

Global technology M&A update

October-December 2011
and year in review

"The disruptive megatrends of 'social-mobile-cloud' and 'big data' analytics have helped fuel a significant rise in global technology M&A activity since 2009, despite a slight pullback due to macroeconomic pressures in late 2011. The same pressures suggest we might be in for slow growth in 2012 – but the long-term outlook for technology M&A remains strong due to ongoing disruptive technology innovation."



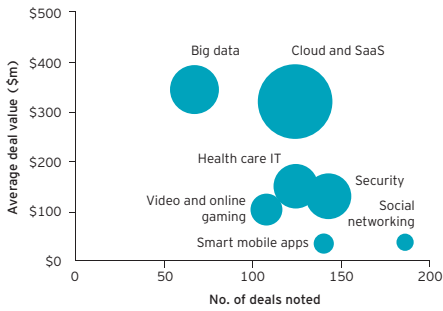
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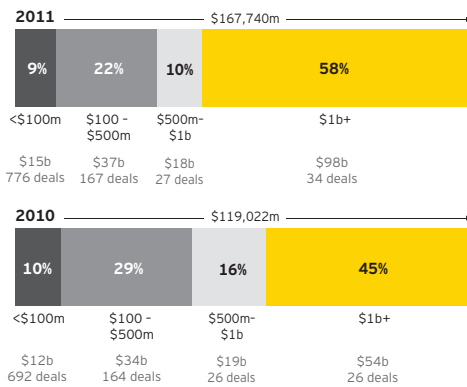
A directional view of 2011 deal-driving trends



Cloud and SaaS-related deals dominated the global technology M&A landscape all year, while “big data” analytics burst into the picture on the strength of a smaller number of higher-average-value deals. Social networking was the volume leader.

Note: average deal value is based on the value of disclosed value deals, while number of deals includes both disclosed and non-disclosed value of deals noted for the given trend.

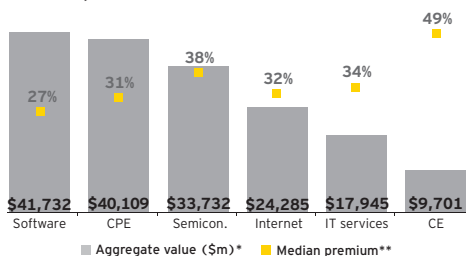
Aggregate value of announced deals by deal size, 2011 versus 2010



Big-ticket deals (\$1 billion or more) were the big story in 2011, nearly doubling in value and representing 58% of the year's aggregate value. All other deal-size categories shrank in percentage terms but held steady or grew in dollar value.

Note: values may differ due to rounding.

Deals by sector, based on aggregate value and median premium, 2011



Based on available data, communications equipment sector deals received the highest premiums in 2011, while software deals achieved the highest aggregate value.

CE = Communications equipment

CPE = Computers, peripherals and electronics

* Based on sector of buyer, except deals with PE and non-technology buyers, which are aligned by sector of the seller.

** For deals greater than \$100m involving the acquisition of a public target.

Source: Ernst & Young analysis of Capital IQ and FactSet Mergerstat accessed via Alacra.

Full-year picture unfolds

Deal drivers

- ▶ The “social-mobile-cloud” phenomenon dominated deal-driving trends in 2011. We call this a phenomenon because the trends reinforced and accelerated each other over the course of the year.
- ▶ Business intelligence and analytics emerged as a major deal driver in 2011, powered in part by the social-mobile-cloud phenomenon.
- ▶ Information security, health care information technology (HIT), social and mobile online games, internet and mobile video, storage and sector consolidation were also important 2011 deal drivers.
- ▶ Diminishing in 2011 but still driving deals were non-technology buyers and solar energy.

Deal activity

- ▶ Full-year deal volume was up 13%, increasing to 3,006 deals in 2011 from 2,658 in 2010. That's still 10% lower than 3,345 in 2007, before the beginning of the global downturn (Figure 4b, page 9).
- ▶ Corporate deal volume growth tapered off throughout the year and turned negative in the final quarter. Full-year corporate volume was 2,689 deals, a 12% increase over 2,391 deals in 2010 but still 11% lower than 3,020 deals in 2007.
- ▶ PE deal volume growth was strong all year. PE volume was 317 deals, a 19% increase over 267 deals in 2010 and just 3% shy of the 325 deals posted in 2007.

Deal value

- ▶ Full-year aggregate M&A value was \$167.7 billion, a 41% increase over \$119 billion in 2010. That's still 10% lower than the \$185.5 billion posted in 2007.
- ▶ Thirty-four deals rose above \$1 billion in 2011, compared with 26 in 2010 and 19 in 2009. They totaled \$98 billion, or 58% of full-year aggregate value, compared with \$54 billion (45%) in 2010.
- ▶ At \$33 billion, aggregate value of PE deals grew YOY at nearly twice the rate of corporate deals, 67% versus 36%. The PE value is 20% of the \$167.7 billion total, the highest percentage since 2007 (when it was also 20%).
- ▶ There were 228 deals of \$100 million or higher in 2011, just a 6% increase over 216 such deals last year. But the value of \$100+ million deals increased by 43% YOY (see chart at left).
- ▶ Full-year average value was \$167 million, up 27% from \$131 million in 2010 and the highest annual average value achieved during the five years that we've been compiling this data.

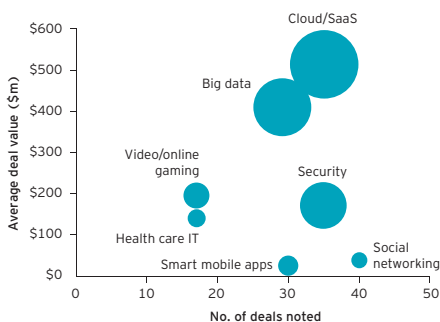
Deals getting done

- ▶ 2011 deal volume increased in every sector except software, which fell 1% to 969 deals – still the highest volume of any sector.
- ▶ Communications equipment had the largest YOY percentage increase of any sector (32%) to 211 deals (+51 deals). IT services had the largest YOY numerical increase of any sector, increasing to 747 deals (+113 deals, or 18%).
- ▶ Corporate deal volume grew in every sector except software; PE deal volume grew in every sector except semiconductors.
- ▶ By sector, YOY average value swung widely up or down: communications equipment, -39%; computers, peripherals and electronics, +51%; internet, +139%; IT services, -40%; semiconductors, +36%; software, +48%.

Cross-border deals

- ▶ For the second consecutive year, cross-border (CB) deals grew faster than in-border (IB) in both volume and average value per deal – but all of the growth came in the first half.
- ▶ CB volume increased 19% YOY, compared with 13% for all deals (CB and IB) and average value increased 35%, compared with 27% for all deals.
- ▶ At 1,077 deals, CB represented 36% of total 2011 volume, up from 34% in 2010 and 31% in 2009.

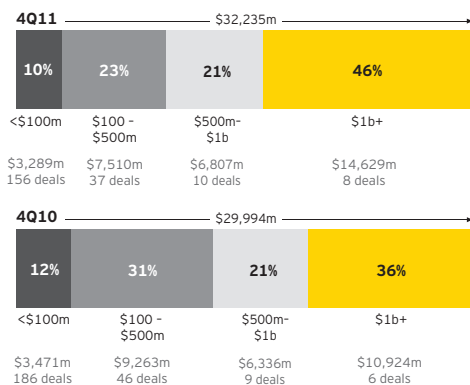
A directional view of select 4Q11 deal-driving trends



Cloud and SaaS continued to exhibit the highest average deal value in 4Q11, with strong volume as well. Security and social networking volume was also high, at lower average deal values. "Big data" analytics showed strong volume and value in the quarter.

Note: average deal value is based on the value of disclosed value deals, while number of deals includes both disclosed and non-disclosed value of deals noted for the given trend.

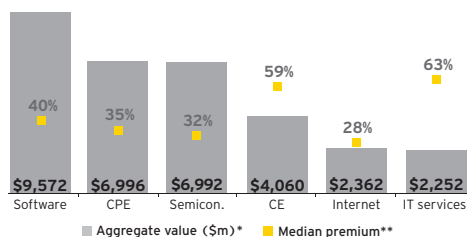
Aggregate value of announced deals by deal size, 4Q11 versus 4Q10



At 46% of disclosed value, big-ticket deals (\$1 billion or more) were at their lowest level of the year in 4Q11 – though still 34% larger than in 4Q10 in terms of dollar value. Deals between \$500 million and \$1 billion achieved their highest levels of the year in 4Q11, in terms of both percentage and dollar value.

Note: values may differ due to rounding.

Deals by sector, based on aggregate value and median premium, 4Q11



Based on available data, IT services and communications equipment companies received the highest premiums in 4Q11. This is the only quarter of 2011 in which IT services achieved the highest median premium.

CE = Communications equipment
CPE = Computers, peripherals and electronics

* Based on sector of buyer, except deals with PE and non-technology buyers, which are aligned by sector of the seller.

** For deals greater than \$100m involving the acquisition of a public target.

Source: Ernst & Young analysis of Capital IQ and FactSet Mergerstat accessed via Alacra.

Fourth quarter picture unfolds

Deal drivers

- Cloud computing, smart mobility and social networking continued to dominate deal-driving trends in 4Q11.
- Business intelligence and analytics increased again across a spectrum of industry-specific uses, with a strong concentration in online advertising and marketing.
- Information security and internet and mobile video maintained their deal-driving momentum in 4Q11, while HIT and social and mobile online games slowed slightly from previous quarters, but remained significant drivers.
- Non-technology buyers ticked back up to 10% of 4Q11 aggregate value from 3% in 3Q11.

Deal activity

- At 676 deals, 4Q11 deal volume declined for the third consecutive quarter and hit the lowest quarterly total since 2Q10 (Figure 4a, page 8). It's down 4% YOY, 11% sequentially and 15% since peaking in 1Q11 at 794 deals.
- Corporate deal volume was 589 deals, down 8% YOY, 13% sequentially and 18% since 1Q11 (721 deals).
- PE deal volume was 87 deals, up 43% YOY, 7% sequentially and 19% from 1Q11 (73 deals). PE volume increased in every quarter of 2011.
- The long-term directional correlation we've observed between quarterly deal volume and the NASDAQ Composite Index was absent in 4Q11, as the index rose 8% while volume fell 11%. We hypothesize that this represents a "catch-up" from 3Q11, when the NASDAQ fell 13% but deal volume declined by only 2%.

Deal value

- Aggregate announced deal value was \$32.2 billion in 4Q11, up 7% YOY but down 43% from \$56.4 billion in 3Q11, which was the highest quarterly total since 2007.
- Average value per deal was \$153 million in 4Q11, up 26% YOY but down 31% from \$221 million in 3Q11 (which was the highest quarterly average value since 1Q00, just before the dotcom bubble burst).
- Eight deals topped \$1 billion in 4Q11, as did 11 in 3Q11, 10 in 2Q11 and 5 in 1Q11.
- YOY, PE deal-makers increased 4Q11 aggregate value 70%, while corporate declined 5%. Both corporate and PE deal-makers saw steep sequential declines in aggregate value: 43% for corporate and 42% for PE.
- Average values mostly declined for both corporate and PE: sequentially, PE average value declined 50% and corporate declined 29%; YOY, corporate was up 19%, while PE declined 12%.

Deals getting done

- Deal volume (combined corporate and PE) declined YOY in every sector except internet (+17%) and semiconductors (+8%).
- Sequentially, all sectors declined in deal volume except internet, which increased 12%.
- Corporate deal volume declined or stayed the same in every sector both sequentially and YOY except internet, which increased 8% sequentially and 15% YOY. PE deal volume increased or stayed the same in every sector both sequentially and YOY except computers, peripherals and electronics, which declined 50% sequentially.

Cross-border deals

- CB volume was 220 deals, or 33% of all deals. This was the first 2011 quarter in which the concentration of CB deals dipped below 34%, the percentage for full-year 2010.
- The aggregate value of CB deals was \$12.9 billion, or 40% of all aggregate value in the quarter (CB and IB), up by 2% from the previous quarter but down from 46% in 2Q11 and 40% in 1Q11.



Another growth year, slowing in 4Q

Even as the value of global M&A in all industries fell slightly in 2011, the aggregate value of global technology industry M&A surged 41%. Although the story of the year's technology M&A has as many subplots as a best-selling novel, that surge is central to them all.

Ernst & Young has identified five long-term “megatrends” that are generating disruptive innovation in technology and leading to technology-enabled innovation in other industries. The five are smart mobility, cloud computing, social networking, “big data” analytics and a growing sense of blur, as technology industry sectors blur together and the technology industry disrupts other industries – challenging whether certain companies are pure technology companies or have entered the industry they are disrupting. In addition, all five are driving increased information security requirements. This report focuses on how these megatrends influenced the microcosm of global technology M&A in 2011, as companies competed for market share and key technologies.

Overall, technology M&A is being driven by five long-term megatrends: smart mobility, cloud computing, social networking, “big data” analytics and cross-sector and cross-industry blur – plus the increased information security requirements that come with them all. The subplots for 2011 range from the return of big-ticket PE deals, semiconductor sector consolidation and big corporate bets on smart mobility, cloud computing and internet video to the dramatic rise of “big data” and the ongoing growth of social networking, security and HIT deals – to name just a few. And the storyline they all share is the irresistible force of disruptive innovation, which is remaking the technology industry while enabling transformative change in other industries as well.

Technology’s role in global economy drives up deal-making

As we previously observed, growth in the global economy depends, in part, on technology innovation. Information is an increasing portion of the value of all products and services, workforce mobility

is growing everywhere, consumers are adopting smart mobility and social networking technology at rapid rates and businesses have a growing need to make sense of the overwhelming volumes of data they are generating. These changes affect many industries, and technology is enabling innovation in all of them.

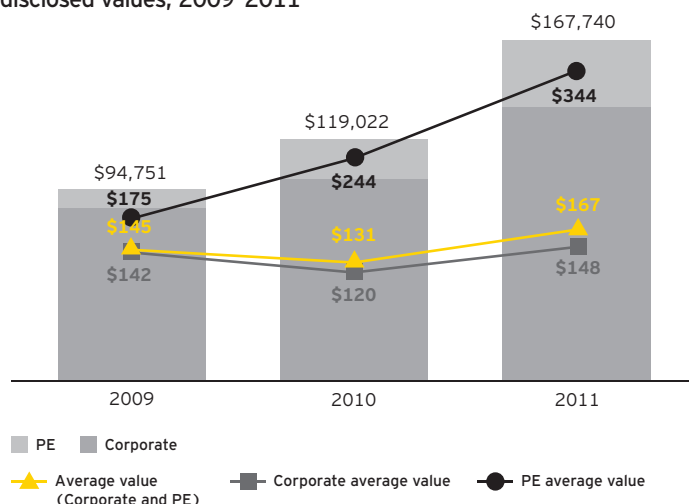
Driven by these forces, the aggregate value of global technology M&A increased to \$167.7 billion in 2011, 41% higher than \$119 billion in 2010 (Figure 2, below). And that 2010 figure represented a 26% increase over 2009, which was the low point for both volume and value since the global recession began in late 2007. At the same time, however, published reports show the value of global M&A in all industries fell slightly, to \$2.6 trillion in 2011 from \$2.66 trillion in 2010.¹ The falloff, which materialized despite strong growth early in the year, was attributed to the return of economic uncertainty over the summer – particularly the sovereign debt crisis in Europe.

Figure 1: Total number of all announced deals, 4Q10-4Q11

| | | | Total # of deals | Total deal value (\$m) | Ave. deal value (\$m) |
|------|-----|----|------------------|------------------------|-----------------------|
| 4Q11 | 589 | 87 | 676 | \$32,235 | \$153 |
| 3Q11 | 678 | 81 | 759 | \$56,385 | \$221 |
| 2Q11 | 701 | 76 | 777 | \$52,068 | \$194 |
| 1Q11 | 721 | 73 | 794 | \$27,052 | \$101 |
| 4Q10 | 641 | 61 | 702 | \$29,994 | \$121 |

■ Corporate ■ PE

Figure 2: Total and average deal values (\$m) for deals with disclosed values, 2009-2011



Source: Ernst & Young analysis of Capital IQ and FactSet Mergerstat accessed via Alacra.



Fourth quarter and deal volume trends suggest slow-growth outlook for 2012

Judging by the 4Q11 metrics in Figure 4a (page 8), global technology deal-making is not immune to the effects of macroeconomic uncertainty – it's just reacting more slowly and, we believe, with less impact. Deal volume declined 4% YOY in 4Q11, the first YOY quarterly decline in more than two years (since 3Q09). Deal volume peaked at 794 deals in 1Q11 and has declined slowly since, to 676 deals in 4Q11. Aggregate value was \$32.2 billion in 4Q11, just 7% higher YOY. Quarterly aggregate value growth also peaked in 1Q11 and followed a similar pattern of diminishing during the course of the year. Cross-border deals, meanwhile, grew more slowly than in-border in 4Q11 for the second consecutive quarter (see CB and regional analyses beginning on page 26).

