant stock markets for IPOs. CV investors in China seldom buy their portfolio companies. In the five-year period from 2006 to the end of 2010, CV units acquired only between 1% and 6% of their IT portfolio companies. Richard Hsu, China head of Intel Capital, the CV unit of US-listed chip-maker Intel Corp., says: “In China, acquisition of venture-backed companies is less active, as the attitude is build, not buy, and the IPO route is so much more attractive for founders from a valuation perspective. Given the abundance of opportunities, retention of management teams is also an issue.”

*In January 2011 media group Pearson took a majority stake in TutorVista, having taken a 17.2% stake in June 2009 as part of a US$12.5 million investment.

Source: Dow Jones VentureSource, 2012
Some CV groups are focusing more on emerging markets

A number of CV groups are looking to invest more in emerging markets than in developed markets. John Ball, founder and Managing Partner of Steamboat Ventures, the venture capital firm aligned with US-based media group Disney as its founding limited partner, says: “Steamboat on average looks to do a deal per quarter in each of the US and China. However, in the future, Steamboat could see an increase in its investment pace in China given the fertile market conditions.”

Corporations are finding that emerging markets can compete strongly with developed markets on innovation, and not just on macroeconomic growth or other factors. According to Michael Jeon, head of Europe Investments at Samsung Venture Investment Corporation, which manages the limited partner commitments from many of the Korea-based conglomerate’s subsidiaries, “If you look at Korea, in the past, domestic start-ups may not necessarily have had the best technology, as the best tended to come from the US or Europe. But increasingly we are finding that Korean companies are producing technologies that are of very high quality. Silicon Valley companies flying over to Korea face tougher competition than they once did.”

CV groups help with international expansion

In the global competition for innovation, CV groups are keen to help their domestic portfolio companies expand internationally as a way of helping the home country more broadly. Toshihisa Adachi, president and chief executive at Itochu Technology Ventures, says: “I am relying on young entrepreneurs to aggressively make a new business globally. They have an eye on the global market, and we are helping them to go to Silicon Valley. It’s time to change Japan Inc. from the legacy business models to being much more innovative.” And as for the CV units themselves, they say the support of their parents help them become global quickly.

Multinationals’ CV groups have a competitive advantage

As the idea of encouraging entrepreneurs and innovation globalizes, multinationals with large amounts of cash to invest and an international network of offices have an important competitive advantage over more localized investment firms. Ralf Schnell, head of Siemens Venture Capital, the corporate venturing unit of Germany-based conglomerate Siemens AG, sums up the new investment landscape: “It is a huge advantage to be part of a global multinational as countries beyond India, China, the US and Europe become relevant entrepreneurial societies. Brazil, Turkey, Russia and Eastern Europe are establishing venture capital markets. The industry is global.”

CV fund-raising is surging

Corporate venturing has been a little-noticed part of the venture investment ecosystem, as judged by traditional databases. However, the astonishingly large number of fund-raisings in the past 18 months, especially in emerging markets, at a time when traditional VC firms are often struggling to raise commitments, indicates companies will play a more important role in the future.
Global digital media trends

What are the hottest digital media trends and investment prospects for VCs? We asked nine leading venture capitalists – most from emerging markets – to share their thoughts.

New digital media platforms stimulate innovation

**Takeshi Goto**: Digital media has merits that enable us to communicate everywhere through the reach of the internet, with higher quality, real time and interactivity. This is not just a change of signals from analog to digital, but it enables an output of information to the world at a lower cost and a higher quality than broadcasting stations, which have been monopolizing the radio waves, and also enables us to collect information from the world. With smartphones and smart pads, a variety of content can be distributed, such as music, video, books and games.

Since digital media possesses an expansive potential beyond the field of business or entertainment, it can be a “Treasure Island” for start-up companies.

**Rajan Mehra**: The level of consumer activity we’re seeing among our portfolio companies is the highest we’ve ever seen in the decade that I have been involved with digital media. And this is with much less marketing and ad spend than would have been needed five years ago, when consumer activity was more of a push-based proposition. We are very excited about the entrepreneurial activity and value creation we foresee over the next five to seven years.

**Luis Gutierrez Roy**: Companies nowadays often do not need significant amounts of capital to roll out new services. This represents a great opportunity. The barriers to starting the business or to entering through any given market opportunity are much lower than they used to be. For investors, this means we can deploy in more companies and can afford to add more resources than just cash – resources that may even be more important.

