

# *Global Technology* IPO Review Full-year and Q4 2014

**Technology Institute**

*A quarterly look at global trends in the technology IPO market*

*January 2015*





# Best year of the decade for global technology IPOs\*



## Raman Chitkara

Partner and Global Technology  
Industry Leader  
PricewaterhouseCoopers LLP  
raman.chitkara@us.pwc.com

Welcome to the full-year and fourth quarter 2014 issue of PwC's Global Technology IPO Review. The year 2014 was a very exciting year for technology IPOs globally. The IPO landscape witnessed some unique events:

- Largest IPO ever of Alibaba.com raising US\$21.8 billion
- Highest proceeds of US\$51.2 billion being raised in the last ten years and more than the combined proceeds of the past three years (2011-2013 US\$50.5 billion)
- Record number of 118 listings
- Broad global participation by 19 countries

Even amidst geopolitical challenges in Russia, Ukraine and the Middle East, technology IPO activity remained unfettered.

This year also witnessed the comeback of Chinese listings and the re-emergence of Europe on the technology IPO map. Overall, Chinese technology IPOs dominated the 2014 IPO scene, surpassing the US with 45 versus 37 listings. However, the US exchanges (NYSE and NASDAQ) maintained the number one global position with 56 versus 34 listings. In the US, the NYSE brought 15% more technology companies public than NASDAQ (30 versus 26).

The Internet Software & Services subsector emerged as the clear favorite, not only in 2014 but also during the entire period of 2011-2014, while Software held the second spot since 2012. This year the Semiconductor subsector also made a comeback with the lifting of the IPO freeze in China by the China Securities Regulatory Commission (CSRC).

The number of cross-border listings increased in 2014 though they declined in percentage terms, and US exchanges were the top favorite for companies listing outside their domicile nation.

Though valuations for private companies remain quite high, thus depressing the need for capital from the public markets, the positive sentiment generated by the high-performing technology IPOs in 2014, the surge in fourth quarter IPOs (34 versus 18 in the third quarter) and the continued strength of the capital markets fuels anticipation that the 2015 technology IPO market will stay at a healthy pace.

If you would like to discuss these findings and how they may impact your business, please reach out to me or any member of our global technology team listed at the back of this document.

Sincerely,

A handwritten signature in black ink that reads "Raman". The signature is written in a cursive style and is underlined with a horizontal line.

Raman Chitkara  
Global Technology Industry Leader

\*Issue size greater than US\$40 million (includes over-allotment) and based on trade date



# Contents

<b>Executive summary</b>	<b>4</b>
Driven by Alibaba, the second half of 2014 surged	5
Chinese technology IPOs return in 2014	6
E-commerce growth and innovation have kept Internet Software & Services and Software ahead of all	8
<b>Full-year 2014 technology IPO summary</b>	<b>9</b>
Geographic distribution	11
Subsector distribution	16
Stock exchange distribution	21
Cross-border listings	22
Technology IPO listing detail	23
<b>2010-2014 technology IPO summary</b>	<b>26</b>
Summary by subsector	27
<b>Q4 2014 technology IPO summary</b>	<b>31</b>
<i>Top 10 technology IPOs</i>	32
<i>Geographic distribution</i>	33
<i>Subsector distribution</i>	39
<i>Stock exchange distribution</i>	40
<i>Cross-border listings</i>	43
<i>Key financials</i>	44
<i>Valuation metrics</i>	48
<i>Top three subsectors in Q4 2014</i>	50
<b>Methodology</b>	<b>62</b>
<b>Contacts</b>	<b>63</b>
About PwC's Technology Institute	64
About PwC	64

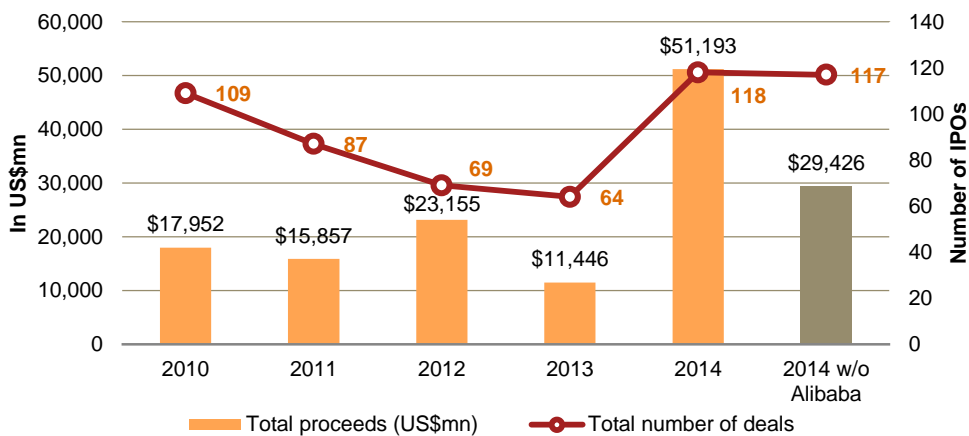
# Executive summary

Following a lackluster performance during 2011 through 2013, the global technology IPO market posted its best year of the decade in 2014, with the highest number of offerings (118) and highest proceeds (US\$51.2bn).

Year over year, total proceeds jumped by 347% and the number of deals grew by 84%. During the period 2010-2014, total proceeds of US\$119.6bn were raised from 447 deals—2014 alone contributed 43% of the proceeds and 26% of the deals. Strong capital markets, relatively low volatility during most of 2014, the reopening of the Chinese exchanges and improvements in Europe all contributed to the strong performance.