PE deal values soar 67% YOY

PE firms, however, bucked the trend of declining second-half growth. While aggregate PE value was flat in 1Q11, it posted YOY gains of 61% in 2Q11, 86% in 3Q11 and 70% in 4Q11. In all, PE aggregate value was \$33 billion in 2011, 67% higher than 2010 and 10% shy of the \$36.6 billion high in 2007. PE firms announced 317 deals (+19% YOY) in 2011, 11 of which were valued above \$1 billion. The big-ticket PE deals ran the gamut of technologies from internet (The Go Daddy Group, \$2.3 billion) to education (Blackboard Inc., \$1.6 billion) to HIT (Emdeon Inc., \$2.2 billion).

Big trends and the big deals they drove

The biggest storyline for 2011 is how trends that have been developing for several quarters – or in some cases, even years –

Figure 3a: Global top 10 deals, October-December 2011 (corporate and PE)

| Buyer | Disclosed value (\$m) | Announced | Status | Deal type | Multiple of TTM EV and Revenue | Multiple of TTM EV and EBITDA | Premium offered |
|---|-----------------------|-----------|------------|-----------|--------------------------------|-------------------------------|-----------------|
| Lam Research Corporation to acquire Novellus Systems, Inc. from BlackRock Advisors LLC and other shareholders | \$3,678 | 14-Dec | Pending | Corporate | 1.3x | 5.2x | 22% |
| SAP America Inc., a subsidiary of SAP AG, to acquire SuccessFactors, Inc. | \$3,368 | 3-Dec | Pending | Corporate | 6.7x | N/A | 69% |
| Permira Advisers LLP to acquire Genesys Telecommunications Laboratories Inc, a subsidiary of Alcatel-Lucent SA | \$1,500 | 12-Oct | Pending | PE | N/A | N/A | N/A |
| Sony Corporation agreed to acquire the remaining stake that it does not already own in Sony Ericsson Mobile Communications AB from Telefon LM Ericsson AB | \$1,498 | 27-Oct | Pending | Corporate | N/A | N/A | N/A |
| Oracle Corporation to acquire RightNow Technologies, Inc. | \$1,430 | 24-Oct | Pending | Corporate | 6.3x | 60.1x | 11% |
| A private group led by Thoma Bravo LLC and Ontario Teachers' Pension Plan Board to acquire Blue Coat Systems, Inc. | \$1,105 | 9-Dec | Pending | PE | 1.7x | 11.8x | 45% |
| VeriFone Systems, Inc. acquired Point International AB, a subsidiary of Electronic Transaction Group Nordic AB | \$1,050 | 14-Nov | Completed* | Corporate | N/A | N/A | N/A |
| American Securities LLC acquired Global Tel*Link Corporation from Goldman Sachs Capital Partners and Veritas Capital LLC | \$1,000 | 31-Oct | Completed | PE | N/A | N/A | N/A |
| SK Telecom Co., Ltd. acquired a minority stake in Hynix Semiconductor, Inc. | \$962** | 11-Nov | Pending | Corporate | 1.5x | 3.2x | 2% |
| Samsung Electronics Co., Ltd. acquired remaining stake in S-LCD Corporation from Sony Corporation | \$941 | 25-Dec | Completed* | Corporate | N/A | N/A | N/A |

Cloud and SaaS, smart mobility, information security, semiconductor consolidation and corporate restructurings were the deal-driving trends represented among 4Q11 top 10 deals. SAP-SuccessFactors and Oracle-RightNow are the first SaaS acquisitions we've seen to top \$1 billion – and may be the first of many (see page 8). VeriFone expands its European footprint for electronic and mobile payments in its plan to acquire Point, and Thoma Bravo is placing a bet on increasing security requirements by taking Blue Coat private. At \$16.5 billion, the top 10 deals were 51% of 4Q11 aggregate value, down from 71% in 3Q11.

*Completed January 2012. **Total value of this transaction was reported at \$3.04 billion and consisted of a minority stake and a private placement ("SK Telecom to Buy Hynix Stake for \$3.04 Billion," The Wall Street Journal Online, 14 November 2011, via Dow Jones Factiva, © 2011 Dow Jones & Company, Inc.).

Source: Ernst & Young analysis of Capital IQ and FactSet Mergerstat accessed via Alacra.

yielded a long string of multibillion-dollar deals. Established companies made key consolidation plays and placed bets on cloud computing, smart mobility, business intelligence and analytics and internet-and-mobile video technology. At the same time, a multitude of smaller deals demonstrated the strategic importance of certain technologies, especially social networking and security, but also HIT, games, advertising and marketing and mobile applications. We counted between 100 and 150 deals in each of these areas in 2011, including many deals that overlapped several areas.

Smart mobility drives top deal of 2011

The largest dollar-value deal of the year was Google's \$11.9 billion pending acquisition of smartphone and TV set-top box maker Motorola Mobility, which was motivated in

part by Motorola's large mobile technology patent portfolio.² The deal exemplifies multiple trends. Smart mobility deals permeated every technology sector in 2011, often involving integration of hardware, software, content and applications. Even two of the year's top 10 semiconductor deals involved mobile chip technology. Likewise, internet video was a major deal driver, and Google considered whether Motorola's set-top box market position might benefit Google TV.³

Finally, patents were a factor in many deals, as mobile-related intellectual property litigation heated up throughout the year.



Figure 3b: Global top 10 deals, 2011 (corporate and PE)

| Buyer | Disclosed value (\$m) | Announced | Status | Deal type | Multiple of TTM EV and Revenue | Multiple of TTM EV and EBITDA | Premium offered |
|--|-----------------------|-----------|---------|-----------|--------------------------------|-------------------------------|-----------------|
| Google Inc. to acquire Motorola Mobility Holdings, Inc. | \$11,878* | 15-Aug | Pending | Corporate | 0.7x | 27.5x | 63% |
| Hewlett-Packard Company acquired Autonomy Corporation plc | \$10,222 | 18-Aug | Closed | Corporate | 11.1x | 25.2x | 62% |
| Microsoft Corporation acquired Skype Technologies SA, from Silver Lake Partners, eBay Inc., Andreessen Horowitz LLC, Canada Pension Plan Investment Board (Canada) and Joltid Ltd. | \$8,554 | 10-May | Closed | Corporate | 10.6x | 48.9x | N/A |
| Texas Instruments Incorporated acquired National Semiconductor Corporation | \$6,071** | 4-Apr | Closed | Corporate | 4.0x | 10.9x | 74% |
| Applied Materials, Inc. acquired Varian Semiconductor Equipment Associates, Inc. | \$4,751 | 4-May | Closed | Corporate | 3.9x | 13.8x | 35% |
| Western Digital Corporation to acquire Hitachi Global Storage Technologies, a wholly owned subsidiary of Hitachi, Ltd. | \$4,250 | 7-Mar | Pending | Corporate | N/A | N/A | N/A |
| Lam Research Corporation to acquire Novellus Systems, Inc. from BlackRock Advisors LLC and other shareholders | \$3,678 | 14-Dec | Pending | Corporate | 1.3x | 5.2x | 22% |
| Broadcom Corporation to acquire NetLogic Microsystems, Inc. | \$3,450 | 12-Sep | Pending | Corporate | 7.7x | 32.0x | 67% |
| SAP America Inc., a subsidiary of SAP AG, to acquire SuccessFactors, Inc. | \$3,368 | 3-Dec | Pending | Corporate | 6.7x | N/A | 69% |
| Qualcomm, Inc. acquired Atheros Communications, Inc. | \$3,221 | 5-Jan | Closed | Corporate | 3.0x | 18.7x | 27% |

In a year dominated by big-ticket deals, smart mobility, business intelligence and analytics and internet and mobile video were the drivers behind the first-, second- and third-largest deals of the year, respectively. In addition, cloud and SaaS is represented by the SAP-SuccessFactors deal. Otherwise, the top 10 was dominated by consolidation deals, five deals in semiconductors and one in disk drives. At \$59.4 billion, the top 10 deals of the year were 35% of the year's aggregate value, right between the 28% in 2010 and 42% in 2009.

*\$12.5 billion per Google's press release: "Google to Acquire Motorola Mobility," ENP Newswire, 15 August 2011, via Dow Jones Factiva, © 2011 Electronic News Publishing.

**\$6.5 billion per press release: "Texas Instruments Buys National Semiconductor to Extend Its Market Leadership in Analog," MarketResearch.com, 24 April 2011, via Dow Jones Factiva, © 2011 MarketResearch.com.

Source: Ernst & Young analysis of Capital IQ and FactSet Mergerstat accessed via Alacra.



“Big data” analytics gathers momentum

HP’s \$10.2 billion deal to buy Autonomy, whose technology helps organizations make sense of large volumes of (mostly unstructured) data, was the second-biggest deal of the year. Again, this August 2011 deal was the big-ticket tip of a mountain of smaller business intelligence and analytics deals that gained momentum during the year.

In 4Q11, for example, IBM – which has been accumulating analytics acquisitions for many years – announced plans to buy DemandTec, Inc., a provider of cloud-based merchandising and marketing analytics software; Q1 Labs Inc., whose technology uses data analytics to detect information security breaches; and Emptoris, Inc., which offers a suite of cloud-based supply chain, spending and contract management analytics. Only the DemandTec deal had a disclosed value: \$439 million.

“Big data” and the cloud: “match made in heaven”

Of note, many business intelligence and analytics deals involve companies that provide their solutions via the cloud,

as SaaS. Analytics was referenced as a key aspect of the second-largest deal of 4Q11, SAP’s pending \$3.4 billion purchase of SuccessFactors, Inc., a provider of cloud-based human resources software.⁴ A SAP official suggested that the combination of SuccessFactors’ human capital management (HCM) analytics and SAP’s HANA in-memory technology could “revolutionize” HCM.⁵

Business intelligence and analytics is among the complex, hard-to-manage applications that lend themselves to SaaS solutions because most organizations struggle with the necessary infrastructure to analyze such large data sets – a challenge they can now outsource to cloud service providers. One analyst even called “big data” analytics and cloud computing “a match made in heaven.”⁶

Cloud deals in many sectors

The main thrust of the SAP-SuccessFactors deal, however, was to accelerate SAP’s cloud growth, as evidenced by the fact that SAP has tapped SuccessFactors’ CEO to lead all SAP cloud operations.⁷ Similarly, another

Figure 4a: Global technology transactions scorecard, 4Q11

| Deals announced | 4Q10 | 4Q | 1Q | 2Q | 3Q | 4Q | 4Q11 | Sequential % change | YOY % change |
|--|----------|----|----|----|----|----|----------|---------------------|--------------|
| Corporate | | | | | | | | | |
| Number of deals announced | 641 | | | | | | 589 | -13% ▼ | -8% ▼ |
| Number of deals with disclosed values | 232 | | | | | | 182 | -21% ▼ | -22% ▼ |
| Total value of deals with disclosed values (\$m) | \$24,997 | | | | | | \$23,736 | -43% ▼ | -5% ▼ |
| Average value of deals with disclosed values (\$m) | \$108 | | | | | | \$129 | -29% ▼ | 19% ▲ |
| PE | | | | | | | | | |
| Number of deals announced | 61 | | | | | | 87 | 7% ▲ | 43% ▲ |
| Number of deals with disclosed values | 15 | | | | | | 29 | 16% ▲ | 93% ▲ |
| Total value of deals with disclosed values (\$m) | \$4,997 | | | | | | \$8,499 | -42% ▼ | 70% ▲ |
| Average value of deals with disclosed values (\$m) | \$333 | | | | | | \$293 | -50% ▼ | -12% ▼ |
| Corporate and PE | | | | | | | | | |
| Number of deals announced | 702 | | | | | | 676 | -11% ▼ | -4% ▼ |
| Number of deals with disclosed values | 247 | | | | | | 211 | -17% ▼ | -15% ▼ |
| Total value of deals with disclosed values (\$m) | \$29,994 | | | | | | \$32,235 | -43% ▼ | 7% ▲ |
| Average value of deals with disclosed values (\$m) | \$121 | | | | | | \$153 | -31% ▼ | 26% ▲ |

This figure shows more red triangles pointing in the downward direction than we’ve seen all year until now. The essential story: all scorecard attributes for corporate deal-makers peaked in the second or third quarter and have slumped since, while PE attributes remained strong or were down slightly from 3Q11. At 676 deals, 4Q11 volume fell to a level last seen in 2Q10. Average value moderated after spiking in the previous two quarters.

Source: Ernst & Young analysis of Capital IQ and FactSet Mergerstat accessed via Alacra.

4Q11 top 10 cloud-focused deal was Oracle's pending purchase of RightNow Technologies for \$1.4 billion, said to be Oracle's first major acquisition of an all-SaaS company.⁸ Apparently, such big-ticket acquisitions of SaaS companies are beginning now because customers are adopting the cloud faster than established companies anticipated⁹ – a factor that suggests more such deals to come.

Until now, most 2011 large-value cloud deals involved IT services sector data center consolidation, or computer, peripherals and electronics sector technologies that support cloud services, such as high-performance storage subsystems and disk drives. Telecommunications network operators have been among the most prolific cloud buyers. In 1Q11, for example, Verizon Communications Inc. announced a \$1.3 billion deal to acquire Terremark Worldwide, Inc., and cable TV operator Time Warner Cable, Inc. announced a \$211 million deal for NaviSite, Inc. CenturyLink, Inc., the third-largest telecommunications provider in the US, followed these in

2Q11 with the \$2.3 billion acquisition of SAVVIS, Inc.

And then there was the 3Q11 deal, for an undisclosed amount, in which Citrix Systems, Inc. purchased Cloud.com, Inc., a provider of software infrastructure platforms to cloud service providers.

Internet and mobile video deals

From semiconductors to applications and content, 2011 was a year of dozens of internet and mobile video technology deals – all of which were dwarfed by Microsoft's acquisition of Skype Technologies in 2Q11 for \$8.6 billion. Microsoft has stated its intention to integrate Skype's capabilities throughout its product line, including Xbox video game consoles, Office software, Windows Phone and Lync.¹⁰ This is not surprising given the range of functions for which internet and mobile video use has begun to soar, including entertainment, business conferencing and collaboration and personal video calling.



Figure 4b: Global technology transactions scorecard, 2011 versus 2010

| Deals announced | 2010 | 2011 | YOY % change |
|--|-----------|-----------|--------------|
| Corporate | | | |
| Number of deals announced | 2,391 | 2,689 | 12% |
| Number of deals with disclosed values | 827 | 908 | 10% |
| Total value of deals with disclosed values (\$m) | \$99,299 | \$134,719 | 36% |
| Average value of deals with disclosed values (\$m) | \$120 | \$148 | 23% |
| PE | | | |
| Number of deals announced | 267 | 317 | 19% |
| Number of deals with disclosed values | 81 | 96 | 19% |
| Total value of deals with disclosed values (\$m) | \$19,723 | \$33,021 | 67% |
| Average value of deals with disclosed values (\$m) | \$244 | \$344 | 41% |
| Corporate and PE | | | |
| Number of deals announced | 2,658 | 3,006 | 13% |
| Number of deals with disclosed values | 908 | 1,004 | 11% |
| Total value of deals with disclosed values (\$m) | \$119,022 | \$167,740 | 41% |
| Average value of deals with disclosed values (\$m) | \$131 | \$167 | 27% |

Full-year 2011 showed good growth in deal volume (+13%) and excellent growth in aggregate value (+41%). Both attributes were within roughly 10% of their pre-downturn 2007 levels. What's interesting, however, is that deal volume peaked in 1Q11 and has diminished in each quarter since. The YOY growth rate for aggregate value followed a similar pattern: it was 124% in 1Q11, 69% in 2Q11, 22% in 3Q11 and just 7% in 4Q11. The question of whether growth resumes in 2012 or deal-making plateaus appears to hinge on the macroeconomic environment.

Source: Ernst & Young analysis of Capital IQ and FactSet Mergerstat accessed via Alacra.