**Kai-Fu Lee**: The innovation process has gone from two years to three months. With the digital media age and internet software area, the project development process is no longer one of locking your door, developing for years and coming out with the amazing product and protecting it with IP. Instead, it’s more about rolling it out there whenever you have something users can tinker with, something that can be altered and improved. Because of this model, it’s difficult to prevent others from copying your idea, but it’s also not prudent for an entrepreneur to try to dream up ideas all by himself or herself because, after all, getting that first prototype right is important, and if someone else has done the work for you, at least you should learn from it and then add your alterations on top of that.

**Simon Cook**: When everything is digital, one of the most amazing aspects is that you can track usage from the point of watching, say, a commercial through to purchasing in the store. When you have a complete chain of accountability like that, you can move to much more performance-based models. In the UK and Europe, we have some investments in performance-based marketing, which is a step beyond display clicks to a system where advertisers pay only if people buy. That’s quite amazing – not how television or traditional media works. I think we are going to see more and more accountability built into the media distribution channels that allows for more and more interesting models.
The fast growth of mobile networks

David Zhang: In China, we are seeing an explosive growth in terms of mobile internet. Prior to the iOS and Android platforms, many of the small teams had a hard time getting funding. And even if some VCs were interested, many were not, as they were focused on achieving big returns in a short time – not likely from a small team. But now, with iOS and the Android platforms and the kind of payment ecosystem surrounding them, many of the small teams really generate revenue and profit on their own, without VC funding. They are able to grow slowly and steadily and to a point where they are actually more healthy and appealing to a venture investor. Overall, I think this is a very good thing and that mobile internet is a big trend.

Kai-Fu Lee: We believed two years ago that Android would win in China, that it was a trend. We favored Android applications related to infrastructure, the operating system, advertising, analytical tools, PC synchronization, the application store, download assistants and the like. The second wave, starting about a year ago, was gaming and social, where we primarily invested over the last 12 months.

Rajan Mehra: India will be a mobile internet market. India so far has only 50 million installed desktops in a country of 1.2 billion people. This is a very small percentage of the total population accessing the internet by desktop. Growth will be driven primarily by other devices, especially mobile handsets. There is currently an installed base of more than 500 million handsets, few of them smartphones with internet access, and the transition to smartphones is occurring rapidly. The cost of smartphones is falling fast, and tablet-like devices will soon be available for US$100 to US$200 in India, a price point that we think will make them widely available and fundamentally impact activity.

William Saito: In Japan, one big change recently is that suddenly Japan-made cell phones are not the majority. The sales leaders include Apple, Samsung and others from outside Japan. And so the vertical orientation that used to be controlled by DoCoMo, the national carrier, is now completely leveled and people choose their service more on the basis of handset than on carrier.

From a Japanese perspective, the distribution channels for smartphone apps were so locked up tight that it was very difficult even to get the time of day. But now it’s a level playing field, and an app store really makes it easy for ventures and entrepreneurs to get into this virtual market space. We’re even seeing a lot of these companies now venturing into the international space and getting quite a bit of traction.

Michael Nicklas: Around 80% of mobiles in Brazil are prepaid. Until very recently, data or internet could not be accessed via prepaid mobile services, regardless of the device. Still, the adoption of smartphones in Brazil has been massive, not so much for their data capacity, but rather because they can be used for watching open TV channels (which are still the most relevant media in Brazil) and because they are multi-chip (therefore allowing users to benefit from free services offered by different operators).

The widespread penetration of smartphones has actually prompted mobile phone operators into offering on-demand 3G access to prepaid users. Mobile browsing is quickly becoming a habit, and this is starting to change the mobile use in the Brazilian market significantly.

Smart and mobile
Mobile internet is finally becoming a reality, and for many users, especially in rapidly developing economies, the first time they use the internet will be through a mobile device. Five billion mobile handsets are rapidly turning into smartphones and tablets. The Android mobile operating system currently powers more than 100 million gadgets and is adding more than 400,000 a day, yet it was virtually unheard of two years ago.