In 2014 we also saw much broader global participation with 19 countries across 16 exchanges—this was also the highest for the period 2010-2014. Despite geopolitical incidents creating global market tensions, the technology IPO market showed resilience.

**Figure 1: Technology IPOs 2010–2014**



Source: Dealogic with analysis by PwC.

*"What's impressive about 2014 results is not just that it was the best technology IPO market of the decade, but that there was such broad participation across the globe with 16 exchanges and companies from 19 countries. There is great excitement about the opportunities technology is bringing to all industries as is evident from the strong investor enthusiasm for IPOs of technology companies."*

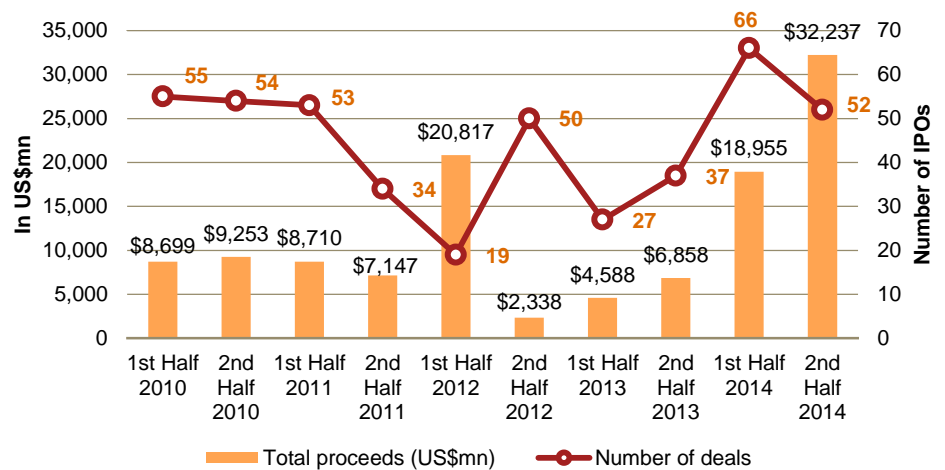
**–Raman Chitkara**  
Global Technology Industry Leader, PwC

## Driven by Alibaba, the second half of 2014 surged

Proceeds raised in the second half of 2014 jumped almost 70% to US\$32.2bn from US\$19.0bn in the first half due to the Alibaba IPO which contributed 68% (US\$21.8bn) of second-half proceeds. Though the second half saw a 21% pullback in the number of deals, with 52 versus 66 in the first half, the fourth quarter surge of 34 technology IPOs made a clear statement about the health of the global tech IPO market and the excitement introduced by Alibaba's IPO.

With the US economy continuing to strengthen, Europe making bold moves on quantitative easing and many of the developing economies refocusing on growth after changes in political leadership, the year 2015 promises to be another good year for technology IPOs.

Figure 2: 2010-2014 – 1st half vs 2nd half

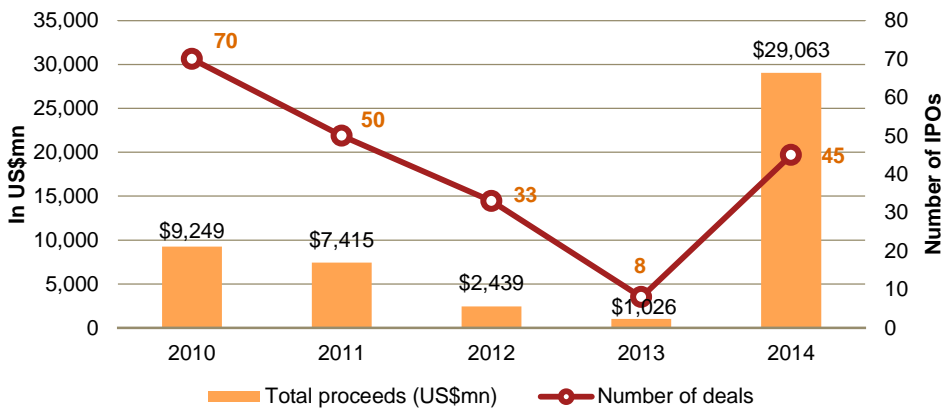


Source: Dealogic with analysis by PwC.

## Chinese technology IPOs return in 2014

Chinese technology IPOs accounted for 38% of the volume in 2014, compared to 13% in 2013, and 57% of the proceeds compared to 9% in 2013. The resurgence of Chinese IPOs was due to the lifting of the freeze by the China Securities Regulatory Commission (CSRC). Chinese exchange listings accounted for 29% of the volume in 2014 compared to zero deals in 2013. However, the world's biggest IPO, Alibaba.com, listed on the NYSE, a clear recognition of deep liquidity of the US capital markets and greater freedom allowed by them as it relates to structuring multiple classes of shareholders.<sup>1</sup> Looking forward, it is expected we will continue to see some Chinese companies list on US exchanges, but also anticipate a return to the robust technology IPO market seen in China during 2009 through 2011.

**Figure 3: 2010-2014 Full-year Chinese technology IPOs**



Source: Dealogic with analysis by PwC.