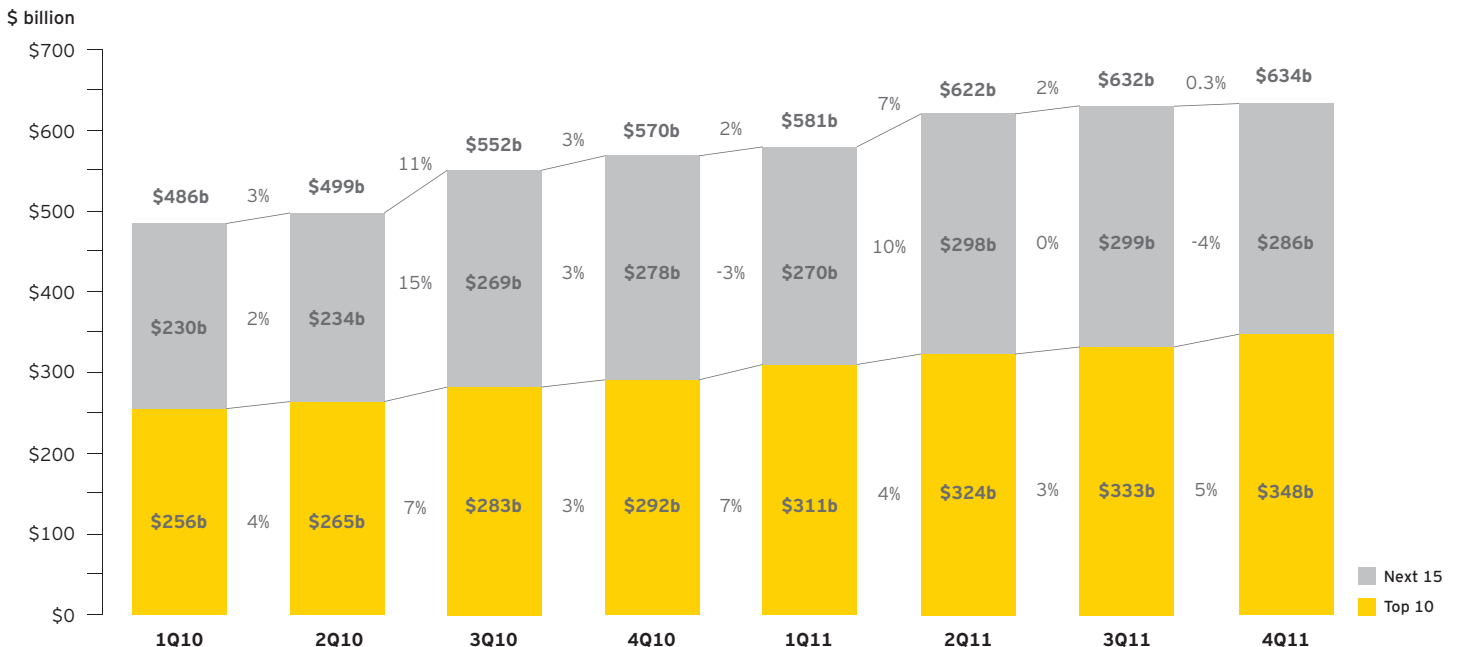
Other notable video technology deals in 2011 included Amazon's 1Q11 purchase for an undisclosed amount of the 58% of Lovefilm International, Ltd., that it didn't already own. Lovefilm had been called "the Netflix of Europe," so the deal presaged Amazon's increasing emphasis on streaming video services in competition with Netflix, Inc. Similarly, Google's 1Q11 purchase of Next New Networks, Inc., with the aim of helping YouTube content partners produce better video, presaged YouTube's plans to develop hundreds of TV-like video channels.¹¹

Internet and mobile video requires infrastructure innovation, and there were dozens of such deals in 2011. These involved video editing for smartphones, video-sharing social network sites, mobile video players, video processing chip technology for mobile devices and video compression and transmission technology.

Consolidation in semiconductors and hard disks

Another major 2011 storyline was consolidation and restructuring, particularly in the semiconductor and computers, peripherals and electronics sectors. Five of the year's top 10 deals, worth a combined \$21.2 billion, involved established semiconductor companies as both the buyer and target (Figure 3b, page 7). At \$6.1 billion, Texas Instruments' purchase of National Semiconductor was the largest. The Broadcom-NetLogic Microsystems and Qualcomm-Atheros Communications deals both served to accelerate the buying company's development of new mobile wireless technologies. The most recent of the five deals is Lam Research's \$3.7 billion pending acquisition of Novellus Systems, the largest deal of 4Q11. The companies' semiconductor manufacturing equipment businesses are said to be entirely complementary.¹²

Figure 5: Aggregate cash, short- and long-term investments of the top 25 technology companies, 1Q10 through 4Q11



The aggregate stockpile of cash, short- and long-term investments of the top 25 global technology companies* grew just 0.3% sequentially in 4Q11 – the lowest quarter-to-quarter growth rate since we began measuring this metric in 1Q09. This may be due in part to the big-ticket deals that occurred in 2011, many of which were by US companies buying overseas. US-based companies are encouraged to do CB deals because of the high tax burden associated with repatriating cash. Still, the compound annual growth rate for the period shown is 14.2%.

*Top 25 companies identified are based on average ranking of market value and sales as of 31 December 2010.

Note: numbers in above chart differ from published reports due to date Capital IQ database was accessed for this chart.

Source: Ernst & Young analysis of Capital IQ data, 30 January 2012.

Two disk drive consolidation deals were announced in the first half of 2011: Western Digital's \$4.3 billion still-pending purchase of Hitachi Global Storage Technologies and Seagate Technology plc's \$1.5 billion purchase of Samsung Electronics Co. Ltd.'s disk drive business.

Restructuring in many sectors

In the second half of 2011, restructuring deals were announced in many sectors. The largest such deal was the \$2.6 billion pooling of the mobile and small panel display units of Hitachi Ltd, Sony Corporation and Toshiba, backed by a government-owned PE fund.¹³ In 4Q11, Sony also sold its share of a joint LCD manufacturing business back to Samsung Electronics for \$941 million, and in the same quarter announced a plan to pay \$1.5 billion to buy 100% of Sony Ericsson Mobile Communications. By gaining full control over smartphone development, the company can accelerate its plan to connect smartphones with its online network of music, videos and games and its PC and tablet offerings.¹⁴

In another 4Q11 effort to refocus on core business, Alcatel-Lucent announced a plan to sell its Genesys enterprise call center business to PE firm Permira Advisors for \$1.5 billion.¹⁵

100+ deals each in security, social networking, HIT, games and advertising and marketing

Although there were nearly twice as many security-related deals in 2011 than in 2010 – touching every sector – none had the high profile of Intel's \$7.3 billion 3Q10 purchase of McAfee, Inc. In aggregate, we counted about \$5.6 billion in 2011 transaction value related to security. One of the largest was in 4Q11, when Thoma Bravo LLC led a group to take private Blue Coat Systems, Inc., a maker of secure internet proxy appliances, for \$1.1 billion.

We also identified \$4.7 billion in HIT deals in 2011. In the largest, Blackstone Group LP is taking private Emdeon, a financial clearing-house that processes claims for doctors, hospitals and insurers. Its growth plans involve electronic health record data and mobile applications. The second largest was defense contractor General Dynamics Corporation's 3Q11 deal to purchase Vangent, Inc., which provides HIT services to military and commercial customers and US federal agencies.

Perhaps surprisingly, the roughly 125 social networking deals we counted generated an aggregate disclosed value of just \$1.1 billion. This is because although social networking technologies have had a profound impact on the technology industry and many others, most of the available target companies are very young and very small. The big trends we've seen in this category involve major players like Facebook, Inc. and Twitter, Inc. purchasing specialized technologies (or people) to enhance key features, and enterprise software vendors buying social technologies to integrate with their offerings.

Likewise, we counted \$3.3 billion of disclosed value in games technology deals, mostly involving technologies that support established companies' ongoing shift to social and mobile games. The largest was Electronic Arts Inc.'s deal to acquire PopCap Games, Inc. for \$1.3 billion. And there was roughly \$2 billion in advertising and marketing technology deals, mostly in platforms that integrate social "listening" tools and other analytics that aim to improve the performance of online marketing. Salesforce.com, Inc.'s \$336 million acquisition of Radian6 Technologies Inc. may best exemplify this trend.

What's next in global technology M&A?

Given the opposing forces of disruptive technology and macroeconomic uncertainty, and considering the surging growth of the last two years, we anticipate a slow-growth year in 2012 for global technology M&A. After all, deal-making has already returned to a strong level, and some deal-makers will be focused on integration challenges involved in the big bets they placed during 2011.

In the long-term, though, we expect strong growth for technology M&A. The disruptive technology megatrends behind 2011's volume and value increases won't abate in 2012, even if ongoing macroeconomic woes restrain deal growth. These trends are certain to drive continued strategic deal-making among global technology companies, including both small strategic deals and big bets by established companies looking to adapt to rapid change and to gain competitive advantage.





Look ahead

Watch for the evolution of the following trends to continue to shape technology industry M&A activity in the coming quarters:

- ▶ Quarterly average deal values peaked in the third quarter and bottomed in the first quarter in each of the last three years – but both the peaks and bottoms increased to higher levels in 2011. Will average values fall in 2012 in light of macroeconomic uncertainty?
- ▶ PE aggregate value soared in 2011 but fell short of pre-recession levels. Will technology PE deals continue to make a comeback in 2012, or be restrained by the European debt crises and other economic conditions?
- ▶ Smart mobility drove the largest technology deal in three years during 2011, despite being a megatrend that's been around for a while. Will it continue to drive big-ticket deals, small strategic deals or both?
- ▶ "Big data" analytics burst on the scene as a major deal driver in 2011, and even played a role in the year's second-largest deal. Will analytics drive big-ticket deals in 2012, smaller industry-specific analytics deals or both?
- ▶ Technology and non-technology companies alike – especially telecommunications carriers – bought cloud data centers in 2011. Will this trend continue in 2012?
- ▶ Researchers say customers are adopting SaaS faster than established software companies expected.¹ Are the two 4Q11 SaaS acquisitions above \$1 billion isolated purchases or the beginning of a major M&A trend?
- ▶ There was \$21.2 billion in long-awaited semiconductor sector consolidation in 2011 – and that's just from the year's top 10 deals. After such a burst of activity, to what extent will sector consolidation continue in 2012?
- ▶ Will increasing usage of internet and mobile video by consumers and businesses continue to drive deals across all sectors?
- ▶ Will the move to mobile and social online games continue to drive a significant volume of small deals?
- ▶ Non-technology companies fell back to 8% of aggregate value acquired in 2011 from 15% in 2010. Driven by the power of social-mobile-cloud megatrends transforming their businesses, will non-technology buyers return in overdrive in 2012?
- ▶ After 18 months in which CB deal volume and value growth outpaced IB growth, CB volume and value declined in 3Q11 and 4Q11 – likely held back by macroeconomic conditions. Will CB deal growth return in 2012?
- ▶ China's deal volume increased dramatically (+76%) in the first nine months of 2011, but declined in 4Q11. Will the country return to technology M&A growth in 2012 or pause before the long-term technology M&A growth continues?
- ▶ As social-mobile-cloud grows, it drives an increasing need for information security solutions, as evidenced by the near-doubling of security technology deal volume in 2011. Will security-related M&A growth continue unabated?
- ▶ Will the capital made available from 2011 IPOs (e.g., LinkedIn, Zynga, Groupon) and IPOs anticipated in 2012 change the nature of M&A in those companies' industry sectors?
- ▶ Adding social networking functions to enterprise infrastructure drove a number of 2011 deals in technology. Will the consumerization of IT drive similar enterprise-related deals in 2012?
- ▶ Will technology's role in enabling innovation throughout the global economy continue to support increasing M&A activity, regardless of the global economic environment?
- ▶ According to *The Economist*, PE firms in all industries are sitting on \$370 billion in "dry powder" – unused funds that they have to invest soon or start to give back to their own investors. Will these unused funds drive increased technology PE M&A in 2012?²



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Commercial due diligence in the cloud

Cloud computing has been growing at an extremely high rate in recent years, and market researchers predict it will continue to do so. One major research house projects a 27.6% compound annual growth rate (CAGR) through 2015, when cloud revenue is expected to reach about \$73 billion.² It's no surprise, therefore, that our own count of cloud-related M&A transactions rose by nearly a third last year, from just under 100 deals in 2010 to roughly 125 in 2011. Surprises, however, just might be in store for acquirers that don't recognize and respond to the unique diligence requirements of cloud transactions.

Cloud revenue will grow to
\$73 billion
by 2015¹

Rapid growth in a young market

The special difficulties of diligence issues presented by cloud company targets are simple to explain but challenging to address. The issues all stem from cloud companies' extremely rapid growth in combination with their youth. Individual companies typically have very limited track records on business results. And the cloud market as a whole is still evolving rapidly – e.g., as an enabler of mobile applications and “big data” – which means customer segmentation and behavior is more challenging to pin down, too.

“As a result, even a deep analysis of a target company's data is likely insufficient to inform a sound transaction decision, whether that be for a partnership, joint venture or outright acquisition,” says Barak Ravid, Commercial Advisory Services, Ernst & Young. Due to the rapid growth and brief history of the market, typical metrics often can't tell the whole story. Rapid growth makes the metrics appear overwhelmingly positive; changes in market conditions or customer relationships that are just beginning to occur may not be detectable. Often, of course, this is true to a certain degree for any emerging technology segment. But the recent rapid adoption of cloud computing is an extreme case – requiring much more emphasis on primary research.

Questioning assumptions

Barak offers as an example an assumption that many acquirers have made: they liken the usage-based, recurring revenue model prevalent in many public cloud service businesses to that of the subscription revenue model used by, for instance, a mobile network operator. But it may not be realistic to apply the relevant metrics,

such as churn rate and average length of customer life, and base a decision on the results.

“The market is still young enough that many cloud customers in a given market may have very limited, or even no, alternatives. So they may prefer the target company's service, or they may dislike it and be waiting to jump to an alternative as soon as it emerges – the metrics can't tell that story,” Barak explains.

Really understanding customer relationships

The solution to the diligence conundrum presented by cloud company targets is to understand the company's customer relationships, as well as its competitive context. You need to know what's going on behind the standard metrics. Typically, this type of sleuthing requires a combination of primary and secondary research, including direct interviews with customers and market participants (e.g., competitors, other vendors and industry observers such as researchers and analysts). This effort is important to verify market expectations and fully understand critical factors, including:

- ▶ The achievability of the target's revenue forecast
- ▶ The potential reach of the target's value proposition in the context of customer requirements
- ▶ The potential for competition to emerge and take away market share
- ▶ And, because markets are evolving so fast, the flexibility, agility and scalability of the target's business model and management team

Cloud-related deal volume
increased by about

one-third
in 2011

Customer interviews are the most important diligence element in these situations. Explains Kripa Rajshekhar, Commercial Advisory Services, Ernst & Young, "In direct customer interviews, the primary goal is to determine whether or not customers actually like the target company's service and have strong, positive feelings about the company. If not, then the question of the 'stickiness' of the company's service becomes very important." Stickiness, in this case, refers to whether the cost of switching to a competitive cloud service provider (CSP) is high or low.

Nuances of "stickiness"

Determining stickiness, however, requires judgment. Some cloud-based services have incorporated "social" functions such as user feedback mechanisms and social network-sourced recommendations to increase stickiness. Diligence must uncover the extent to which the customer base uses such features and how they are valued.

In addition, stickiness can vary significantly from customer to customer. "We saw one case this year in which a target company had a dominant customer that built its own systems and processes around the cloud service. That customer would have very high switching costs. But most customers used the service

less comprehensively, and would have far lower switching costs," Barak explains.

Really understanding competitive context

Understanding the target's competitive landscape is another area in which traditional diligence approaches may not be sufficient for cloud-related transactions. Again, because the cloud market itself is so young, it is more difficult to be certain of whether a given competitive advantage is unique, or how high a competitive barrier it erects.

Although most acquirers need to do more in this respect, Kripa shares one company's exemplary approach. That company had identified two competitors it believed delivered services similar to a company it had targeted for acquisition. The would-be buyer also hypothesized that there were two functions its target provided that were unique and represented high competitive barriers. As part of its diligence process, that potential acquirer worked with Ernst & Young's Commercial Advisory Services practice area to conduct a sizable number of customer and market participant interviews to ground their hypothesis with recent market data. The work revealed additional areas of competitive threat that might temper the target's rates of customer adoption – and likely reduce the business' valuation.

Region-specific considerations

Yet another matter complicating cloud-related diligence is the impact of region-specific cultural and regulatory factors. In some areas, for instance, contracts are viewed as sacrosanct, while other areas take contractual obligations more lightly.

Perhaps most important, however, there is a lack of sufficient guidance from the world's tax authorities as to how the cloud's inherently borderless business paradigm will be subject to local and CB taxation.³ This issue, which stems from the way cloud business models are evolving much faster than tax law, is discussed in depth in another Ernst & Young report, *View from the top: global technology trends and performance*, Issue 3 2011.

On-the-ground market insight

While many acquirers focus too much on internal information provided by the target company and dated secondary research data, systematically conducting rigorous diligence on key deal issues using on-the-ground market insight and looking beyond the metrics can help you mitigate future risks and also capitalize on potential cloud computing opportunities.

Figure 6: Customer-centered cloud diligence

Achievability of revenue forecast

- ▶ How will you know if the target is positioned to meet its stated revenue goals and forecasts?
- ▶ How are you validating:
 - Market assumptions
 - Revenue forecasts
 - Growth expectations

Attractiveness of competitive position

- ▶ How are you finding out how well the target stacks up against competitors in the market?
- ▶ How are you validating competitive dynamics and success factors?
- ▶ How are you assessing the strength of any competitive barriers the target has erected?

Standard metrics include:

- ▶ Average length of customer engagement
- ▶ Average revenue per customer (ARPU)
- ▶ Churn rate
- ▶ Lifetime customer value
- ▶ Average cost of customer acquisition



Stability of customer base

- ▶ How will you assess the target's ability to retain key customers?
- ▶ How are you evaluating the extent to which the target has created "sticky" offerings or service experiences?
- ▶ Have you determined how easy it is for the target's customers to switch vendors?
- ▶ Have you assessed the loyalty of the target's key customers?

Ability to extend the customer base

- ▶ How are you determining the target's ability to attract new customers?
- ▶ How are you analyzing the alignment of the target's value propositions against its customers' purchase decision drivers, including:
 - Privacy and security
 - Reliability and availability
 - Service quality and consistency
- ▶ How are you evaluating the target's product roadmap alignment with market needs and the target's ability to adapt to future or latent customer needs?

Source: Ernst & Young analysis.



Sector snapshot

Communications equipment

Communications equipment deal-making reflected increasing cross-sector and cross-industry blur in 2011, mostly in the form of increasing integration among smartphones and tablets and the applications, content and services that bring them to life. Sector companies also bought technologies to help network operator customers manage the growing bandwidth demands and complexity that all these integrated devices, applications and services create. Smartphone intellectual property also drove deals.