Digital media meets local and global demand
David Zhang: Increasingly, Chinese companies are becoming more international. Many of the mobile gaming companies now are moving out of China and reaching into Southeast Asia, Europe, Germany, even the US, because the Facebook platform is very universal, very international. And they are able to grow very rapidly this way. Secondly, a lot of these applications that are developed for or are also leveraging the iPhone and Android platforms now are becoming more international.
Emerging markets
Just over 10 years ago, internet usage in emerging markets was almost nonexistent. China, for example, had only 10 million internet users in 2000. Today, China has close to 440 million users. It is estimated that the number of users in China, India and Brazil combined will exceed 1 billion by 2015. The evolution of local markets will be very different from how it is today, and the competitive landscape will be a fight between global digital media conglomerates, local digital players and offline companies.

William Saito: The app store has really turned things upside down in Japan. I used to complain that a lot of the venture and entrepreneurial spirit in Japan was local because it was very hard to get outside the market for a number of reasons. But the app stores of both Android and iPhone are allowing many Japanese ventures to make significant progress selling their products overseas.

Sumant Mandal: I think the most exciting companies, the most exciting investments, the most exciting products are coming out of Europe and the BRICs. It’s no longer a US-centric market. You can look almost anywhere on the globe and see innovative new products and ideas coming out that appeal to a global market.

The virtual network world and the physical world have merged, and that’s a huge investing theme. This virtual market is now accessible like never before. Thus, local, point-of-presence businesses need to figure out not only how they will manage their relationships with their customers in the physical world, when a potential customer is physically visiting a store, but also in the virtual environment. Even when a potential customer is physically inside a store, that person can be reached virtually through their smartphone.

Social networking and commerce intersect
Sumant Mandal: Social networking is important because it personalizes the web, adding information about how people live. This makes it much more engaging. Facebook is amazing because it can put everything you do on the internet into a social framework.

No one has been able to crack commerce using the social network framework yet. But I don’t think one should discount it just because it hasn’t been done. It is a very interesting business, because it allows someone to pay for a lead knowing exactly how much they can make from that customer.

In the context of social networking and commerce, I think that the two will blend where your social network, your social graph, your social interest will become a guide toward your purchasing, consumption and taste intentions. We have invested in, and I have been on the board of, many of these companies that try to do social shopping or try to create a way where your social information gives businesses more targeting information. It’s still early, but it hasn’t worked yet.

What has worked is the blending of the social graph with games. Technology gives you a way of interacting with your social network by playing games, which is something I think most human beings are naturally wired to do. For Facebook, I would say games account for perhaps two-thirds of their revenue. I think we are going to see more of this blending of the social graph with entertainment in the form of competition within one’s social group.

Takeshi Goto: The past decade was, without doubt, the age of Google. Google offered various sorts of information from around the world and created a revolutionary environment through its sophisticated search technology. Google was splendid in text information, and advertisements connected with searches through complicated algorithmic logic. But what about the digital media? Digital media also contains music and movies, not just restricted text information. It’s not easy to search music and videos, although it has been tried experimentally, for example, by adding metadata. It may be said that it is impossible to search perfectly. Music and videos cannot be dealt with by logic. They contain “feeling,” which cannot be quantified. This means that it is beyond Google’s field.

Facebook is a platform whose core is the “social graph,” the users’ online relationships, which reflect their real personal relationships. It has 750 million users. Using the “like” button, you can say “I like it!” to contents uploaded by your friend. This is not logic, but feeling. Since digital media appeals to your feeling, it is driven more by social media.
The vast potential of digital e-commerce

David Zhang: There are already a number of e-commerce companies in China, both private and public, with values exceeding US$5 billion. And I think there will be many more going forward. We have been investing in e-commerce companies, and they are making very healthy margins. We are really seeing an online consumption explosion in China.

Rajan Mehra: We believe that if you are going to invest in the Indian consumer, your choices are to play the physical-store retailers or the digitization of the consumer. We think the latter is more asset-efficient, and that as a percentage of total share of wallet it will form a meaningful share for Indian consumers. Also, given the high cost of real estate in India and given the fairly distributed audience bases who tend to be in very remote geographies, there is a fantastic opportunity for e-commerce companies that provide a variety of choice and price to people who often don’t have much access. We think e-commerce will be big, and we think it will be run by local companies.

Platform potential in the East

Takeshi Goto: Setting up significant search, social media or e-commerce platforms, and winning users, requires a lot of capital and know-how. Western companies already in the game have overwhelming amounts of capital and expertise. We expect that Western platforms will generally succeed over the local competition in the East, except in countries that, like China, have strict regulations that create hurdles for foreign companies. In Japan, where such hurdles do not exist, Facebook is rapidly catching up to mixi, and Twitter is a runaway success.