*"Alibaba is a huge inspiration for Chinese technology companies to capture a higher market valuation. The large number of China tech IPOs in 2014 has also boosted the confidence of private equity investors and venture capitalists which led to healthy US dollar-denominated fundraising by technology companies in the Chinese market."*

**– Jianbin Gao**  
Technology Industry Leader,  
PwC China

<sup>1</sup> <http://www.ft.com/intl/cms/s/0/c96004f8-2d25-11e4-911b00144feabdco.html#axzz3PLAgTBcu>



*"Although you probably have noticed a bit of volatility in the European market in 2014, we continue to see healthy investor interest as the economy recovers. This is especially true for the technology sector where a number of thriving startup centers, such as Berlin, have developed."*

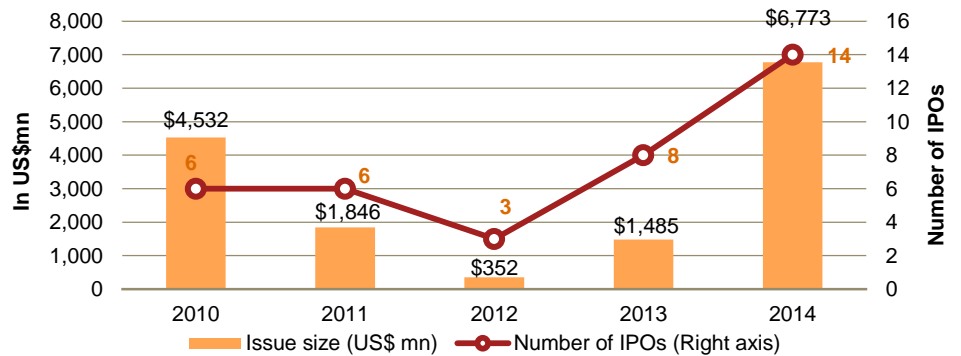
**– Werner Ballhaus**  
European Technology Industry Leader, PwC Germany

### Europe and Japan make a comeback despite difficult market conditions

The European technology IPO market made a comeback in 2014, raising US\$6.8bn from 14 offerings, compared to US\$1.5bn from eight offerings in 2013. During the period 2010-2012, Europe had been a witness to falling proceeds and listings, but this trend started reversing in 2013 and accelerated in 2014.

The UK was the leading country seeing seven deals with total proceeds of US\$3.3bn (48%). The European region witnessed participation from a total of eight countries (Belgium, France, Germany, Ireland, Luxembourg, Netherlands, Norway and the UK) compared to five countries (France, Germany, Luxembourg, Switzerland and the UK) in 2013.

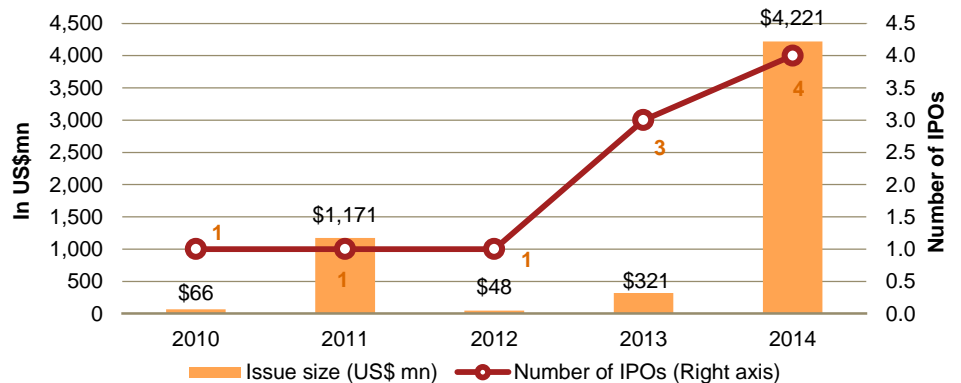
**Figure 4: 2010-2014 Full-year European technology IPOs**



Source: Dealogic with analysis by PwC.

Japan had four technology IPOs raising US\$4.2bn, compared to three deals raising US\$321mn in 2013. The largest deal was Japan Display Inc, which raised proceeds of US\$3bn in the first quarter of 2014.

**Figure 5: 2010-2014 Full-year Japanese technology IPOs**



Source: Dealogic with analysis by PwC.

---

## **E-commerce growth and innovation have kept Internet Software & Services and Software ahead of all**

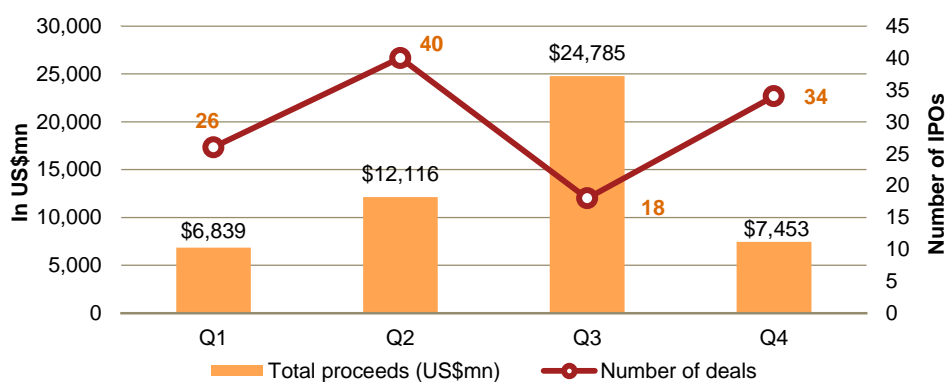
From the subsector perspective, the Internet Software & Services and Software subsectors together have raised the highest proceeds, contributing 79% of the total proceeds and 69% of the total deals, as compared to 64% of the proceeds and 66% of deals in 2013. The two subsectors have consistently held their place in the last five years, driven by the rapid increase in e-commerce and innovations in mobile and social. Given the growth in the digital economy, it is expected that these two sectors will remain the favorites for some time to come.