All told, the sector had 211 deals in 2011, 48 of which (23%) were in the fourth quarter. Sector companies acquired \$6.4 billion of disclosed value and sold \$19 billion.

Trends and drivers

- ▶ Though not always reflected in the sector's acquired value, smartphone companies pursued patent portfolios this year. Most notably, a consortium comprised mostly of smart mobile device makers purchased Nortel Networks Inc.'s patent portfolio for \$4.5 billion, outbidding Google. Google's subsequent acquisition of Motorola Mobility – the biggest dollar-value deal of 2011 – was also motivated in part by patents.¹
- ▶ To help compete for a greater share of customer allegiance – and wallet – smartphone makers acquired multiple content, application and services companies. Research In Motion Limited did seven such deals, and HTC Corporation did a half dozen.
- ▶ Coming from the other direction, the Google-Motorola deal and Sony's 4Q11 deal to buy out its smartphone joint venture with Ericsson bring to both buyers devices to integrate with their growing networks of music, videos and games.²
- ▶ The sector's largest purchase of the year was Ericsson's \$1.2 billion bid for Telcordia Technologies. This smart mobility bet strengthens Ericsson's core: Telcordia's software helps network operators manage their growing traffic and transactions more efficiently.³
- ▶ Two other top five deals also respond to network operators' growing challenges around bandwidth volume and network complexity: NeuStar-Targus and the PE deal to take Tekelec private.
- ▶ Many sector companies acquired internet and mobile video technologies, typically in small or non-disclosed value deals. Buyers included Cisco Systems, Inc., Motorola Mobility (before the Google acquisition), Polycom, Inc. and Netgear, Inc.
- ▶ Sector restructurings drove many deals in 2011, as several companies sold units deemed outside their core. Cisco Systems, for example, did three such deals, all with undisclosed values. Alcatel did one for \$1.5 billion (see page 32). Nokia did four such deals; two had undisclosed values and the other two combined for \$156 million in disclosed value.

Top five communications equipment deals, 2011 (corporate and PE)

| Buyer | Target | Disclosed value (\$m) | Announced | Deal type | Premium offered |
|---|---|-----------------------|-----------|-----------|-----------------|
| Telefon LM Ericsson AB | Telcordia Technologies, Inc. from Providence Equity Partners LLC and Warburg Pincus LLC | \$1,150 | 14-Jun | Corporate | 49% |
| American Securities LLC | Global Tel*Link Corp. from Goldman Sachs Capital Partners and Veritas Capital LLC | \$1,000 | 31-Oct | PE | N/A |
| Private group led by Siris Capital Group LLC, GSO Capital Partners LP, Sankaty Advisors LLC, ZelnickMedia Corp. and affiliates of The ComVest Group | Tekelec | \$762 | 7-Nov | PE | N/A |
| NeuStar, Inc. | Targus Information Corp. | \$650 | 11-Oct | Corporate | N/A |
| Huawei Technologies Co. Ltd. | Purchases remaining stake in Huawei Symantec Technologies Co. Ltd. from Symantec Corp. | \$529 | 14-Nov | Corporate | N/A |

Source: Ernst & Young analysis of Capital IQ and FactSet Mergerstat accessed via Alacra.

Sector snapshot

Computers, peripherals and electronics

Cloud computing and business intelligence and analytics were major deal drivers for this sector. Sector companies seeking cloud-related growth did deals around high-performance storage, servers and related cloud offerings, including analytics (which are in increasing demand due to growing volumes of cloud data). Natural disasters also appeared to play a role in sector deal-making. The devastating tsunami in Japan preceded months of flooding in the manufacturing centers of Thailand, and both affected the supply of products ranging from disk drives to LCDs. Also in 2011, sector companies consolidated (as seen in two of the sector's top five deals) and HP openly weighed, and then decided against, a sale of its PC business.¹

Sector companies did 373 deals in 2011, 86 of which (23%) took place in the fourth quarter. The sector acquired \$32 billion and sold \$26 billion.

Trends and drivers

- ▶ Sector companies acquired a broad range of cloud technology platforms and software, from Dell's undisclosed-value deal for a maker of specialized cloud memory software to Acer, Inc.'s \$395 million plan to purchase iGware, Inc., a CSP that will be renamed Acer Cloud Technology Co.
- ▶ Business intelligence and analytics to help make sense of all the cloud data and video generated by smartphones, e-commerce and social networking drove the second-largest deal of the year: HP's \$10.2 billion Autonomy acquisition.
- ▶ The global PC market was flat and the US market contracted² as thin, lightweight laptops known as ultrabooks became the latest in a range of devices (smartphones, tablets, e-readers) vying for consumer and, increasingly, corporate attention.
- ▶ China became the world's largest PC market in 2011.³ China's Lenovo acquired a German PC company and entered a PC JV with NEC Corporation in Japan. The acquisition strategy paid off, as Lenovo moved up to become the No. 2 global supplier of PCs and said it will continue pursuing market growth through acquisitions.⁴
- ▶ Consolidation in disk drives yield two major deals in 2011: Western Digital-Hitachi Global Storage and Seagate Technology's \$1.5 billion purchase of Samsung Electronics' disk business.
- ▶ LCD consolidation led to multiple deals, the largest of which was the pooling of the mobile and small panel display businesses of Hitachi, Sony and Toshiba into a new company, Japan Display, funded by a Japanese government-backed PE firm.
- ▶ Security was a factor in Advent's deal for Oberthur, a maker of smart cards used for payments and identity management.
- ▶ A cloud-based "smart communities" vision drove Toshiba to acquire smart meter maker Landis+Gyr (see page 30).



Top five computers, peripherals and electronics deals, 2011 (corporate and PE)

| Buyer | Target | Disclosed value (\$m) | Announced | Deal type | Premium offered |
|-----------------------------------|---|-----------------------|-----------|-----------|-----------------|
| Hewlett-Packard & Company | Autonomy Corp. Plc | \$10,222 | 18-Aug | Corporate | 62% |
| Western Digital Corp. | Hitachi Global Storage Technologies from Hitachi, Ltd. | \$4,250 | 7-Mar | Corporate | N/A |
| Innovation Network Corp. of Japan | Acquires mobile display units of Hitachi, Ltd. Sony Corp. and Toshiba Corp. | \$2,600 | 31-Aug | PE | N/A |
| Toshiba Corp. | Landis+Gyr AG from Landis & Gyr Holdings Pty Ltd. | \$2,289 | 19-May | Corporate | N/A |
| Advent International Corp. | Purchases majority stake in Oberthur Technologies SA, a subsidiary of François-Charles Oberthur Fiduciaire SA | \$1,628 | 4-Aug | PE | N/A |

Source: Ernst & Young analysis of Capital IQ and FactSet Mergerstat accessed via Alacra.



Sector snapshot

Internet

The internet was the only sector that sustained deal growth momentum into the fourth quarter. Driving sector deal-making was the integration of mobility and social networking functions into many dimensions of internet activity, the rapid growth of internet and mobile video, the increasing spread of e-commerce, the need for analytics to make sense of the vast data stores internet businesses generate and, of course, the cloud. In addition, many deals were driven by the desire for talent or geographic expansion.

We counted 513 internet sector deals in 2011, of which 135 (26%) were in 4Q11 – making this the only sector to have more than one-fourth of its annual volume in the final quarter. Aggregate value acquired by the sector was \$18.9 billion; it sold \$21.1 billion.

Trends and drivers

- ▶ Social-mobile-cloud: the year's biggest deal was Google-Motorola Mobility, and a major driver of that deal was the integration of smart mobile devices with content, applications and services. But it was not alone. Many of Facebook's 10 deals involved adding various mobile capabilities to its social network. And many small deals by Amazon, eBay, Google and others were for social technologies such as network recommendations or tools to obtain friends' advice at the moment of purchase consideration.
- ▶ Internet and mobile video: TV-like streaming services, interactive mobile players, mobile video capturing and sharing software and video distribution platforms were some of the video-related technologies acquired by companies including Amazon, AOL, Inc., Google and Skype (before its acquisition by Microsoft).
- ▶ E-commerce: dozens of small deals involved deal-a-day site consolidation as competition intensified heading into Groupon, Inc.'s IPO. But the big e-commerce deal was eBay-GSI Commerce, the largest of several buys eBay made for its "X.Commerce" initiative to support online merchants in competition with Amazon.¹
- ▶ Analytics: Amazon, eBay, Twitter and others bought technologies that analyze social network activity. More than 125 deals involved advertising and marketing technologies, whether social-specific or not.
- ▶ Migration to social-mobile online games drove more than a hundred deals, including the Shanda Interactive deal in the chart below and nine by Zynga, Inc. that appear to be mostly talent acquisitions.
- ▶ Groupon did many deals, expanding into India, Malaysia, the Middle East and South Africa, for example. eBay's purchase of a Turkish site was another example of geographic expansion.
- ▶ Even basic internet building blocks drew buyers. Two top-five deals involved domain registration services Go Daddy and Network Solutions.

Top five internet deals, 2011 (corporate and PE)

| Buyer | Target | Disclosed value (\$m) | Announced | Deal type | Premium offered |
|--|--|-----------------------|-----------|-----------|-----------------|
| Google, Inc. | Motorola Mobility Holdings, Inc. | \$11,878 | 15-Aug | Corporate | 63% |
| KKR & Co. LP, Silver Lake Group LLC and Technology Crossover Ventures LP | The Go Daddy Group, Inc. | \$2,250 | 2-Jul | PE | N/A |
| eBay, Inc. | GSI Commerce, Inc. | \$1,963 | 28-Mar | Corporate | 49% |
| Management buyout of remaining stake not already owned | Shanda Interactive Entertainment Ltd. | \$736 | 17-Oct | PE | 28% |
| Web.com Group, Inc. | Network Solutions LLC, a portfolio company of General Atlantic LLC | \$552 | 3-Aug | Corporate | N/A |

Source: Ernst & Young analysis of Capital IQ and FactSet Mergerstat accessed via Alacra.

Sector snapshot

IT services

Cloud computing, business intelligence and analytics and HIT were among the prominent 2011 deal drivers for the IT services sector. Consolidation also played an important role, given the prevailing context of global economic uncertainty. Two of the sector's top five deals involved government contractors, which were dealing with national budget cuts during the year. Of note, sector companies' vertical industry expansion plans drove many deals.

There were 747 deals in the sector during 2011, 161 of them (22%) in the fourth quarter. IT services companies are often targeted by other sectors, so it's no surprise that sector companies sold far more value (\$17.9 billion) than they acquired (\$8.8 billion).

Trends and drivers

- ▶ As IT services companies consolidated their cloud data centers in 2011, telecommunications network operators bought them.¹ Two of the sector's biggest deals were by network operators advancing their cloud strategies. Verizon's \$1.3 billion 1Q11 deal to acquire Terremark Worldwide was the first, bringing with it cloud data centers in various countries around the globe. But the largest was CenturyLink's \$2.3 billion deal to acquire SAVVIS, a provider of managed hosting and cloud services.
- ▶ IT services companies were either a buyer or seller in nearly 60 HIT deals. The largest was defense contractor General Dynamics' purchase of Vangent, a provider of HIT systems and solutions for federal, commercial and military customers.
- ▶ The second-largest sector deal of the year also involved a defense contractor, SRA International, taken private by Providence Equity Partners. The two deals appear to be part of an ongoing trend of acquisition and divestiture in government contracting – an industry facing shrinking budgets and changing priorities.²
- ▶ US-based iGate acquired India-based Patni Computer in a top-five consolidation deal combining the two companies to achieve greater scale to compete with larger rivals.³
- ▶ A high proportion of sector deals involved vertical industry IT services, a particularly popular target of PE firms. Likewise, most of Xerox Corporation's 15 deals targeted small industry-specific providers, including companies serving accounting, health care, financial services and education.
- ▶ Analytics deals were exemplified by IBM's string of a half dozen acquisitions of mostly cloud-based analytics providers focusing on marketing, information security, supply chain management and financial services.



Top five IT services deals, 2011 (corporate and PE)

| Buyer | Target | Disclosed value (\$m) | Announced | Deal type | Premium offered |
|----------------------------------|--|-----------------------|-----------|-----------|-----------------|
| CenturyLink, Inc. | SAVVIS, Inc. | \$2,278 | 27-Apr | Corporate | 15% |
| Providence Equity Partners, Inc. | SRA International, Inc. | \$1,826 | 1-Apr | PE | 11% |
| Verizon Communications, Inc. | Terremark Worldwide, Inc. | \$1,259 | 27-Jan | Corporate | 42% |
| iGate Corp.* | Patni Computer Systems Ltd. | \$1,216 | 10-Jan | Corporate | 7% |
| General Dynamics Corp. | Vangent, Inc. from Veritas Capital LLC | \$960 | 16-Aug | Corporate | N/A |

*The iGate and Patni deal involved acquisition of a majority and minority stake – the total value of both deals is shown above.

Source: Ernst & Young analysis of Capital IQ and FactSet Mergerstat accessed via Alacra.



Sector snapshot

Semiconductors

Consolidation drove the biggest deals of 2012 for the semiconductor sector. But there were also many big-ticket deals focused on specific point technologies that align with one or more of the “megatrends” in global technology: smart mobility, cloud computing, social networking, “big data” analytics and the increased security requirements that come with them all.

As a result, aggregate value acquired by semiconductor companies soared 83% to \$30.8 billion in 2011, compared with \$16.8 billion in 2010 – even as economic crises and natural disasters took their toll on sector sales.¹ Sector companies sold \$31.7 billion. There were 193 semiconductor deals in 2011, 40 (21%) of which occurred in the fourth quarter.

Trends and drivers

- ▶ Consolidation in the face of difficult market conditions may have been at the heart of Texas Instruments’ \$6.1 billion acquisition of National Semiconductor. Still, the merger of the two analog chip-makers also demonstrates how M&A can help companies get new products or even whole new strategies to market faster, as it brings broader industrial strength to Texas Instruments’ largely consumer-market portfolio, especially in specific areas of the market like power management.²
- ▶ Companies that supply semiconductor manufacturing equipment also consolidated, as evidenced by the Applied-Varian and Lam-Novellus deals noted below.
- ▶ Some deals clearly aimed to gain a larger share of the extremely fast-growing market for devices that support mobile communications, such as Qualcomm’s purchase of Atheros Communications for \$3.2 billion. The deal accelerates Qualcomm’s expansion into wireless technologies and platforms beyond cellular.
- ▶ Escalating internet and mobile video use drove deals – including a big one, Broadcom’s \$3.5 billion deal for NetLogic Microsystems, which brings video-over-the-internet technology.³
- ▶ Several deals envision increasing on-chip functional integration, especially the integration of security functions in silicon. For example, Rambus, Inc. announced a \$288 million deal to acquire Cryptography Research Inc., a provider of on-chip security technology.
- ▶ Sector deals also responded to the specialized needs of specific industries. In one example, Microsemi Corporation paid \$465 million for Zarlink Semiconductor Inc., whose chips are specialized for health care applications, including ultra-low-power radios that enable wireless medical devices and therapies.⁴

Top five semiconductor deals, 2011 (corporate and PE)

| Buyer | Target | Disclosed value (\$m) | Announced | Deal type | Premium offered |
|--------------------------------|---|-----------------------|-----------|-----------|-----------------|
| Texas Instruments Incorporated | National Semiconductor Corp. | \$6,071 | 4-Apr | Corporate | 74% |
| Applied Materials, Inc. | Varian Semiconductor Equipment Associates, Inc. | \$4,751 | 4-May | Corporate | 35% |
| Lam Research Corp. | Novellus Systems, Inc. from BlackRock Advisors LLC and other shareholders | \$3,678 | 14-Dec | Corporate | 22% |
| Broadcom Corp. | NetLogic Microsystems, Inc. | \$3,450 | 12-Sep | Corporate | 67% |
| Qualcomm, Inc. | Atheros Communications, Inc. | \$3,221 | 5-Jan | Corporate | 27% |

Source: Ernst & Young analysis of Capital IQ and FactSet Mergerstat accessed via Alacra.

Sector snapshot

Software

Technology products don't work without software, so this sector was red hot in 2011. Cloud and SaaS, smart mobility, business analytics and internet and mobile video drove the biggest-ticket software-related deals, while information security, HIT and social-mobile games drove volume – approximately five dozen deals each. In addition, there was a multitude of deals involving vertical-industry software.

In all, there were 969 deals in the software sector during 2011, 206 (21%) of which took place in the fourth quarter. Software was the largest net seller of any sector: \$49 billion in aggregate value was sold and \$25 billion was acquired.