A platform is a relay station that content providers use to deliver content to users, and the operator of a platform is called a “platformer.” The most important function of a platformer is to attract a lot of users (i.e., customers for the content). Platformers can maintain stable profits if they succeed, and thus they are attractive investments. On the other hand, there is a large cost in acquiring members, so a great deal of money is needed in the early phase. This makes it very difficult to launch a new platform. In Japan, Pixiv — a social networking site where you can share pictures, which users draw in the image of an anime/cartoon character – is popular. We target platforms that, like Pixiv, are focused on a niche and show potential. It’s important that the platform is successfully gathering quality users.

Content matters

Takeshi Goto: When the internet became popular in Japan, illegal downloads were an issue in the Japanese music industry. There were people who did not want to pay for invisible music data, though they did pay for packaged visible CDs. Today, Japan has payment platforms (such as the iTunes Store), and digital content sales in the music market have expanded to half the size of those of packaged CDs.

Ten years later, China will experience the same change that Japan is now experiencing. Perhaps it will take them less time. Currently, there is a regional gap caused by differences of economic scale and the penetration level of IT, but these problems will be solved by time. Therefore, there is great potential in China for content sales, considering the population and the popularity of digital devices among a growing middle class.

Simon Cook: The latest successful models are more about distribution than content. Facebook, for example, is a distribution platform for content – 800 million people or more. But content itself is a valuable area. Social game developers, such as Playfish and Zynga, have had a lot of success recently. But other content opportunities deserve attention.

In Europe, we have some incredibly strong content businesses, which I think will become more valuable as time goes on. For instance, Premier League soccer and Formula 1 are two digital content businesses with hundreds of millions of people who participate in every event around the world. In addition, a lot of the television formats in the US come out of the UK. Entertainment content is not your traditional venture investment, but I think there’s good, long-term value there. We invested in LOVEFiLM, which is the Netflix of Europe, but now there are over 40 different service providers in the UK from which you can get movies online. It’s the content that makes a difference, and it may be where some of the best investments lie in the future.

Small pieces, big profits

Takeshi Goto: Digital media is displayed on various terminals, ranging from computers and TVs to smartphones and tablets. Shipment volume will increase, as digital media is expanding. A single model of iPhone sells more than 100 million units, so a huge profit may be earned by providing even a small part of the technology. We believe there is still plenty of room for improvement in technologies, such as touch panels, liquid crystal displays and batteries, so we will focus on companies that have prominent element technologies in this field.
Sustaining innovation is a major challenge due to lack of financing.

**Innovation capital at risk?**

The current financing environment raises serious concerns about the future ability of biotech to play a major role in the life sciences innovation process. Recent results have fueled new optimism about the future development of the biotech sector. However, a closer look behind the capital numbers tells a somewhat different story.

An overall analysis of the financing situation in the global biotech industry indicates that biotech investment began to return to pre-crisis levels starting in 2010. At the same time, the global biotech sector achieved a turnaround in R&D investments after serious concerns due to crisis-driven cost-saving initiatives.

The apparent recovery of the financing situation for the biotech sector in 2010 consists mostly of large debt financings by a few mature companies that took advantage of low interest rates. This trend was particularly evident in the US, but it has been less pronounced in Europe, where the industry is less mature and where recovery has yet to approach pre-crisis levels.

In fact, innovation capital in the biotech industry declined by almost 20% from 2009 to 2010. And 2011 does not show any improvement but rather a solidification of this trend, with most equity capital sources around or even below the 2010 figures. This raises concerns about the sustainability of biotech’s traditional role as a driver of innovation.

By “innovation capital,” we mean all equity capital (VC, IPO, follow-on) that is the traditional source of financing for an industry sector heavily involved in start-ups or generating innovation.

The impact of declining innovation capital on biotech’s traditional innovation role is exacerbated by the extremely polarized distribution of invested capital. We now have a division into “haves” and “have-nots,” where a very small number of companies can afford to invest in innovation while the large majority continue to fight for mere survival.

The unequal distribution of funds is clearly visible in public company financings. In terms of securing capital, the gap between the upper quintile of successful companies and the lower end widens every year.