# Full-year 2014 technology IPO summary

The global technology IPO market in 2014 was the best in the last ten years, with 118 IPOs raising US\$51.2bn in proceeds. This year witnessed the big ticket IPO of Alibaba.com worth US\$21.8bn, though even without this deal, total proceeds raised by 117 listings were worth US\$29.4bn—the highest in the past five years. Q4 2014 saw a jump of 89% in the number of listings to 34 against 18 offerings in Q3 2014.

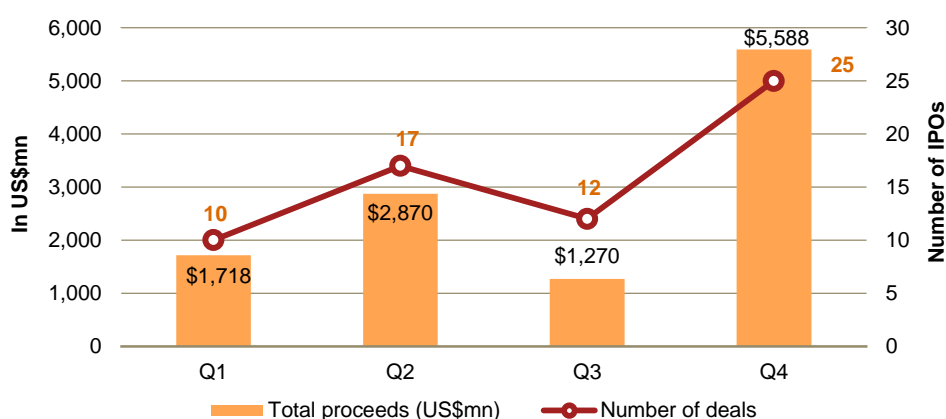
Proceeds raised declined, primarily due to inclusion of Alibaba's IPO proceeds in Q3. Excluding Alibaba from Q3 2014 numbers, Q4 2014 experienced a 150% rise in proceeds from US\$3bn in Q3 to US\$7.5bn in Q4.

Figure 6: 2014 Global technology IPOs



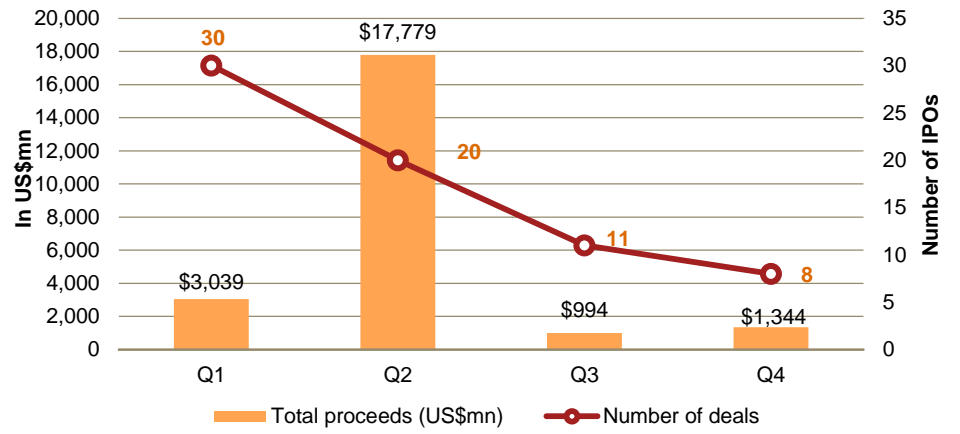
Source: Dealogic with analysis by PwC.

Figure 7: 2013 Global technology IPOs



Source: Dealogic with analysis by PwC.

Figure 8: 2012 Global technology IPOs



Source: Dealogic with analysis by PwC.

## Geographic distribution

In 2014, technology IPOs witnessed the broadest geographic participation of the last five years. Nineteen countries were represented in 2014 compared to 15 in 2010, 11 in 2011, just 6 in 2012 and 16 in 2013.

China's re-emergence marked the biggest change in year-over-year activity. With 45 listings and proceeds worth US\$29.1bn in 2014, China surpassed its 2013 figures fourfold (463%) in the number of issues (8) and by 28 times in proceeds (US\$1bn). Until 2013, the best year for China in terms of proceeds and number of technology IPOs was 2010. Chinese companies raised US\$9.2bn from 70 deals in 2010. However, beyond 2010, proceeds from IPOs, and the number of technology companies going public declined the next three years. In 2014, China raised the highest proceeds in five years, mainly driven by the IPO of Alibaba.

The US was in second place in 2014 with 37 deals and proceeds worth US\$7.9bn. Compared to 2013, the growth in number of deals was 6% from 35 deals, while proceeds grew by 3% from US\$7.5bn. In the last five years, the US has experienced consistent growth in technology IPOs.

During the period 2010 to 2014, US technology companies raised proceeds worth US\$42.8bn from 147 deals, while Chinese technology companies raised US\$49.2bn from 206 deals. The average deal size of US IPOs was 22% larger than that of the Chinese IPOs.

The UK also joined the 'billion league' in 2014 with proceeds of US\$3.3bn from seven deals. The UK alone contributed 48% of total proceeds raised by European companies. In 2013, the UK raised only US\$730mn from four deals. The other European countries participating in 2014 were Belgium, France, Germany, Ireland, Luxembourg, the Netherlands and Norway, which helped Europe reach total proceeds worth US\$6.8bn.