Trends and drivers

- ▶ SaaS helped end the year with a bang, perhaps because customers are adopting SaaS solutions faster than established companies expected.¹ Two SaaS acquisitions, SAP-SuccessFactors (noted in the chart below) and Oracle's \$1.4 billion bid for RightNow Technologies, were both top-10 deals for 4Q11.
- ▶ Smart mobility, social networking and social-mobile gaming are moving massive amounts of consumer and corporate data into clouds and generating unprecedented potential for insights via business intelligence and analytics. HP's \$10.2 billion acquisition of Autonomy was an example of the cross-sector drive to buy up "big data" capabilities. Of note, the SAP-SuccessFactors deal also includes a "big data" angle.
- ▶ Smart mobility and the video-enablement of multiple applications drove the sector's biggest deal of the year: Microsoft's \$8.6 billion acquisition of internet and mobile voice and video company Skype Technologies.
- ▶ The integration of social networking functions into enterprise SaaS emerged and got hot in 2011. Salesforce.com made several exemplary acquisitions, with the \$336 million purchase of Radian6 Technologies, Inc. being the largest. That particular deal is also about analytics: Radian6's technology lets companies analyze social network content to determine what people are saying about their brands, or topics important to their brands.
- ▶ Many PE deals, including the three on the chart below, zeroed in on capabilities for serving vertical industries. Emdeon's software provides financial clearinghouses for hospitals and doctors, Blackboard is an educational software provider and Lawson provides a number of industry-specific solutions.
- ▶ Another would-be vertical deal fell through: CVC Capital Partners' plan to buy financial services provider ConvergeX Group for \$1.9 billion would have been the sector's second-largest PE deal. It fell through in December.²
- ▶ Ending on analytics: Yahoo spun out its Hadoop development group into an independent "big data" analytics company named Hortonworks.³



Top five software deals, 2011 (corporate and PE)

| Buyer | Target | Disclosed value (\$m) | Announced | Deal type | Premium offered |
|--|---|-----------------------|-----------|-----------|-----------------|
| Microsoft Corp. | Skype Technologies SA, from Silver Lake Partners, eBay Inc., Andreessen Horowitz LLC, Canada Pension Plan Investment Board (Canada) and Joltid Ltd. | \$8,554 | 10-May | Corporate | N/A |
| SAP America Inc., a subsidiary of SAP AG | SuccessFactors, Inc. | \$3,368 | 3-Dec | Corporate | 69% |
| Blackstone Group LP | Emdeon, Inc. | \$2,201 | 4-Aug | PE | 23% |
| Golden Gate Capital and Infor Global Solutions | Lawson Software, Inc. | \$1,841 | 1-May | PE | 12% |
| Providence Equity Partners, Inc. | Blackboard, Inc. | \$1,576 | 1-Jul | PE | 2% |

Source: Ernst & Young analysis of Capital IQ and FactSet Mergerstat accessed via Alacra.



Transaction value flow

M&A and sector convergence in 2011

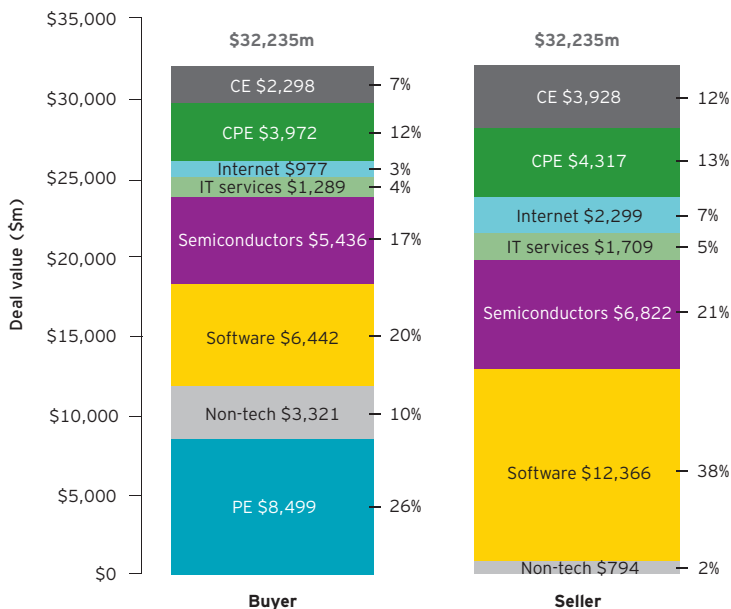
Technology industry sectors historically focused the vast majority of their M&A transactions within their own sectors – often 80% or more of the disclosed value they acquired. But increasing cross-sector blur diminished that pattern in 2011 despite a rising consolidation trend, which tends to concentrate value within sectors.

This sector convergence trend is most obvious in the top three deals of the year. Topping the list, Google-Motorola Mobility (\$11.9 billion) reflects the convergence of the communications equipment and internet sectors or, more specifically, smart mobile devices and applications, content and services.

HP-Autonomy (\$10.2 billion) brings together a diversified computer, peripherals and electronics company with a software

vendor whose “big data” products focus on making sense of unstructured data. Autonomy’s software, based on neural network and pattern recognition research done at Cambridge University in the early 1990s, was adopted early on by police forces and intelligence agencies to help them make sense of unstructured information to solve crimes.^{1,2,3} HP says Autonomy will strengthen its data analytics, cloud computing and workflow management capabilities.⁴

Figure 7a: Global technology transactions value flow by sector, 4Q11



CE = Communications equipment

CPE = Computers, peripherals and electronics

Note: percentages may not total 100 due to rounding.

Source: Ernst & Young analysis of Capital IQ and FactSet Mergerstat accessed via Alacra.

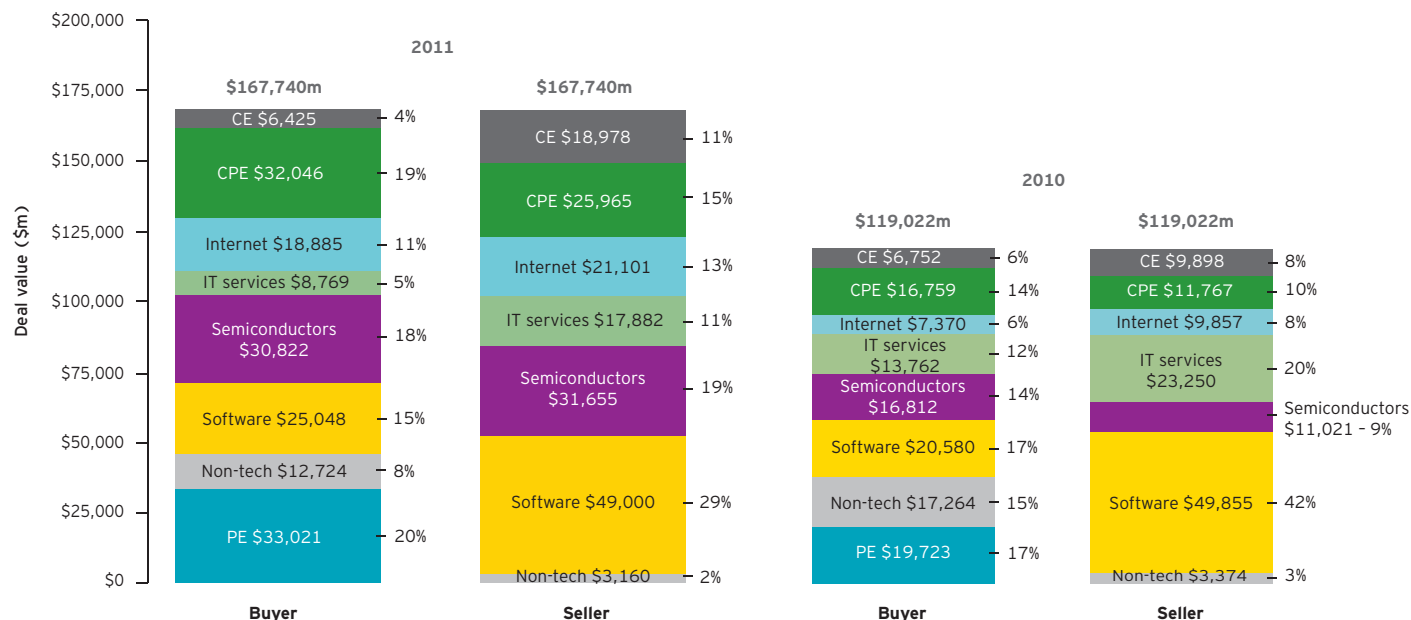
Microsoft-Skype (\$8.6 billion) brings together a software and internet company. But more precisely, it shows how internet-and-mobile video have rapidly converged with businesses and consumers, and are becoming a key element of communications and collaboration.

As the 2011 versus 2010 chart (below) shows, the communications equipment sector was a net seller, selling \$12.6 billion more than it acquired. Nearly all of that difference was in the value of the Google-Motorola deal. However, the internet sector remained a net seller on the year despite that large deal due to the fact that the sector is such a popular target of other sectors. IT services and software are also traditionally popular acquisition targets. Of note, software was the largest net seller of any sector again in 2011 despite a buyer-side boost from the Microsoft-Skype deal. Software companies sold \$24 billion more than they acquired.

Consolidation also drove the semiconductor sector to rise from just 9% of value sold in 2010 to 19% in 2011. Five of the top 10 deals of 2011 involved semiconductor sector consolidation (Figure 3b, page 7). Non-technology buyers, which nearly pulled even with PE in 2010, bought less in 2011 in both percentage and dollar terms, while PE firms surged back to near their pre-recession level.

In 4Q11, CPE was a net buyer – by an ever-so-slight margin – while every other sector was a net seller (software by almost double). Of note, PE firms purchased 27% of the quarter's aggregate value, versus 20% for the full year, suggesting that they remained more active than corporate buyers in 4Q11. Buying by non-technology companies perked up, too; they purchased 10% of 4Q11 value versus 8% for the full year.

Figure 7b: Global technology transactions value flow by sector, 2011 versus 2010



CE = Communications equipment
 CPE = Computers, peripherals and electronics

Note: percentages may not total 100 due to rounding.

Source: Ernst & Young analysis of Capital IQ and FactSet Mergerstat accessed via Alacra.

Figure 8a: Global technology corporate and PE transactions scorecard by sector, 4Q11

| | Number of deals | | | | | | Average value (\$m) | | | | | | | | | | | | | | |
|--|-----------------|----|----|----|----|----|---------------------|---------------------|--------------|------------|----------|--------------|----|----|----|------|---------------------|--------------|----------|-------------|----------|
| | 4Q10 | 4Q | 1Q | 2Q | 3Q | 4Q | 4Q11 | Sequential % change | YOY % change | 4Q10 | 4Q | 1Q | 2Q | 3Q | 4Q | 4Q11 | Sequential % change | YOY % change | | | |
| Corporate deals by sector (based on buyer sector) | | | | | | | | | | | | | | | | | | | | | |
| CE | 55 | | | | | | 44 | -8% | ▼ | -20% | ▼ | \$97 | | | | | \$92 | 100% | ▲ | -5% | ▼ |
| CPE | 87 | | | | | | 80 | -6% | ▼ | -8% | ▼ | \$128 | | | | | \$140 | -62% | ▼ | 9% | ▲ |
| Internet | 106 | | | | | | 122 | 8% | ▲ | 15% | ▲ | \$185 | | | | | \$48 | -91% | ▼ | -74% | ▼ |
| IT services | 161 | | | | | | 137 | -29% | ▼ | -15% | ▼ | \$67 | | | | | \$48 | -11% | ▼ | -28% | ▼ |
| Semiconductors | 33 | | | | | | 33 | -35% | ▼ | 0% | - | \$130 | | | | | \$400 | 93% | ▲ | 208% | ▲ |
| Software | 199 | | | | | | 173 | -8% | ▼ | -13% | ▼ | \$100 | | | | | \$157 | 128% | ▲ | 57% | ▲ |
| Total | 641 | | | | | | 589 | -13% | ▼ | -8% | ▼ | \$108 | | | | | \$130 | -29% | ▼ | 20% | ▲ |
| PE deals by sector (based on seller sector) | | | | | | | | | | | | | | | | | | | | | |
| CE | 4 | | | | | | 4 | 0% | - | 0% | - | \$1,141 | | | | | \$881 | 647% | ▲ | -23% | ▼ |
| CPE | 5 | | | | | | 6 | -50% | ▼ | 20% | ▲ | \$0 | | | | | \$310 | -70% | ▼ | N/A | - |
| Internet | 9 | | | | | | 13 | 63% | ▲ | 44% | ▲ | \$78 | | | | | \$251 | -68% | ▼ | 222% | ▲ |
| IT services | 11 | | | | | | 24 | 0% | - | 118% | ▲ | \$10 | | | | | \$66 | -39% | ▼ | 560% | ▲ |
| Semiconductors | 4 | | | | | | 7 | 600% | ▲ | 75% | ▲ | \$445 | | | | | \$198 | 19,700% | ▲ | -56% | ▼ |
| Software | 28 | | | | | | 33 | 3% | ▲ | 18% | ▲ | \$96 | | | | | \$446 | -42% | ▼ | 365% | ▲ |
| Total | 61 | | | | | | 87 | 7% | ▲ | 43% | ▲ | \$333 | | | | | \$293 | -50% | ▼ | -12% | ▼ |
| Total deals by sector | | | | | | | | | | | | | | | | | | | | | |
| CE | 59 | | | | | | 48 | -8% | ▼ | -19% | ▼ | \$213 | | | | | \$150 | 194% | ▲ | -30% | ▼ |
| CPE | 92 | | | | | | 86 | -11% | ▼ | -7% | ▼ | \$128 | | | | | \$155 | -65% | ▼ | 21% | ▲ |
| Internet | 115 | | | | | | 135 | 12% | ▲ | 17% | ▲ | \$181 | | | | | \$84 | -85% | ▼ | -54% | ▼ |
| IT services | 172 | | | | | | 161 | -25% | ▼ | -6% | ▼ | \$64 | | | | | \$51 | -14% | ▼ | -20% | ▼ |
| Semiconductors | 37 | | | | | | 40 | -23% | ▼ | 8% | ▲ | \$196 | | | | | \$368 | 84% | ▲ | 88% | ▲ |
| Software | 227 | | | | | | 206 | -7% | ▼ | -9% | ▼ | \$99 | | | | | \$199 | 24% | ▲ | 101% | ▲ |
| Total | 702 | | | | | | 676 | -11% | ▼ | -4% | ▼ | \$121 | | | | | \$153 | -31% | ▼ | 26% | ▲ |

CE = Communications equipment
 CPE = Computers, peripherals and electronics

After a year of mostly green colors adorning the quarterly editions of this chart, the overall metrics (combined corporate and PE) for 4Q11 have turned mostly red. The 31% sequential decline in average value reflects the two mega deals in the previous quarter: Google-Motorola (\$11.8 billion) and HP-Autonomy (\$10.2 billion). Also, "only eight" 4Q11 deals topped \$1 billion – which is a small number for 2011 but bests all except one of the previous year's quarters. That last point is evidenced by the 26% YOY increase in average value – the only overall metric to increase. The extremely high sequential increase in semiconductor sector average value for PE firms results from the fact that there was only one PE deal in that sector in 3Q11, and it had a disclosed value of only \$1 million.

We hypothesize that the steep sequential and YOY declines in corporate average values for the internet sector reflect both the 3Q11 Google-Motorola deal and equities markets volatility. Last year and into early 2011, pending high-profile internet IPOs generated excitement that helped to drive up that sector's valuations across the board. Beginning in mid-2011, however, macroeconomic uncertainty and market volatility dampened enthusiasm for IPOs – and some technology companies even ended the year trading below their IPO price. Just as last year's excitement led to higher valuations, this year's diminished excitement appears to be deflating internet valuations.

Overall deal volume drifted lower since peaking in 1Q11, probably because of the same macroeconomic factors. Only the internet sector bucked the trend, both sequentially and YOY. The semiconductor sector gained on a YOY basis.

Note: average value based on deals with disclosed values.

Source: Ernst & Young analysis of Capital IQ and FactSet Mergerstat accessed via Alacra.

Figure 8b: Global technology corporate and PE transactions scorecard by sector, 2011 versus 2010

| | 2010 | | 2011 | | YOY % change | |
|--|--------------|------------------|--------------|------------------|--------------|------------------|
| | No. | Avg. value (\$m) | No. | Avg. value (\$m) | No. | Avg. value (\$m) |
| Corporate deals by sector (based on buyer sector) | | | | | | |
| CE | 147 | \$118 | 190 | \$75 | 29% | -36% |
| CPE | 273 | \$144 | 348 | \$186 | 27% | 29% |
| Internet | 383 | \$85 | 472 | \$224 | 23% | 164% |
| IT services | 578 | \$118 | 667 | \$72 | 15% | -39% |
| Semiconductors | 151 | \$215 | 180 | \$290 | 19% | 35% |
| Software | 859 | \$95 | 832 | \$118 | -3% | 24% |
| Total | 2,391 | \$120 | 2,689 | \$148 | 12% | 23% |
| PE deals by sector (based on seller sector) | | | | | | |
| CE | 13 | \$516 | 21 | \$326 | 62% | -37% |
| CPE | 16 | \$28 | 25 | \$718 | 56% | 2,464% |
| Internet | 39 | \$198 | 41 | \$288 | 5% | 45% |
| IT services | 56 | \$340 | 80 | \$159 | 43% | -53% |
| Semiconductors | 21 | \$161 | 13 | \$228 | -38% | 42% |
| Software | 122 | \$202 | 137 | \$419 | 12% | 107% |
| Total | 267 | \$244 | 317 | \$344 | 19% | 41% |
| Total deals by sector | | | | | | |
| CE | 160 | \$155 | 211 | \$94 | 32% | -39% |
| CPE | 289 | \$140 | 373 | \$211 | 29% | 51% |
| Internet | 422 | \$98 | 513 | \$234 | 22% | 139% |
| IT services | 634 | \$136 | 747 | \$81 | 18% | -40% |
| Semiconductors | 172 | \$211 | 193 | \$286 | 12% | 36% |
| Software | 981 | \$106 | 969 | \$157 | -1% | 48% |
| Total | 2,658 | \$131 | 3,006 | \$167 | 13% | 27% |

CE = Communications equipment

CPE = Computers, peripherals and electronics

Boosted by big-ticket deals that drove 2Q11 and 3Q11 average values to the highest quarterly levels seen in a decade, this full-year comparison of 2011 and 2010 shows a 27% increase in annual average value. The internet sector led the increase, while communications equipment and IT services decreased.