**Sustaining innovation is clearly an important issue for the many small start-ups backed mostly by venture capital. Looking at the total VC volume tells us that pre-crisis levels have not quite been regained.**

The total amount of US venture capital raised has grown since 2009; only Europe saw a decrease for 2010 and again in 2011. Results for 2011 indicate no upswing in venture capital flowing into the biotech sector: the total of US$3.9 billion in 2011 equals the amount invested in the same period of the previous year.

However, the reported financing volume alone does not tell the complete story.
Whereas the reported numbers include the total amount assigned in a financing round, this amount is very often split into tranches that are paid according to fulfilled milestones. Therefore, available cash for companies is far lower, and instead we have a “drip feeding” mechanism for almost the whole venture-backed biotech sector.

In general, there is a significant decline in the number of active biotechnology VC investors in Europe and the US. This makes it even harder for the remaining VC players to build consortia for decent financing rounds. Fewer active investors cannot achieve a steady level in financing rounds and volume and will thus create more fluctuation in the year-over-year statistics. Analysis of VC financing in individual countries over the last couple of years reveals just such a fluctuation.

The supply of innovation capital for biotech is also pressured by competition. The high risk profiles, long development times and weak return record for life sciences start-ups make the sector appear a relatively bad bet. Opportunities in sectors without those challenges – consumer IT, media and elsewhere – continue to take a bigger piece of the total VC pie, while investment in biotech continues to fall to 10.7% in 2011 from 12.2% in 2010.

How can biotech regain and sustain its historical role as a life sciences innovation engine?

- Do more with less: broaden the scope of potential capital sources and improve the deployment of capital to maximize capital efficiency
- Adapt business models with a broader spectrum of options to leverage company assets

We now have a division into “haves” and “have-nots,” where a very small number of companies can afford to invest in innovation while the large majority continue to fight for mere survival.

### Biotech venture capital raised in major regions (US$m), 2005-11

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Source: Dow Jones VentureSource, 2012

Do more with less – a new capital agenda

Companies are now forced to spend capital more efficiently. Under the new capital agenda, companies need to look more broadly for alternative capital sources such as grants and alliances. Successful fund-raising will also need a better understanding of partners’ and the markets’ needs. And it will require a better ability to present a compelling story based on solid data.

The new capital agenda expects companies to become better at preserving, optimizing and wisely investing the money raised.

Adapting business models is driven by the need to reduce dependency on scarce VC financing sources. Biotech companies have found that going “back to the roots” of biotech as providers of technologies and platform tools offers more chances to sustain their businesses.

Solid technology platforms can be leveraged in service models that create revenue from the inception of the company. They also ensure a very fast proof of the business and weed out non-performers very quickly. Although financially less attractive, service models can be used to build a customer base that can—upon successful use of the technologies—be transformed into higher-value models with risk- and profit-sharing partnerships. Most attractive, of course, will be those platforms that enable the next generation of innovative products, which are urgently needed in the pharmaceutical industry.
The way forward to sustaining innovation

It is especially unfortunate that biotech’s ability to play a key role in the life sciences innovation process is in jeopardy due to lack of financing. Biotech has a lot to offer in terms of research ideas, technologies, new product paradigms, and diagnostic and therapeutic approaches — exactly the assets that are needed to help ensure future progress and drive innovation in the life sciences industry.

One logical way for biotech companies to deal with this problem is to reduce dependence on traditional financing instruments, such as venture capital. This requires broadening the scope of financing sources and investors.

Biotech companies also need to consider more creative models, such as providing services around technology platforms. High-risk models around product development sponsored by VC may be pursued sequentially after proof of the applicability and attractiveness of the initial business ideas.

The third element in sustaining biotech’s role as a driver of life sciences innovation is helping to ensure capital efficiency on the spending side of the capital flow and adhering to a strict capital agenda.

These three actions will yield a greater variety of ways to do business and greater opportunities to be innovative.

It is encouraging that there are already numerous examples of companies that have defined their individual way out of the crisis by tapping into alternative financing sources, positioning themselves in new business partnerships and structuring their businesses in a way to conserve capital as efficiently as possible.