Japan contributed four IPOs with total proceeds of US\$4.2bn, compared to three listings worth US\$321mn in 2013. The two largest offerings in Japan were Japan Display Inc (US\$3bn) and Hitachi Maxell Ltd (US\$706mn). Both IPOs were listed on the Tokyo Stock Exchange in Q1 2014, when investor confidence was strong.<sup>2</sup>

South Korea and Israel also raised over a billion in proceeds with three and four listings raising US\$1.2bn and US\$1.1bn, respectively. Seven technology companies went public from Australia (4) and New Zealand (3), raising US\$336mn and US\$259mn, respectively.

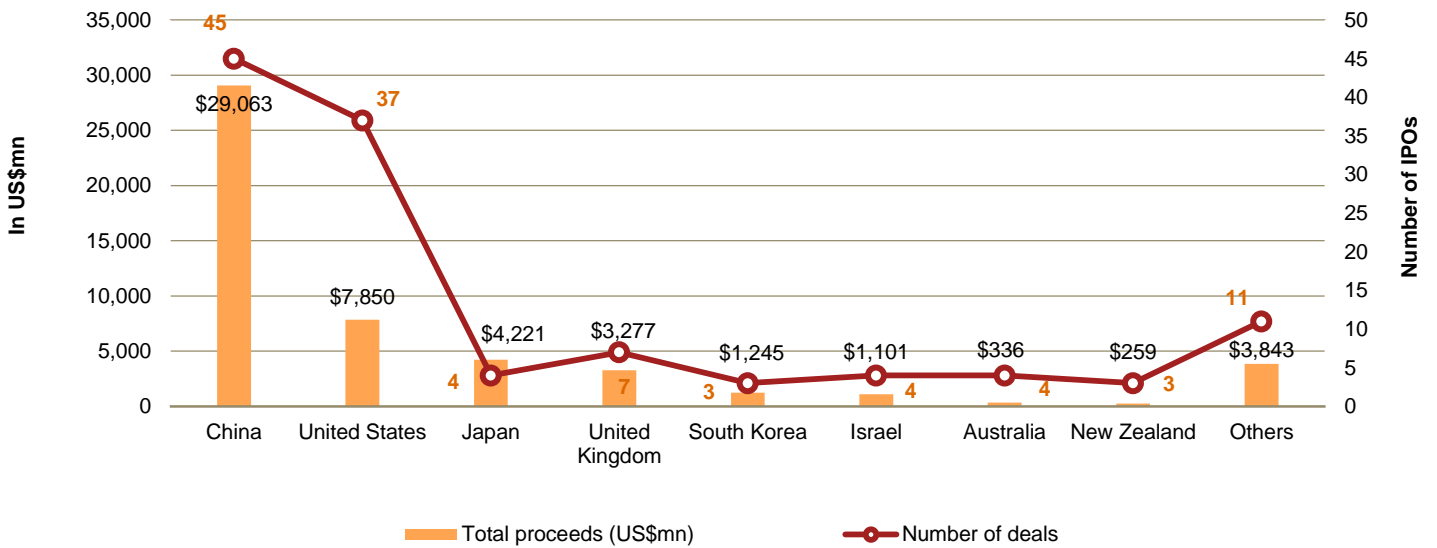
Other countries with one IPO each were Germany (US\$2bn), France (US\$782mn), Ireland (US\$500mn), the Netherlands (US\$188mn), Malaysia (US\$169mn), Norway (US\$107mn), Belgium (US\$96mn), Canada (US\$92mn), Luxembourg (US\$59mn), South Africa (US\$44mn) and Indonesia (US\$42mn).

*“The UK tech market continues to produce good, credible IPO candidates and the pipeline remains strong. Further, the IPOs have been focused on retail, consumer and ‘fintech’, confirming that the UK is a leading tech country for consumer adoption of new technologies.”*

*– Jass Sarai  
Technology Industry  
Leader, PwC UK*

<sup>2</sup> <http://www.cnbc.com/id/101978396>

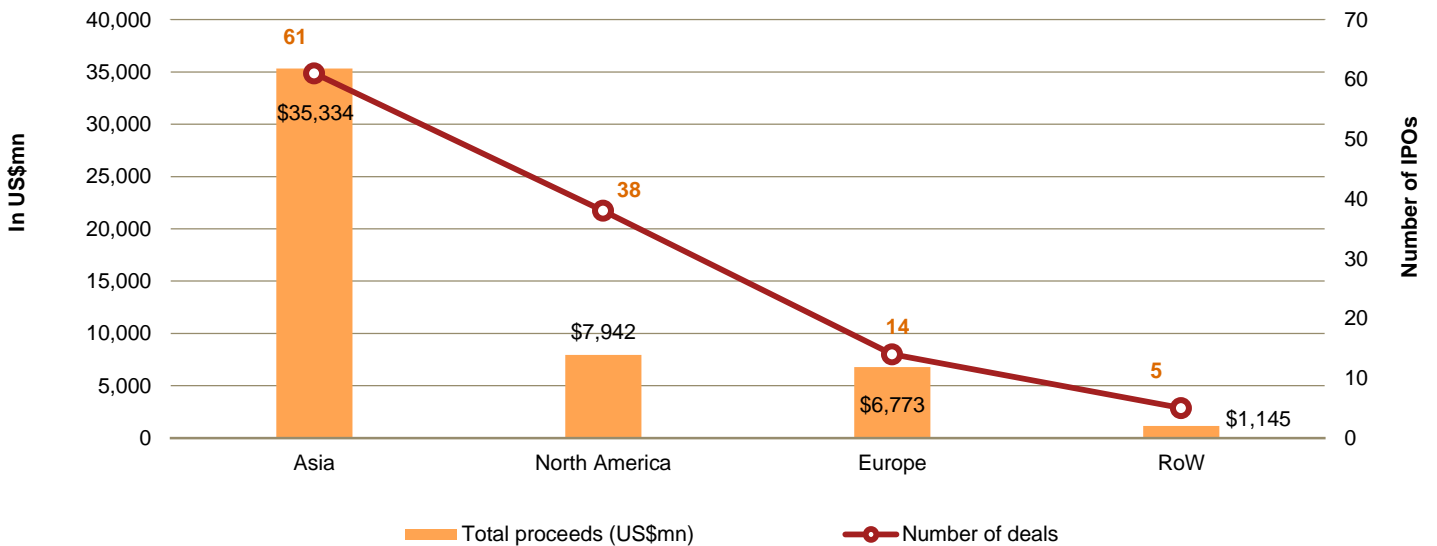
**Figure 9: Full-year 2014 technology IPOs – Geographic distribution**