Although the 13% increase in deal volume brings full-year 2011 volume close to pre-recession levels, volume actually declined sequentially in every quarter of the year after peaking in 1Q11. This raises a concerning question mark over 2012 transaction activity.

Note: average value based on deals with disclosed values.

Source: Ernst & Young analysis of Capital IQ and FactSet Mergerstat accessed via Alacra.

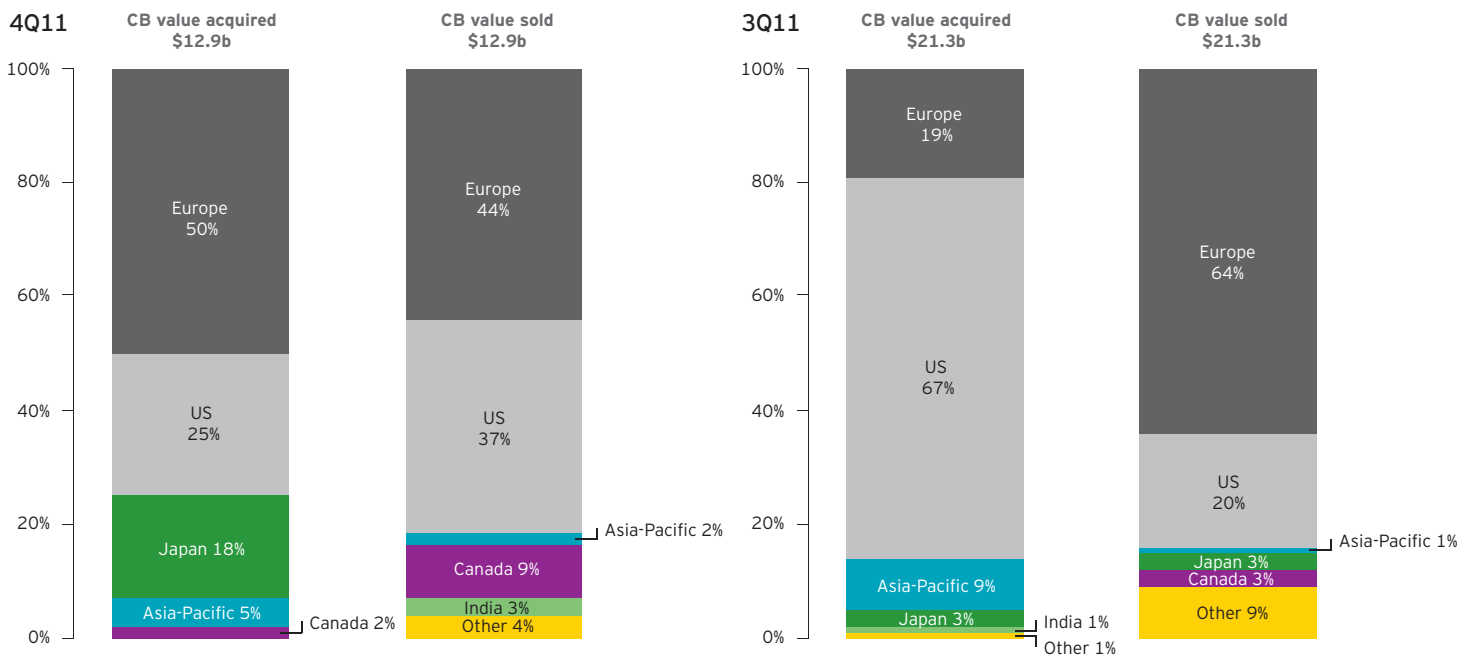


Cross-border and regional snapshots

CB value share holds steady in growth year

The proportion of CB aggregate value to overall global technology M&A value held steady at 41% in 2011, as both IB and CB deals experienced roughly 41% YOY growth. CB deal volume, however, increased in proportion to IB deals for the third consecutive year. But 2011 seemed on track for even greater CB growth until macroeconomic uncertainty returned in the second half of the year, appearing to damp down deal flow across borders more than it did to IB deals.

Figure 9a: Cross-border deal value flow for technology deals (disclosed value), 4Q11 versus 3Q11



Despite concerns about the Eurozone sovereign debt crisis, Europe was the largest net buyer in CB transactions for 4Q11, accounting for 50% of the quarter's CB deal value (\$6.4 billion). Much of that results from SAP's (Germany) purchase of SaaS software company SuccessFactors (US).

- ▶ 76% of Europe's total was tied to two prominent deals: the \$3.4 billion SAP-SuccessFactors deal and the \$1.5 billion Permira-Genesys Telecom deal.
- ▶ European technology companies were most active buying in the US (\$4.2 billion, 66% of European CB total); followed by cross-border deals within Europe (\$2 billion, 31% of total).
- ▶ 4Q11 represented the first quarter of 2011 in which the US was a net seller. European companies purchased 88% of the US technology company value sold in CB transactions.
- ▶ Sony's acquisition of Ericsson's stake in the Sony Ericsson venture represents 65% of the value acquired by Japan in 4Q11 (\$1.5 billion).
- ▶ Canada was a net seller. Its \$1.2 billion sold was largely attributable to Sterling Partners Inc.'s \$551 million acquisition of semiconductor intellectual property company MOSAID Technologies, Inc., and Rakuten, Inc.'s \$311 million acquisition of Kobo, Inc., which integrated social networking functions with e-readers.

Note: percentages may not total 100 due to rounding.

Source: Ernst & Young analysis of Capital IQ and FactSet Mergerstat accessed via Alacra.

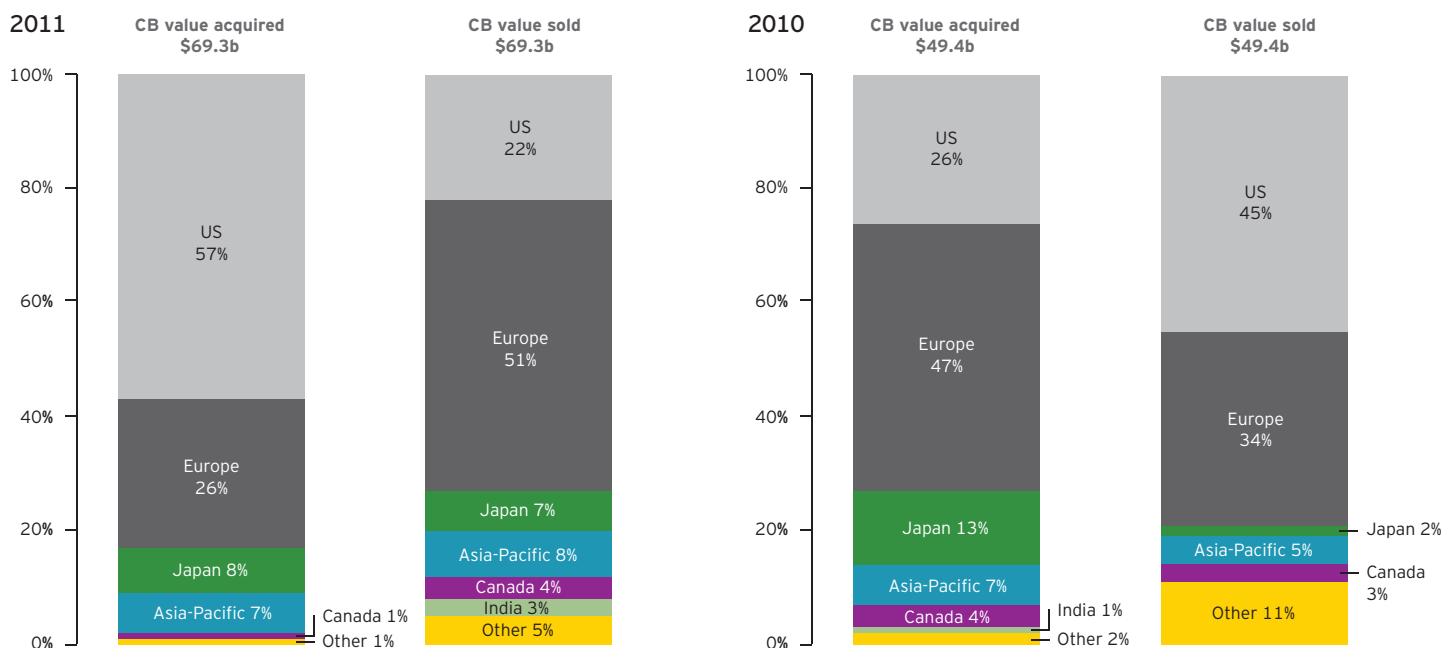
At 1,077 deals, CB volume increased 19% from 907 deals last year, while IB volume increased 10% to 1,929 deals in 2011 from 1,751 deals in 2010. CB volume accounted for 36% of full-year 2011 volume, up from 34% in 2010 and 31% in 2009. Aggregate CB value increased from \$49.4 billion in 2010 to \$69.3 billion in 2011. Those values represent 41% of aggregate values in both years, growing from 25% in 2009.

Interestingly, Europe and the US switched full-year net buyer and net seller positions for the second consecutive year in 2011. In 2009, Europe was the world's major net seller and the US its biggest net buyer.

As Figure 9b (below) shows, Europe switched to the biggest net buyer position and the US became the biggest net seller in 2010, and they switched once more in 2011. Although this could be attributed to the sovereign debt crisis that has beset Europe in the second half of 2011, the region had a strong fourth quarter. In 4Q11, Europe had its only net buyer quarter of the year – and a strong quarter overall (see page 32).

The Asia-Pacific region also experienced strong value growth in 4Q11 (see page 30). The Americas region had a strong year but weakened in 4Q11 (see page 28).

Figure 9b: Cross-border deal value flow for technology deals (disclosed value), 2011 versus 2010



For the second consecutive year, the US and Europe switched roles as the biggest net buyer of global technology M&A transaction value crossing borders, with the US buying the most in 2011.

- ▶ US companies purchased the majority (56%) of technology CB value – \$39 billion (including six deals valued at more than \$1 billion).
- ▶ The top three US CB deals – HP-Autonomy, Microsoft-Skype and Western Digital-Hitachi Global Storage – were valued at \$23 billion (nearly 60% of the CB value acquired by US companies).
- ▶ Europe switched to a net seller in 2011. European companies acquired \$17 billion in CB transactions, including \$5 billion (28%) that involved CB deals within Europe.
- ▶ European buyers mostly bought in the US. They accounted for 63% of the European CB value acquired, including SAP-SuccessFactors (\$3.4 billion).
- ▶ Japanese companies remained active CB buyers but reduced their value acquired to \$5.7 billion in 2011 from \$6.2 billion in 2010. Two deals topped \$1 billion: Toshiba-Landis+Gyr (\$2.3 billion) and Sony-Sony Ericsson Mobile Communications (\$1.5 billion).
- ▶ Asia-Pacific companies executed smaller deals (\$56 million average value per deal) but actively bought companies around the world. Only 17% of the region's acquired CB deal value was in-region.

Source: Ernst & Young analysis of Capital IQ and FactSet Mergerstat accessed via Alacra.



Regional snapshot: Americas

'Social-mobile-cloud' deals more concentrated here

Americas deal-making represented slightly more than half of all global technology M&A volume in 2011 and almost three-quarters of disclosed value. Most notably, the deal-driving megatrends we've identified – smart mobility, cloud computing, social networking, "big data" analytics, sector and industry blur and the increased security requirements that come with them all – were more concentrated in this region.

"The high concentration of deals driven by the 'social-mobile-cloud' trends in the Americas is evidence that this region continues to play its traditional technology trendsetting role, even as other regions have risen to prominence."

Joe Steger
Global Technology Industry
Transaction Advisory Services Leader

The 353 Americas deals shown in Figure 12 represent 52% of global 4Q11 deal volume. The \$17 billion in aggregate value was about 53% of global value. For the full-year 2011, the Americas deal volume was about the same percentage of global volume, but the value was higher: approximately 73% of global value. Americas companies were buyers in 9 of the top 10 deals of the year but only 6 of the top 10 4Q11 deals.

Of note, the volume of transactions related to deal-driving megatrends was even higher in the Americas than globally. For example, Americas buyers were responsible for nearly three-quarters of the deals we identified as related to social networking and cloud and SaaS, roughly 70% of "big data" analytics deals and nearly 60% of information security deals.

Examples of all of these trends can be found in the top five deals of the quarter and the year, shown in Figures 10 and 11 (opposite). The continuing rapid rise of smart mobility was a key driver of the Google-Motorola Mobility, Microsoft-Skype and VeriFone-Point International deals. The rapid adoption of SaaS solutions was a driver of the Oracle-RightNow deal, and the fast-growing need to analyze large volumes of structured and unstructured data was a key to the HP-Autonomy deal. Information security over the internet is the focus of Blue Coat Systems, which was taken private in 4Q11. Social networking is the one major trend not directly represented yet in top deals by dollar value, due to the relative youth and size of the target companies.

Many of these deals also demonstrate sector and industry blur. The Google-Motorola deal suggests the integration of applications, content, services and advertising with smart mobile devices. The Microsoft-Skype deal suggests the blurring together of enterprise software and internet services, as well as the integration of consumer and enterprise approaches to communication and collaboration.

Long-expected semiconductor sector consolidation – among both device makers and suppliers of semiconductor manufacturing equipment – was another major 2011 deal driver. Two such deals are seen in Figure 10, TI-National and Applied-Varian – and they were just two of five similar semiconductor sector deals that added up to \$21.2 billion in aggregate semiconductor value and made it onto the full-year top 10 list.

One possibly concerning sign is the decline in aggregate and average values seen in Figure 12. The 61% sequential and 21% YOY declines in aggregate value for 4Q11 compare with a 43% sequential decline and 7% increase globally (Figure 4a, page 8). Likewise, the average value declines of 60% sequentially and 5% YOY compare with a 31% decline and 26% increase for the global metrics. The Asia-Pacific and Japan and European regions both outperformed the global averages for these metrics (Figure 15, page 31 and Figure 18, page 33).

Figure 10: Top five Americas deals, 2011 (corporate and PE)

| Buyer | Target | Disclosed value | Announced (\$m) | Deal type | Premium offered |
|--------------------------------|---|-----------------|-----------------|-----------|-----------------|
| Google, Inc. | Motorola Mobility Holdings, Inc. | \$11,878 | 15-Aug | Corporate | 63% |
| Hewlett-Packard & Company | Autonomy Corp. PLC | \$10,222 | 18-Aug | Corporate | 62% |
| Microsoft Corp. | Skype Technologies SA, from Silver Lake Partners, eBay Inc., Andreessen Horowitz LLC, Canada Pension Plan Investment Board (Canada) and Joltid Ltd. | \$8,554 | 10-May | Corporate | N/A |
| Texas Instruments Incorporated | National Semiconductor Corp. | \$6,071 | 4-Apr | Corporate | 74% |
| Applied Materials, Inc. | Varian Semiconductor Equipment Associates, Inc. | \$4,751 | 4-May | Corporate | 35% |

Figure 11: Top five Americas deals, 4Q11 (corporate and PE)

| Buyer | Target | Disclosed value | Announced (\$m) | Deal type | Premium offered |
|---|---|-----------------|-----------------|-----------|-----------------|
| Lam Research Corp. | Novellus Systems, Inc. from BlackRock Advisors LLC and other shareholders | \$3,678 | 14-Dec | Corporate | 22% |
| Oracle Corp. | RightNow Technologies, Inc. | \$1,430 | 24-Oct | Corporate | 11% |
| A private group led by Thoma Bravo LLC and Ontario Teachers' Pension Plan Board | Blue Coat Systems, Inc. | \$1,105 | 9-Dec | PE | 45% |
| VeriFone Systems, Inc. | Point International AB, a subsidiary of Electronic Transaction Group Nordic AB | \$1,050 | 14-Nov | Corporate | N/A |
| American Securities LLC | Global Tel*Link Corp. from Goldman Sachs Capital Partners and Veritas Capital LLC | \$1,000 | 31-Oct | PE | N/A |

Figure 12: Americas transactions scorecard, 4Q11

| Deals announced | 4Q10 | 4Q | 1Q | 2Q | 3Q | 4Q | 4Q11 | Sequential % change | YOY % change | | |
|--|----------|----|----|----|----|----|----------|---------------------|--------------|------|---|
| Corporate | | | | | | | | | | | |
| Number of deals announced | 299 | | | | | | 306 | -15% | ▼ | 2% | ▲ |
| Number of deals with disclosed values | 88 | | | | | | 72 | -1% | ▼ | -18% | ▼ |
| Total value of deals with disclosed values (\$m) | \$17,812 | | | | | | \$13,104 | -64% | ▼ | -26% | ▼ |
| Average value of deals with disclosed values (\$m) | \$202 | | | | | | \$182 | -63% | ▼ | -10% | ▼ |
| PE | | | | | | | | | | | |
| Number of deals announced | 35 | | | | | | 47 | 24% | ▲ | 34% | ▲ |
| Number of deals with disclosed values | 9 | | | | | | 9 | -10% | ▼ | 0% | - |
| Total value of deals with disclosed values (\$m) | \$3,986 | | | | | | \$4,154 | -51% | ▼ | 4% | ▲ |
| Average value of deals with disclosed values (\$m) | \$443 | | | | | | \$462 | -45% | ▼ | 4% | ▲ |
| Corporate and PE | | | | | | | | | | | |
| Number of deals announced | 334 | | | | | | 353 | -11% | ▼ | 6% | ▲ |
| Number of deals with disclosed values | 97 | | | | | | 81 | -2% | ▼ | -16% | ▼ |
| Total value of deals with disclosed values (\$m) | \$21,798 | | | | | | \$17,258 | -61% | ▼ | -21% | ▼ |
| Average value of deals with disclosed values (\$m) | \$225 | | | | | | \$213 | -60% | ▼ | -5% | ▼ |

Source: Ernst & Young analysis of Capital IQ and FactSet Mergerstat accessed via Alacra.