The Capital Agenda

- Perform due diligence on counterparties
- Establish systems to monitor performance of service providers
- Boost efficiency, attract funding
  (IP consolidation, synergies, geographic reach, talents)
- Diversify
  (Portfolios, geography, offer)
- Optimize portfolio for outcomes
  (PM, rare diseases, capture data)
- Make fixed costs variable
- Streamline R&D approaches
  (Fail fast, project funding)
- Extract value from IP
  (Market rights, “offer“)
- Look broadly
  (Grants, alliances)
- Become partner of choice
  (Deal structure, understanding investors’ needs)
- Tell a better story
  (Data, milestones, efficiency, understand new market dynamics)

Author

Dr. Siegfried Bialojan
Executive Director
European Life Science Center
Ernst & Young
“Opportunities lie in the now-realistic valuations and the fact that fewer investors are active in the VC segment.”

**Ernst & Young: When you look at the biotech VC sector in 2011-12, what do you see as the key trends, growth drivers, opportunities and challenges?**

**Hans Peter Hasler:** The past 10 years have reduced biotech company valuations, especially in the US, eight- to tenfold! The higher complexity of product development and regulatory requirements led to significant increases in development costs and a lower probability of success. For investors, the exit paths are more difficult. IPOs suffer from fickle demand, and trade sales are difficult due to the current negotiation tactics of potential acquirers, leading to more back-loaded, milestone-based deal structures. Opportunities lie in the now-realistic valuations and the fact that fewer investors are active in the VC segment.

**Ernst & Young: How have your investment strategy and the VC industry been affected by the current environment and economy?**

**Hans Peter Hasler:** The devaluations of biotech and pharma had a significant impact on the VC environment. In my view, today, early-stage investments need to be covered by long-term, mostly strategic investors (biotech and pharma companies). Our VC firm will now focus more on later-stage, less-risky opportunities in the private segment in order to protect values and to generate gains for investors.

**Ernst & Young: How do you view the current exit environment and its impact on your portfolio companies?**

**Hans Peter Hasler:** The partially weak pipelines in the industry, and the fact that over US$200 billion of revenues will be exposed to patent expiration in the coming five years, increase the appetite of large industry players for doing deals these days. Therefore, the possibility of executing trade sales is still good. IPOs remain difficult to realize and frequently are only possible with significant participation by existing investors.

**Ernst & Young: What key trends do you see among successful entrepreneurs pursuing sources of financing other than VC (e.g., private placements, angel investors)?**

**Hans Peter Hasler:** So-called angel investors will remain important in the biotech sector, particularly for seed financings. In Europe, the relative dearth of successful serial entrepreneurs in biotech/medtech has led to a decline in VC money available in the sector, and vice versa. An end to this vicious cycle is hardly in sight.

**Ernst & Young: These days, how do you typically advise portfolio companies’ management regarding timing, growth options, valuations, financing alternatives, etc.?**

**Hans Peter Hasler:** Advice is typically delivered through active participation on the boards of investee companies. “True growth opportunities” deliver multiple shots on goal and carry limited or no binary regulatory risks.

**Ernst & Young: Broadly speaking, what is your view of the recent history of the VC industry, and what is your outlook for the next 12 to 18 months?**

**Hans Peter Hasler:** The recent years have led to disappointments for biotech investors. The history is difficult, although for the past two years, we have seen renewed increases of valuations. We will change our focus and invest in promising private companies, either with less-risky product portfolios or cash-neutral or cash-generating businesses. Overall, the pharmaceutical sector should see renewed growth in the coming years. And current valuations are low; therefore, this is a good time to invest, with the needed care and competency.
**Ernst & Young: Tell us how Check Point got to where it is today.**

**Gil Shwed:** Check Point started in 1993, when most people hadn't heard about the internet. I knew the internet was becoming a reality, and I believed it would change the world – not to the extent it did, but I was a big believer in it. And the internet needed security; companies wanted to connect, but they wanted to be secure. So our vision was to enable every company to connect to the internet securely. Two other co-founders and I grew the company step by step until it became the world leader in firewalls, with more than US$1 billion in sales.

**Ernst & Young: How important was venture funding to your growth, and how did you select the right investors?**

**Gil Shwed:** Today, there are plenty of VC funds in Israel, and it's a very developed market. But back in 1993, there was almost nothing. Our venture funding came from another software company investing in us. We raised about US$250,000, and that's all the venture funding we ever needed. That investor contributed a lot of value beyond just the money, mainly by pushing us to achieve more results. They gave us some good advice and some contacts, but their main value was in being independent people who could tell us, "You need to do more; you can do more."