Source: Dealogic with analysis by PwC.

Looking at the distribution by region, Asia was the clear leader in 2014 with 61 IPOs and US\$35.3bn in proceeds. Almost three times as many technology companies from North America went public compared to Europe, but proceeds were just 17% higher.

**Figure 10: Full-year 2014 technology IPOs – Regional distribution**

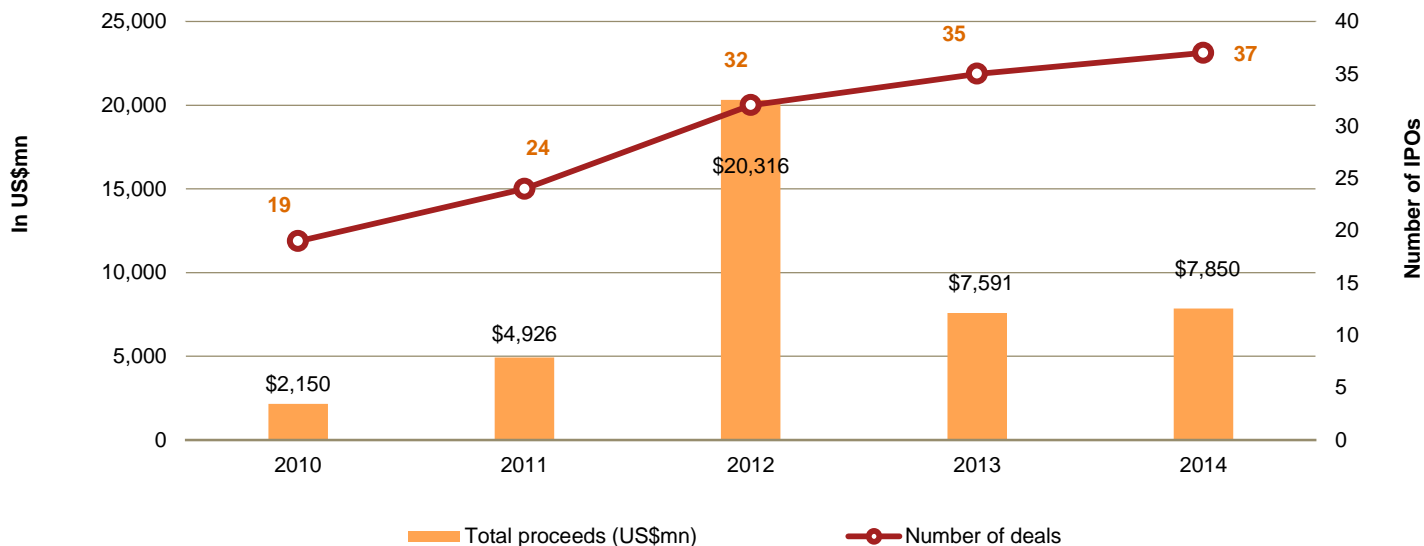


Source: Dealogic with analysis by PwC.

*"The US technology IPO market continues to be a leader in both number and volume of listings led by e-commerce, SaaS and cloud-based technology offerings. Looking ahead into 2015, the IPO pipeline remains strong indicating significant growth opportunities and momentum."*