Regional snapshot: Asia-Pacific and Japan

Transaction volume, value growth outpaces global averages

Asia-Pacific and Japan M&A activity in 2011 grew faster than the global averages in terms of both volume and value, but many of the region's big-ticket deals involved corporate restructurings in reaction to difficult market conditions. Nonetheless, many deals were also driven by the same megatrends present around the world, particularly smart mobility. And one top-five deal was built on a cloud-based vision aiming to create more efficient communities.

“With a year of restructurings behind us, the Asia-Pacific region is preparing for a year of strategic growth and deal-making driven by a desire to gain market share in the ‘social-mobile-cloud’ space.”

Lin Cai
Technology Transaction Advisory
Services Leader, Asia-Pacific

The region's full-year 2011 volume increase was 19%, compared with 13% global volume growth (Figure 4b, page 9). China led volume growth, increasing to 197 deals for the year from 135 in 2010 (+62 deals, or 46%). China's 197 deals accounted for 36% of the region's total volume of 552 deals.

The region's aggregate disclosed value also grew faster than the global average. Aggregate value was \$24 billion in 2011, 48% higher than \$16.2 billion in 2010, compared with 41% global growth (Figure 4b, page 9). As Figure 15 (opposite) shows, Asia-Pacific value growth also bested the global averages in 4Q11.

However, the region's 4Q11 volume shrank more than the global average on a sequential basis, 17% versus 11% globally (Figure 4a, page 8). And YOY, Asia-Pacific's 3% volume decline was only slightly better than the global 4% decline for 4Q11. The volume declines came despite PE deal growth to nine deals in 4Q11 from just two in 4Q10 and are due, in part, to falling quarterly volume from China. After significant growth in each of the first three quarters of the year, China dropped from 46 deals in 4Q10 to 39 in 4Q11. The country reportedly experienced an overall departure of capital in 4Q11, and this decline may be a result of the tightening of funding.¹

The region's largest 2011 deal was the \$2.6 billion pooling of mobile display units from Hitachi, Sony and Toshiba, backed by a Japanese government-funded PE firm.

In other restructurings, Sony sold back to Samsung half of the S-LCD joint venture they formed in 2004,² and the CEO of Chinese online games company Shanda Interactive joined with members of his family to take the company private.³

Sony's third restructuring was the purchase from Ericsson of the rest of their smartphone JV (Figure 13, opposite). The deal was driven by Sony's strategic plan to integrate the mobile devices with its growing network of music, videos and games.⁴ Similarly, Taiwan's HTC pursued a half dozen deals that add content and services to its own smartphone repertoire.

The region's largest cloud-related deal was Toshiba's \$2.3 billion purchase of Landis+Gyr, whose smart meters enable power companies to run more efficiently. The products fit into Toshiba's broad cloud-based “smart communities” vision, in which the cloud becomes a forum for integrating information from multiple “social infrastructure” systems that today operate separate, independent information systems, including utilities, water supply, transportation, telecommunications, medicine and public services.⁵

Another notable cloud deal was Acer, Inc.'s \$395 million purchase of iGware, Inc., a cloud service provider that will be renamed Acer Cloud Technology Co.

Figure 13: Top five Asia-Pacific and Japan deals, 2011 (corporate and PE)

| Buyer | Target | Disclosed value | Announced (\$m) | Deal type | Premium offered |
|-----------------------------------|---|-----------------|-----------------|-----------|-----------------|
| Innovation Network Corp. of Japan | Acquires mobile display units of Hitachi Ltd, Sony Corp. and Toshiba Corp. | \$2,600 | 31-Aug | PE | N/A |
| Toshiba Corp. | Landis+Gyr AG from Landis & Gyr Holdings Pty Ltd. | \$2,289 | 19-May | Corporate | N/A |
| Sony Corp. | Purchases remaining stake in Sony Ericsson Mobile Communications AB from Telefon LM Ericsson AB | \$1,498 | 27-Oct | Corporate | N/A |
| SK Telecom Co., Ltd. | Purchases equity stake in Hynix Semiconductor, Inc. | \$962 | 11-Nov | Corporate | 2% |
| Samsung Electronics Co. Ltd. | Purchases remaining stake in S-LCD Corp. from Sony Corp. | \$941 | 25-Dec | Corporate | N/A |

Figure 14: Top five Asia-Pacific and Japan deals, 4Q11 (corporate and PE)

| Buyer | Target | Disclosed value | Announced (\$m) | Deal type | Premium offered |
|--|---|-----------------|-----------------|-----------|-----------------|
| Sony Corp. | Purchases remaining stake in Sony Ericsson Mobile Communications AB from Telefon LM Ericsson AB | \$1,498 | 27-Oct | Corporate | N/A |
| SK Telecom Co., Ltd. | Purchases equity stake in Hynix Semiconductor, Inc. | \$962 | 11-Nov | Corporate | 2% |
| Samsung Electronics Co. Ltd. | Purchases remaining stake in S-LCD Corp. from Sony Corp. | \$941 | 25-Dec | Corporate | N/A |
| Management buyout of remaining stake not already owned | Shanda Interactive Entertainment Ltd. | \$736 | 17-Oct | PE | 28% |
| Huawei Technologies Co. Ltd. | Purchases remaining stake in Huawei Symantec Technologies Co. Ltd. from Symantec Corp. | \$529 | 14-Nov | Corporate | N/A |

Figure 15: Asia-Pacific and Japan transactions scorecard, 4Q11

| Deals announced | 4Q10 | 4Q | 1Q | 2Q | 3Q | 4Q | 4Q11 | Sequential % change | YOY % change |
|--|---------|----|----|----|----|----|---------|---------------------|--------------|
| Corporate | | | | | | | | | |
| Number of deals announced | 128 | | | | | | 117 | -18% ▼ | -9% ▼ |
| Number of deals with disclosed values | 76 | | | | | | 71 | -24% ▼ | -7% ▼ |
| Total value of deals with disclosed values (\$m) | \$3,860 | | | | | | \$6,285 | 61% ▲ | 63% ▲ |
| Average value of deals with disclosed values (\$m) | \$51 | | | | | | \$89 | 117% ▲ | 75% ▲ |
| PE | | | | | | | | | |
| Number of deals announced | 2 | | | | | | 9 | -10% ▼ | 350% ▲ |
| Number of deals with disclosed values | 1 | | | | | | 8 | 33% ▲ | 700% ▲ |
| Total value of deals with disclosed values (\$m) | \$2 | | | | | | \$1,320 | -55% ▼ | 65,900% ▲ |
| Average value of deals with disclosed values (\$m) | \$2 | | | | | | \$165 | -67% ▼ | 8,150% ▲ |
| Corporate and PE | | | | | | | | | |
| Number of deals announced | 130 | | | | | | 126 | -17% ▼ | -3% ▼ |
| Number of deals with disclosed values | 77 | | | | | | 79 | -21% ▼ | 3% ▲ |
| Total value of deals with disclosed values (\$m) | \$3,862 | | | | | | \$7,605 | 11% ▲ | 97% ▲ |
| Average value of deals with disclosed values (\$m) | \$50 | | | | | | \$96 | 39% ▲ | 92% ▲ |

Source: Ernst & Young analysis of Capital IQ and FactSet Mergerstat accessed via Alacra.



Regional snapshot: Europe, the Middle East and Africa (EMEA)

Smart mobility and the cloud overcome economic malaise

Cloud computing and smart mobility were the technology megatrends that drove big-ticket acquisitions by European companies in 2011. Otherwise, the top deals occurring in Europe, the Middle East and Africa (EMEA) reflected the ongoing economic malaise affecting the region: they were often restructurings to increase focus on core activities, while improving company balance sheets.

“Defying the European economic malaise, smart mobility, cloud computing and other technology innovations drove deals and helped to lift European technology M&A in the fourth quarter. It was a real beacon in an otherwise gloomy landscape.”

Staffan Ekström
Transaction Advisory Services Leader,
EMEA

Still, disruptive innovation prevailed over macroeconomic uncertainty in many cases. Increasing cloud and SaaS adoption, for example, drove SAP's \$3.4 billion deal to acquire SuccessFactors, a US-based provider of cloud-based human resources software. In the \$1.2 billion Ericsson-Telcordia deal, Ericsson is obtaining software that helps fixed and mobile network operators manage their rapidly growing network traffic more efficiently. And Schneider Electric's \$1.4 billion deal for Telvent looks for similar efficiencies – but in the power network. Telvent makes software that collects and presents information so that power grid operators can manage their networks more efficiently.

Such deals resulted in strong fourth quarter value metrics for EMEA. Figure 18, opposite, shows growth in EMEA's value metrics that outpaced the global average. For example, the 4Q11 47% sequential and 70% YOY growth in EMEA aggregate value compares with a 43% sequential decline and just a 7% YOY increase for global technology M&A overall (Figure 4a, page 8). Average value exhibited a similar pattern: the 110% sequential and 146% YOY increases for EMEA compare with a global 31% sequential decline and 26% YOY increase.

But many of the deals that drove those increases involved restructurings. A good example is Alcatel-Lucent's sale of its Genesys enterprise call-center business, which brings \$1.5 billion to the balance sheet and enables greater focus on the needs of network operators, the company's core customer.¹

In fact, PE deal-makers dominated EMEA's top deals and transaction scorecard in a way that was not apparent in other regions. Of note, one 4Q11 metric seen in Figure 18 is telling. At \$3 billion, the aggregate value of PE deals for the region represents 41% of the region's combined (corporate and PE) aggregate value of \$7.4 billion. For comparison, in Asia-Pacific and Japan PE deals were just 17% of aggregate value and in the Americas, just 24%. This suggests that corporate deal-makers are having a tougher time in Europe, where acquisitions in all industries are reportedly “grinding to a near halt” due to persistent debt woes.²

However, the region's fortunes may be on the rise. As Figure 9a (page 26) shows, Europe became a net buyer of CB transaction value in 4Q11, for the first time in five quarters (since 3Q10).

Figure 16: Top five Europe, Middle East and Africa (EMEA) deals, 2011 (corporate and PE)

| Buyer | Target | Disclosed value | Announced (\$m) | Deal type | Premium offered |
|--|--|-----------------|-----------------|-----------|-----------------|
| SAP America Inc., a subsidiary of SAP AG | SuccessFactors, Inc. | \$3,368 | 3-Dec | Corporate | 69% |
| Permira Advisers LLP | Genesys Telecommunications Laboratories Inc., a subsidiary of Alcatel-Lucent SA | \$1,500 | 12-Oct | PE | N/A |
| Schneider Electric SA | Telvent GIT SA from Abengoa SA and other shareholders | \$1,368 | 1-Jun | Corporate | 24% |
| Telefon LM Ericsson AB | Telcordia Technologies Inc. from Providence Equity Partners Inc. and Warburg Pincus LLC | \$1,150 | 14-Jun | Corporate | N/A |
| Astorg Partners SAS | FCI Microconnections SA from FCI France SA, a unit of Framatome Connectors International SA, itself ultimately owned by Bain Capital LLC | \$817 | 10-Aug | PE | N/A |

Figure 17: Top five Europe, Middle East and Africa (EMEA) deals, 4Q11 (corporate and PE)

| Buyer | Target | Disclosed value | Announced (\$m) | Deal type | Premium offered |
|--|---|-----------------|-----------------|-----------|-----------------|
| SAP America Inc., a subsidiary of SAP AG | SuccessFactors, Inc. | \$3,368 | 3-Dec | Corporate | 69% |
| Permira Advisers LLP | Genesys Telecommunications Laboratories Inc., a subsidiary of Alcatel-Lucent SA | \$1,500 | 12-Oct | PE | N/A |
| HgCapital Trust Plc | IRIS Software Group Ltd. | \$672 | 7-Dec | PE | N/A |
| Norvestor Equity AS, via a special purpose vehicle owned by Norvestor V LP | Inmeta Crayon ASA | \$144 | 8-Dec | PE | 53% |
| Datalogic SpA | Accu-Sort Systems, Inc. from Danaher Corp. | \$135 | 22-Nov | Corporate | N/A |

Figure 18: Europe, Middle East and Africa transactions scorecard, 4Q11

| Deals announced | 4Q10 | 4Q | 1Q | 2Q | 3Q | 4Q | 4Q11 | Sequential % change | YOY % change | | |
|--|---------|----|----|----|----|----|---------|---------------------|--------------|------|---|
| Corporate | | | | | | | | | | | |
| Number of deals announced | 214 | | | | | | 166 | -7% | ▼ | -22% | ▼ |
| Number of deals with disclosed values | 68 | | | | | | 39 | -38% | ▼ | -43% | ▼ |
| Total value of deals with disclosed values (\$m) | \$3,325 | | | | | | \$4,346 | 137% | ▲ | 31% | ▲ |
| Average value of deals with disclosed values (\$m) | \$49 | | | | | | \$111 | 283% | ▲ | 127% | ▲ |
| PE | | | | | | | | | | | |
| Number of deals announced | 24 | | | | | | 31 | -6% | ▼ | 29% | ▲ |
| Number of deals with disclosed values | 5 | | | | | | 12 | 33% | ▲ | 140% | ▲ |
| Total value of deals with disclosed values (\$m) | \$1,009 | | | | | | \$3,025 | -4% | ▼ | 200% | ▲ |
| Average value of deals with disclosed values (\$m) | \$202 | | | | | | \$252 | -28% | ▼ | 25% | ▲ |
| Corporate and PE | | | | | | | | | | | |
| Number of deals announced | 238 | | | | | | 197 | -7% | ▼ | -17% | ▼ |
| Number of deals with disclosed values | 73 | | | | | | 51 | -29% | ▼ | -30% | ▼ |
| Total value of deals with disclosed values (\$m) | \$4,334 | | | | | | \$7,372 | 47% | ▲ | 70% | ▲ |
| Average value of deals with disclosed values (\$m) | \$59 | | | | | | \$145 | 110% | ▲ | 146% | ▲ |

Source: Ernst & Young analysis of Capital IQ and FactSet Mergerstat accessed via Alacra.