**Ernst & Young: What advice would you pass on to other entrepreneurs looking to get an injection of capital like that?**

**Gil Shwed:** Actually, my main advice would be to minimize the need for capital as much as possible. Entrepreneurs can get addicted to it and think that if they only get more money, they will be successful. We built Check Point on three people and almost no expenses, and I think that was a great infrastructure for a healthy company. Entrepreneurs need money and it's good to raise money, but minimize the need for it as much as possible.

**Ernst & Young: And how do you stay close to your customers with such a global presence?**

**Gil Shwed:** We stay focused on what customers need, on what will change the lives of our customers, not what the competition is doing, nor what our engineers are thinking. We do this through a lot of meetings, conferences, travel, panels and customer advisory forums around the world.

The best ideas can come from anywhere – from any employee and any customer interaction. But I think the main source of ideas is day-to-day interaction with customers and what they need. But then innovation requires good internal analysis of these ideas and some good instincts about which ones we should invest in, which innovation can be important. We have mechanisms to brainstorm and collect ideas, and we're creating mechanisms to enable employees to propose an idea and receive a month or so to develop a prototype before the idea is then re-evaluated.

**Ernst & Young: What were some of the biggest challenges in Check Point's evolution from private to public company?**

**Gil Shwed:** Actually, I didn't want to become public that much. Not because, by the way, it's good or bad, but because I think it sometimes shifts people's focus away from the business and the customer and onto the stock market.

However, it was a very good, if tough, experience going for a road show of three or four weeks doing the same presentation seven or eight times a day, answering the same questions. It was like basic training in the army – they want to see if you can make it and you can be strong enough. It does create some financial discipline as you go through the process of crystallizing some of the financial metrics, documenting everything, spending time with the lawyers and the bankers. At the end, I'm very happy we've grown.

**Ernst & Young: Which countries or markets do you think have a true competitive edge in terms of technological product innovation or capabilities?**

**Gil Shwed:** Innovation can come from anywhere, though only some places develop the ecosystem needed to keep attracting people. We're seeing a lot of innovation with internet start-ups from Europe, including Eastern Europe. And of course Boston and Seattle are active. But I would say that Silicon Valley is still the center of the world, and that Israel comes second.

**Ernst & Young: How can governments help promote young companies and stimulate entrepreneurship?**

**Gil Shwed:** I think governments need to provide open markets and good infrastructure. Taxation is a very important consideration these days for attracting companies, because you can open a company in most any country even if your customers are somewhere else. So one of the things the Government of Israel was smart about was providing low tax rates so that companies like Check Point stayed in Israel. That said, my principle when I started Check Point was to avoid being too dependent on government actions. Build a business that just stands on its own merits in the world commercial market. I'm still trying to stay true to that value.
Ernst & Young: You started the company that became Hyflux in 1989. To what do you attribute your ongoing success?

Olivia Lum: I think we have kept focusing on what we are good at and what we believe in, no matter what the world thinks or how it changes. Hyflux has lived through three financial crises over the past 20 years. And after each one, we emerged stronger because we maintained our focus throughout.

Ernst & Young: What was the most important attribute you were looking for in selecting VC firms to invest in your business?

Olivia Lum: We didn’t have any venture capital before we listed the company. After we listed, we were expanding and I was looking for a strategic investor who could offer a different perspective on the vision for the company. I also wanted someone with ideas about how the company should position itself in the global market.

Ernst & Young: How did the VC firms you worked with add value to Hyflux?

Olivia Lum: Mainly by acting as a sounding board for ideas. It’s always good to look to another party who is not in the business but has an interest in the business, and who is willing to give you a very frank opinion. I’ve benefited a lot from asking many questions and listening.

Ernst & Young: The world has become much more globalized since your business started. Do you think that has been good for entrepreneurs generally?

Olivia Lum: Entrepreneurs who want to move into other countries have benefited. It really depends on whether you want to be a global entrepreneur or just a country entrepreneur. Protectionism can benefit country entrepreneurs.

Ernst & Young: You operate in developed markets as well as fast-growth emerging markets. What challenges does this create for managing the business?

Olivia Lum: There are always two sides to a coin. In a more developed country, you face more competition. In a less developed country, you have less competition but more bureaucracy and more unexpected processes you have to deal with.