**–Alan Jones**  
Deals Partner, PwC US

**Figure 11: 2010-2014 US technology IPOs**

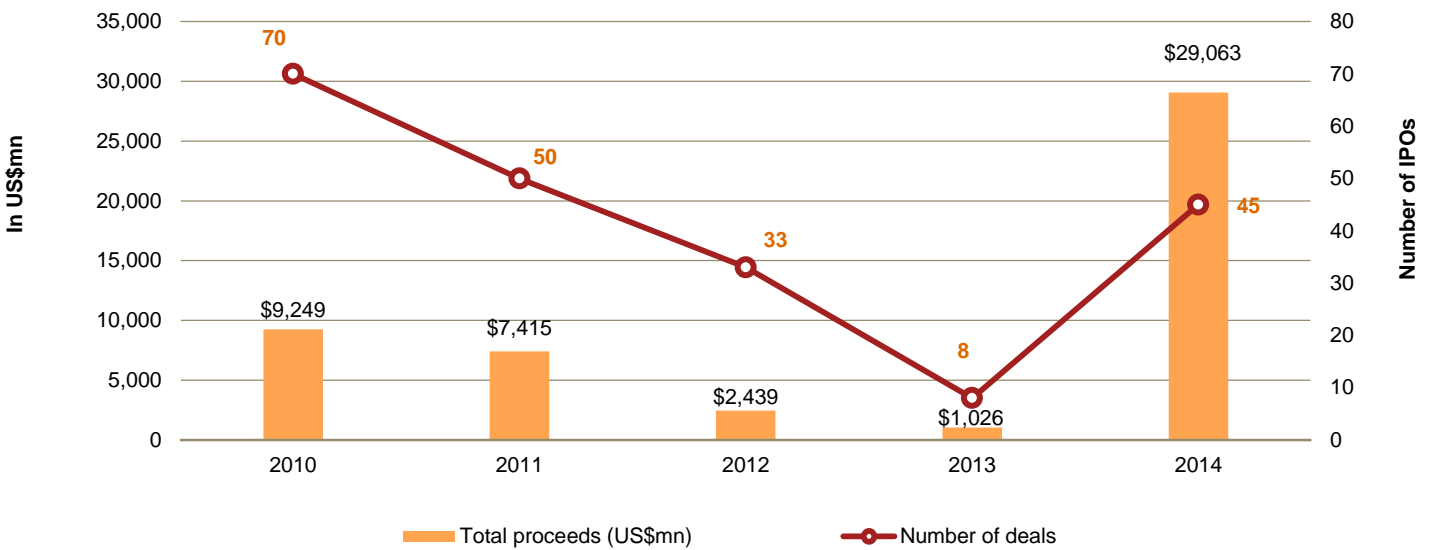


Source: Dealogic with analysis by PwC.

*"The volatility of the Chinese capital markets, capricious changes in policy, and complex listing issues have led to many Chinese tech companies favoring US stock exchanges over Chinese domicile exchanges in 2014. However, with the successful launch of the Shanghai-Hong Kong Connect Program in November 2014, Chinese stock markets have become more competitive and should do well in 2015."*

**– Jianbin Gao**  
*Technology Industry Leader,  
 PwC China*

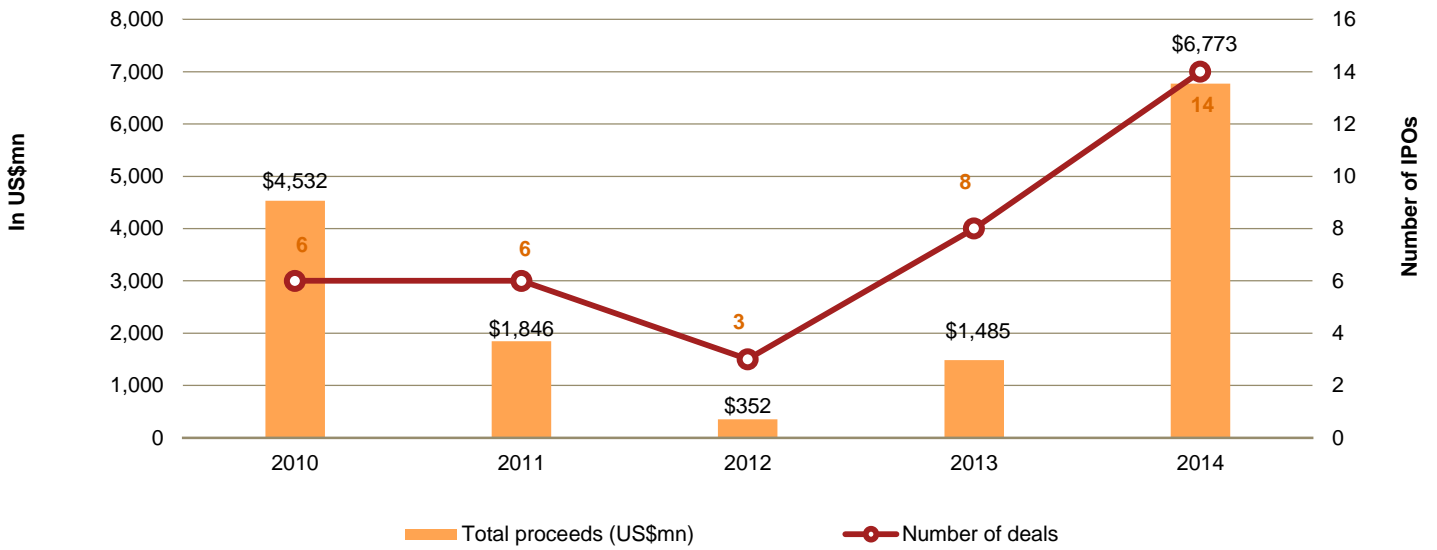
**Figure 12: 2010-2014 Chinese technology IPOs**



Source: Dealogic with analysis by PwC.