Cross-border corporate and PE transaction activity by sector

Figure 19a: Cross-border corporate and PE transactions scorecard by sector, 4Q11

| | Number of deals | | | | | | Average value (\$m) | | | | | | | | | | | |
|--|-----------------|----|----|----|----|----|---------------------|---------------------|---------------|-------------|----|----|----|----|----|--------------|---------------------|---------------|
| | 4Q10 | 4Q | 1Q | 2Q | 3Q | 4Q | 4Q11 | Sequential % change | YOY % change | 4Q10 | 4Q | 1Q | 2Q | 3Q | 4Q | 4Q11 | Sequential % change | YOY % change |
| Corporate deals by sector (based on buyer sector) | | | | | | | | | | | | | | | | | | |
| CE | 27 | | | | | | 13 | -43% ▼ | -52% ▼ | \$130 | | | | | | \$149 | 263% ▲ | 15% ▲ |
| CPE | 39 | | | | | | 36 | -8% ▼ | -8% ▼ | \$59 | | | | | | \$238 | -70% ▼ | 303% ▲ |
| Internet | 31 | | | | | | 39 | 56% ▲ | 26% ▲ | \$120 | | | | | | \$45 | 61% ▲ | -63% ▼ |
| IT services | 49 | | | | | | 43 | -33% ▼ | -12% ▼ | \$131 | | | | | | \$72 | 38% ▲ | -45% ▼ |
| Semiconductors | 15 | | | | | | 13 | -28% ▼ | -13% ▼ | \$18 | | | | | | \$60 | -63% ▼ | 233% ▲ |
| Software | 69 | | | | | | 52 | -30% ▼ | -25% ▼ | \$47 | | | | | | \$333 | 624% ▲ | 609% ▲ |
| Total | 230 | | | | | | 196 | -19% ▼ | -15% ▼ | \$88 | | | | | | \$174 | -8% ▼ | 98% ▲ |
| PE deals by sector (based on seller sector) | | | | | | | | | | | | | | | | | | |
| CE | 1 | | | | | | 1 | 0% - | 0% - | \$0 | | | | | | \$0 | -100% ▼ | N/A - |
| CPE | 1 | | | | | | 1 | -80% ▼ | 0% - | \$0 | | | | | | \$28 | -97% ▼ | N/A - |
| Internet | 0 | | | | | | 3 | 200% ▲ | N/A - | \$0 | | | | | | \$20 | 82% ▲ | N/A - |
| IT services | 3 | | | | | | 4 | -60% ▼ | 33% ▲ | \$10 | | | | | | \$0 | N/A - | -100% ▼ |
| Semiconductors | 0 | | | | | | 1 | N/A - | N/A - | \$0 | | | | | | \$551 | N/A - | N/A - |
| Software | 11 | | | | | | 14 | -18% ▼ | 27% ▲ | \$61 | | | | | | \$516 | -34% ▼ | 746% ▲ |
| Total | 16 | | | | | | 24 | -29% ▼ | 50% ▲ | \$48 | | | | | | \$353 | -42% ▼ | 635% ▲ |
| Total deals by sector | | | | | | | | | | | | | | | | | | |
| CE | 28 | | | | | | 14 | -42% ▼ | -50% ▼ | \$130 | | | | | | \$149 | 282% ▲ | 15% ▲ |
| CPE | 40 | | | | | | 37 | -16% ▼ | -8% ▼ | \$59 | | | | | | \$225 | -72% ▼ | 281% ▲ |
| Internet | 31 | | | | | | 42 | 62% ▲ | 35% ▲ | \$120 | | | | | | \$43 | 72% ▲ | -64% ▼ |
| IT services | 52 | | | | | | 47 | -36% ▼ | -10% ▼ | \$126 | | | | | | \$64 | 23% ▲ | -49% ▼ |
| Semiconductors | 15 | | | | | | 14 | -22% ▼ | -7% ▼ | \$18 | | | | | | \$183 | 13% ▲ | 917% ▲ |
| Software | 80 | | | | | | 66 | -27% ▼ | -18% ▼ | \$49 | | | | | | \$390 | 200% ▲ | 696% ▲ |
| Total | 246 | | | | | | 220 | -21% ▼ | -11% ▼ | \$86 | | | | | | \$199 | -11% ▼ | 131% ▲ |

CE = Communications equipment
CPE = Computers, peripherals and electronics

CB deal volume hit its lowest level in nearly two years in 4Q11. The last time CB volume was less than the 220 deals shown above was in 1Q10, when it was 182 deals. As shown by the micro plot line above, CB volume continued an 18-month growth curve to a peak in 2Q11 at 311 deals, and then declined to 277 deals in 3Q11 and 220 in 4Q11. Similarly to the all-deals chart (Figure 8a, page 24), the internet sector was the only one to buck the declining trend. In fact, that sector's sequential all-deal volume growth in 4Q11 was entirely due to CB deals, which grew by 16 deals while IB internet deals declined by 2.

The CB average value picture is more robust. Almost the entire YOY gain of 131% in average value occurred in 2Q11, when CB deals spiked 120% to \$229 million. Since then, CB deals have sustained their average value level better than all deals. A 2% sequential decline in 3Q11 and the 11% sequential decline shown above bring CB average value per deal to \$199 million in 4Q11, compared with \$153 million for all deals.

Note: average value based on deals with disclosed values.

Source: Ernst & Young analysis of Capital IQ and FactSet Mergerstat accessed via Alacra.

Figure 19b: Cross-border corporate and PE transaction activity by sector, 2011 versus 2010

| | 2010 | | 2011 | | YOY % change | |
|--|------------|------------------|--------------|------------------|--------------|------------------|
| | No. | Avg. value (\$m) | No. | Avg. value (\$m) | No. | Avg. value (\$m) |
| Corporate deals by sector (based on buyer sector) | | | | | | |
| CE | 71 | \$161 | 73 | \$109 | 3% | -32% |
| CPE | 117 | \$90 | 161 | \$348 | 38% | 287% |
| Internet | 100 | \$75 | 138 | \$45 | 38% | -40% |
| IT services | 167 | \$168 | 223 | \$75 | 34% | -55% |
| Semiconductors | 63 | \$106 | 73 | \$98 | 16% | -8% |
| Software | 304 | \$127 | 299 | \$200 | -2% | 57% |
| Total | 822 | \$123 | 967 | \$176 | 18% | 43% |
| PE deals by sector (based on seller sector) | | | | | | |
| CE | 7 | \$27 | 7 | \$11 | 0% | -59% |
| CPE | 3 | \$0 | 6 | \$636 | 100% | N/A |
| Internet | 12 | \$227 | 10 | \$136 | -17% | -40% |
| IT services | 15 | \$657 | 26 | \$51 | 73% | -92% |
| Semiconductors | 9 | \$77 | 2 | \$551 | -78% | 616% |
| Software | 39 | \$185 | 59 | \$337 | 51% | 82% |
| Total | 85 | \$273 | 110 | \$296 | 29% | 8% |
| Total deals by sector | | | | | | |
| CE | 78 | \$153 | 80 | \$102 | 3% | -33% |
| CPE | 120 | \$89 | 167 | \$362 | 39% | 307% |
| Internet | 112 | \$99 | 148 | \$60 | 32% | -39% |
| IT services | 182 | \$226 | 249 | \$74 | 37% | -67% |
| Semiconductors | 72 | \$104 | 75 | \$108 | 4% | 4% |
| Software | 343 | \$135 | 358 | \$225 | 4% | 67% |
| Total | 907 | \$139 | 1,077 | \$187 | 19% | 35% |

CE = Communications equipment

CPE = Computers, peripherals and electronics

Growth in CB deal volume (19%) and average value per deal (35%) for full-year 2011 outpaced the growth of all deals (CB plus IB), which was 13% and 27%, respectively (Figure 4b, page 9). Of note, the entire volume increase was due to CB growth in the first half of the year, since which time CB deal volume has declined. CB average value more than doubled sequentially in 2Q11 and has remained near that level since.

Note: average value based on deals with disclosed values.

Source: Ernst & Young analysis of Capital IQ and FactSet Mergerstat accessed via Alacra.



Global corporate and PE deals by acquiring country: cross-border and in-border

Figure 20: Global corporate and PE deals by acquiring country: cross-border and in-border, 4Q11

| Corporate deals | | | | | | | | 4Q11 | | | | | |
|---------------------|------------|----|----|----|----|----|------------|---------------|--------------|----|-----|------|--------------|
| Top 10 countries | 4Q10 deals | 4Q | 1Q | 2Q | 3Q | 4Q | 4Q11 deals | % total deals | No. IB deals | 0% | 50% | 100% | No. CB deals |
| United States | 275 | | | | | | 269 | 46% | 215 | | | | 54 |
| United Kingdom | 37 | | | | | | 36 | 6% | 19 | | | | 17 |
| Japan | 30 | | | | | | 35 | 6% | 22 | | | | 13 |
| China and Hong Kong | 44 | | | | | | 34 | 6% | 24 | | | | 10 |
| France | 39 | | | | | | 32 | 5% | 14 | | | | 18 |
| Canada | 15 | | | | | | 27 | 5% | 12 | | | | 15 |
| Germany | 23 | | | | | | 23 | 4% | 11 | | | | 12 |
| India | 18 | | | | | | 13 | 2% | 9 | | | | 4 |
| Sweden | 27 | | | | | | 13 | 2% | 6 | | | | 7 |
| Taiwan | 16 | | | | | | 13 | 2% | 9 | | | | 4 |
| Other | 117 | | | | | | 94 | 16% | 52 | | | | 42 |
| Total | 641 | | | | | | 589 | 100% | 393 | | | | 196 |

| PE deals | | | | | | | | 4Q11 | | | | | |
|---------------------|------------|----|----|----|----|----|------------|---------------|--------------|----|-----|------|--------------|
| Top 10 countries | 4Q10 deals | 4Q | 1Q | 2Q | 3Q | 4Q | 4Q11 deals | % total deals | No. IB deals | 0% | 50% | 100% | No. CB deals |
| United States | 34 | | | | | | 45 | 52% | 34 | | | | 11 |
| United Kingdom | 3 | | | | | | 15 | 17% | 11 | | | | 4 |
| China and Hong Kong | 1 | | | | | | 5 | 6% | 4 | | | | 1 |
| France | 4 | | | | | | 5 | 6% | 4 | | | | 1 |
| Switzerland | 0 | | | | | | 4 | 5% | 1 | | | | 3 |
| Norway | 1 | | | | | | 2 | 2% | 2 | | | | 0 |
| South Korea | 0 | | | | | | 2 | 2% | 2 | | | | 0 |
| Other | 18 | | | | | | 9* | 10% | 5 | | | | 4 |
| Total | 61 | | | | | | 87 | 100% | 63 | | | | 24 |

*Additional countries with one PE deal: Austria, Bermuda, Brazil, Germany, India, Israel, Japan, Spain and Sweden.

After eight consecutive quarters of growth dating back to 4Q09, China's corporate deal volume growth stalled in 4Q11. As shown above, the number of Chinese technology M&A transactions declined to 34 in 4Q11 from 44 in 4Q10. During this period, however, Chinese corporate M&A volume grew from 86 deals in 2009 to 132 in 2010 and reached 189 for full-year 2011. The US remains the dominant CB deal buyer, accounting for 30% of all deal volume that flows across borders. The UK returned to its historical second position in 4Q11, displacing China (which occupied the No. 2 spot for the four previous quarters).

PE firms, meanwhile, increased their CB activity by 50%, from 16 deals in 4Q10 to 24 in 4Q11. For full-year 2011, PE firms increased CB deal volume 29%, to 110 deals in 2011 from 85 deals in 2010. In so doing, PE firms increased the proportion of their CB deals to 35% of all PE deals in 2011 from 32% in 2010.

Of note, while Japan reportedly made significant increases in CB M&A value purchases in other industries,³ that was not the case in technology. Although Japanese CB deal volume increased 45% to 45 deals in 2011 from 31 deals in 2010, disclosed CB value acquired by Japan actually decreased 9%. Instead, Japanese technology M&A value growth focused on in-border deals, whose value increased 281% to \$4.7 billion in 2011 from \$1.2 billion in 2010.

Source: Ernst & Young analysis of Capital IQ and FactSet Mergerstat accessed via Alacra.

Source notes

Another growth year, slowing in 4Q

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Cross-border corporate and PE transaction activity by sector

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As we went to press, the following pending deal were completed in January 2012:

VeriFone/Point International

"VeriFone Systems acquired 100% stake in Point International," Datamonitor's Financial Deals Tracker, 3 January 2012, via Dow Jones Factiva, © 2012 Datamonitor Ltd.

Samsung Electronics/S-LCD

Closed 12 January 2012, Capital IQ, accessed 30 January 2012.

Methodology

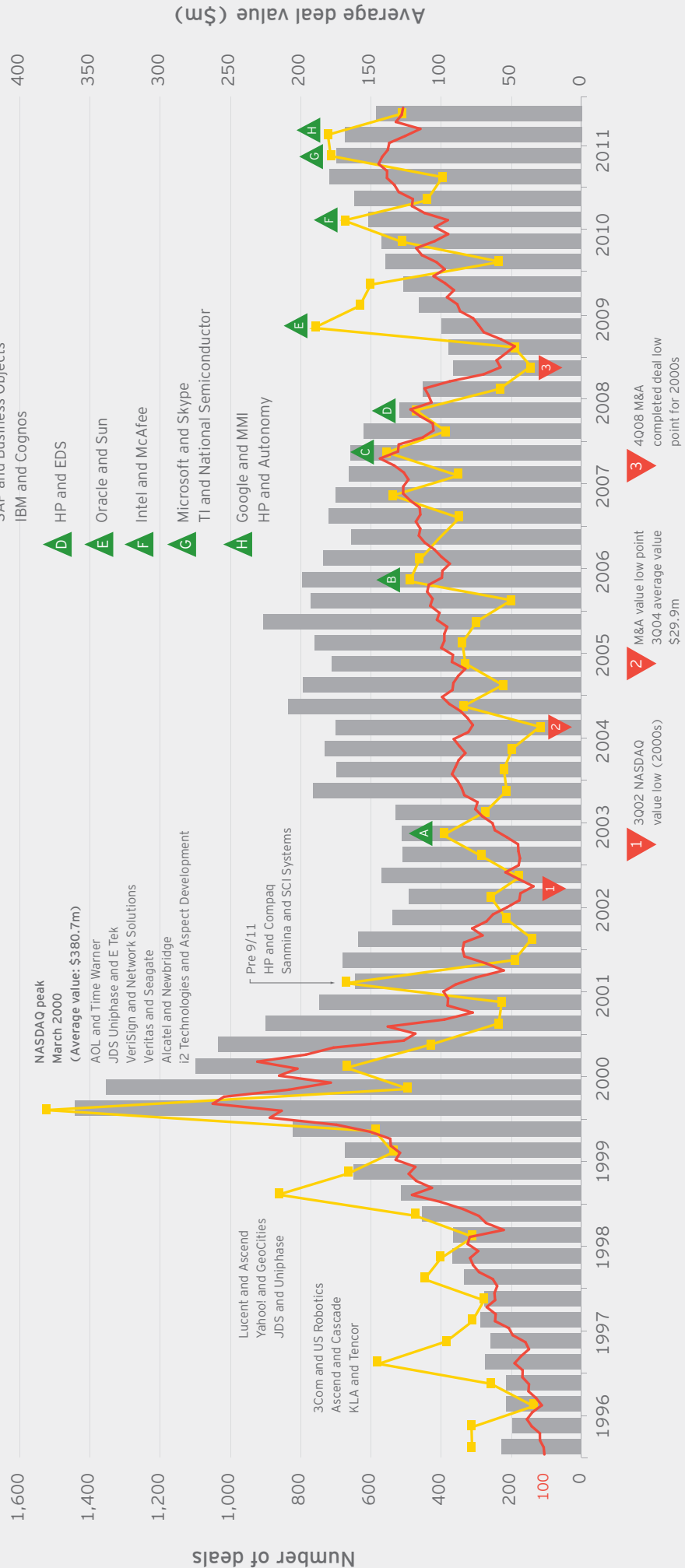
- ▶ *Global Technology M&A update: October-December and year in review 2011* is based on Ernst & Young's analysis of Capital IQ and FactSet Mergerstat data for 2010 and 2011. Deal activity and valuations may fluctuate slightly based on the date the databases were accessed.
- ▶ Technology company M&A data was pulled based on the companies' respective standard industrial classification (SIC) codes for computers, peripherals and electronics; communication equipment; semiconductors; software; IT services; and internet companies.
- ▶ Technology deals included M&A transactions between:
 - Two technology companies
 - Technology companies acquiring companies in other industries
 - Non-technology companies acquiring technology companies, deals valued at more than \$100 million
 - Management consulting companies acquiring technology companies (IT consulting deals valued at more than \$500 million)
- ▶ Joint ventures were not included.
- ▶ Corporate M&A activity data was analyzed based on the classification of the acquiring company.
- ▶ For non-technology company acquirers, deals were classified based on the technology sector of the seller.
- ▶ Equity investments were included (corporate and PE).
- ▶ PE M&A activity includes both full and partial stake transactions and was analyzed based on acquisitions by firms classified as private equity, sovereign wealth funds, investment holding companies, alternative investment management groups, certain commercial banks, investment banks, venture capital and other similar entities.
- ▶ Unsolicited technology deal values were not included in the dataset, unless the proposed bid was accepted and the deal closed based on data available at the time of analysis.
- ▶ The value and status of all deals highlighted in this report are as of 31 December 2011, unless otherwise noted.
- ▶ All dollar amounts are in US dollars, unless otherwise indicated.
- ▶ Top 25 companies identified are based on average ranking of market value and sales as of 31 December 2010 (Figure 5, page 10).
- ▶ Only disclosed deal values are used in all value analyses.
- ▶ As used in this report, "total value" refers to the aggregate value of deals with disclosed values for the period under discussion.



Historical view of NASDAQ Composite Index

Figure 21: Historical view of M&A technology deal activity aligned with NASDAQ Composite Index, 1996-2011

Equities markets volatility has been making headlines in the business press for several years now, but global technology M&A average deal values appear to be even more volatile. This figure charts the synchronicity with which the volume of global technology deals per quarter has risen and fallen together with the NASDAQ Composite Index over the past 16 years. We find the correlation striking. The average quarterly transaction value (of completed deals with disclosed values) also appears to move in synchronization with the NASDAQ, although it is often skewed by big-ticket deals – as happened in two separate quarters of 2011. This suggests the influence – both rational and psychological – that macroeconomic factors hold over technology industry M&A activity. The NASDAQ index ended 2011 down 2%, slightly out of sync with a 13% rise in global technology M&A volume. However, the steep mid-2011 NASDAQ decline shown below did appear to restrain deal volume growth in the second half of the year.



Note: we overlaid the NASDAQ composite on this chart tracking completed deals less canceled deals to correspond to the deals we have published. The composite is indexed to 100 starting on 29 December 1995. To show correlation between the NASDAQ and technology industry M&A activity, we aligned the index starting point to 100 on the deals axis. All currency references are in US\$. Source: Ernst & Young's analysis of Capital IQ and FactSet MergerStat data via Alacra, last accessed 5 January 2012. NASDAQ Composite Index from Capital IQ, accessed 9 January 2012.

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