So I wouldn’t say it’s easier to do business in developed countries or in developing countries. Each has pros and cons. So what we need to do is look at each country and focus on what kind of value proposition we can give to that country.

Ernst & Young: Hyflux is obviously a company that takes innovation very seriously. How do you stay ahead of your competition?

Olivia Lum: By embracing competition. I always tell people that we have grown through competition. It is part of our journey. It sharpens us and makes us more innovative and more competitive. If you go into a country where 20 companies are competing for a job, you should not shy away. If you are able to win the job, you will be more innovative.

Ernst & Young: When you started, I believe Hyflux was just three of you – now it’s more than 2,000. How do you maintain a culture of innovation during that remarkable growth?

Olivia Lum: Unless you have a staff that shares your vision, you can’t grow. So one of the things I constantly do is tell stories – influence the newcomers, especially, to help them see why we need to be innovative. Sharing the vision is the most important thing. It is not easy to tell stories to everybody because you only have 24 hours a day. But it is very important. Have a dinner with them, have a lunch. And keep talking, because it needs to be a never-ending story.

Ernst & Young: What do you look for in the people you bring in to the company?

Olivia Lum: When you grow a company, you want people with a lot of big-company experience. You can’t bring in people from smaller companies because that will only stifle your growth. Innovation always must be balanced by processes. After an innovative idea, the processes must follow for building the company on a firm footing.

Ernst & Young: If you could offer some advice to governments around the world about how best to support entrepreneurship, what would you tell them?

Olivia Lum: I always say entrepreneurs are like actors and actresses. We like to play on a stage. If governments can create a stage that is fair and big enough for us to dance on, entrepreneurs will thrive.

Ernst & Young: We’re here in Monte Carlo with 50 of the world’s best entrepreneurs who have grown great businesses like yours. What advice would you offer to the next generation of entrepreneurs?

Olivia Lum: I feel that whatever entrepreneurs do, they must have passion and conviction. Without that, the journey will be very challenging. Whatever happens, hold on to your vision and your passion.
Attracted by exceptional growth opportunities that require substantial funding, VC and PE investors are currently shifting their focus from “traditional” VC and PE countries toward emerging countries.

To help institutional investors decide where to allocate capital and help them navigate current uncertainties, Ernst & Young has sponsored a broad international survey to create the Global Venture Capital and Private Equity Country Attractiveness Index, which measures 80 countries’ attractiveness to investors in VC and PE firms.

The index is based on six key drivers, shown below, that investors cite as most important in shaping a country’s VC markets (and thus determine the relative attractiveness of a country for investment in VC/PE assets).

### Drivers of VC/PE attractiveness of countries
- Economic activity (GDP, inflation, unemployment)
- Depth of capital markets (size and liquidity)
- Taxation
- Investor protection and corporate governance
- Human and social environment (e.g., human capital, labor market policies, crime)
- Entrepreneurial culture and opportunities (e.g., innovation capacity, the ease of doing business, the development of high-tech industries)

The index seeks to determine the relative positioning of 80 countries and their attractiveness for investment in VC/PE assets. Not surprisingly, the countries that fared well in the ranking excelled in enhancing “competition, openness and professionalism” within their borders.

### The top 10 countries for 2011 PE/VC attractiveness

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### Key highlights of the index:

- **Exceptional growth opportunity in BRIC economies has its costs**, including poor investor protection, less liquid exit markets, reduced innovation capacity, and perceived or actual bribery and corruption. Also, growth and development is not widespread but mainly concentrated in particular hubs with the benefit of wealth creation allocated to rather small fractions of the population. Unless these issues are addressed, both a country’s attractiveness and the relative attractiveness of particular investments may fail.

- **Lastly, the analysis shows that there is a strong correlation between index scores and countries’ average returns to investors.** Countries with high index scores offer higher returns to investors than countries with low index scores. Taking action to improve a country’s score – by, for example, improving corporate governance – is key to achieving the desired returns.

You will find a dedicated website online with more information and where you can download the 2011 annual of the Global Venture Capital and Private Equity Country Attractiveness Index free of charge. In the section “Regional and Country Profiles,” you will find a tool that allows you to assess all the individual countries and regions covered. Please visit http://blog.iese.edu/vcpeindex/.

(The 2011 index and report were sponsored by Ernst & Young and produced by leading European business school IESE/CIFF.)
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