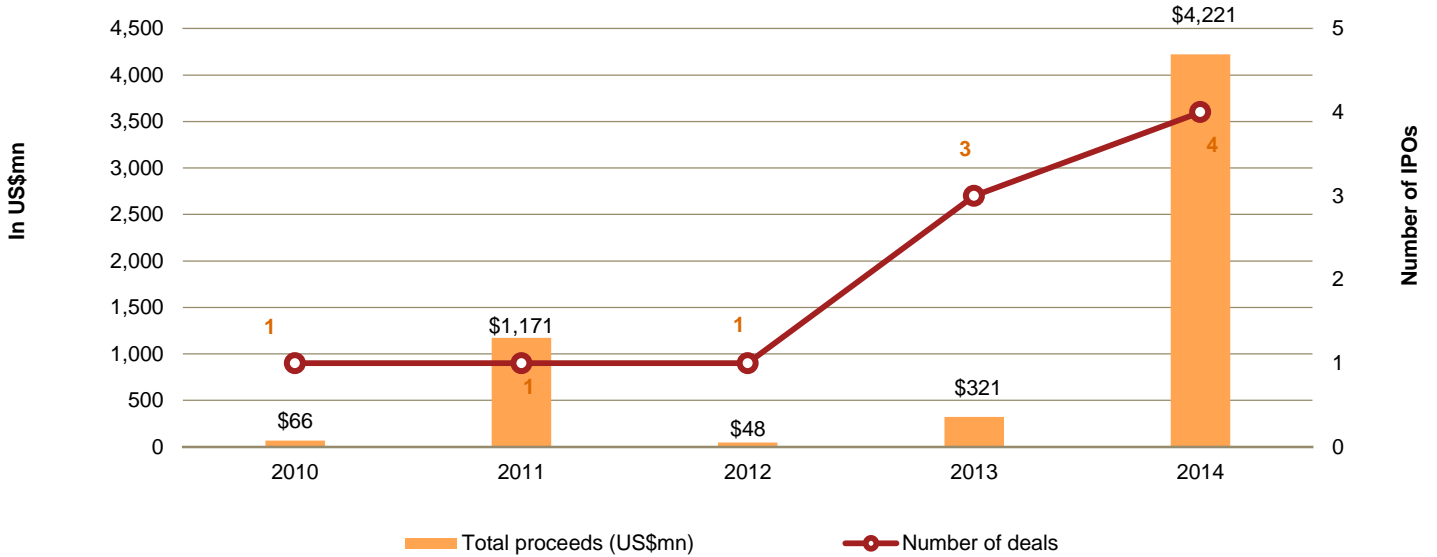


**Figure 13: 2010-2014 European technology IPOs**



Source: Dealogic with analysis by PwC.

**Figure 14: 2010-2014 Japanese technology IPOs**



Source: Dealogic with analysis by PwC.

---

## Subsector distribution

Internet Software & Services led the subsectors in 2014 with 47 deals raising US\$33.5bn. It was the most active sector during the year, contributing 65% of total proceeds and 40% of total listings as compared to 43% of the proceeds and 38% of total listings in 2013. The sector was primarily boosted by Alibaba's IPO which raised the highest proceeds in history. Excluding Alibaba, Internet Software & Services was still the highest in the group with proceeds of US\$11.7bn.

The Software subsector has been maintaining its position as the second most important technology subsector after Internet Software & Services. It raised US\$7.1bn from 35 deals in 2014. The subsector contributed 14% of total proceeds and 30% of the total listings in 2014, compared to 21% of the proceeds and 28% of the listings in 2013. The largest IPO in this sector was Markit Ltd from the UK which raised US\$1.2bn, while the smallest listing was Cartrack Holdings Limited from South Africa which raised US\$44mn.

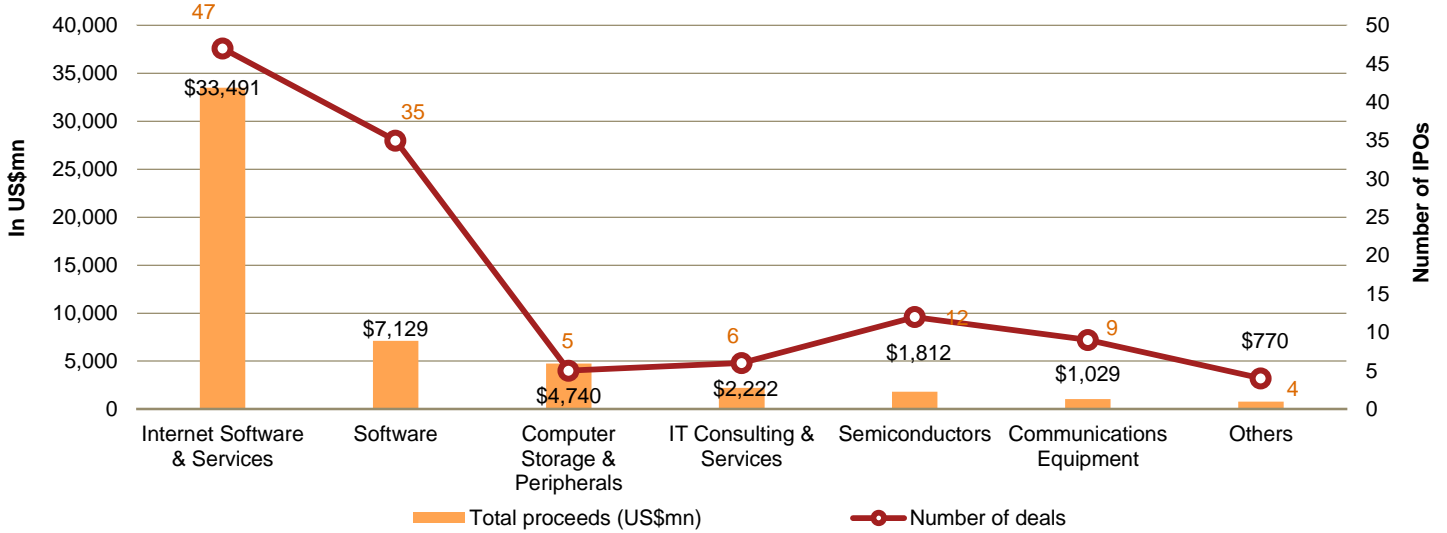
Computer Storage & Peripherals demonstrated marked improvement in proceeds in 2014, but not in volume. The subsector raised US\$4.7bn from five deals compared to US\$1.6bn from eight deals in 2013. A reflection of the market at large, the subsector continues to struggle, posting no deals during Q4 2014. It accounted for 9% of the total proceeds and 4% of the total deals during the year. Japan Display Inc from Japan raised the highest proceeds of US\$3.1bn, while Hubei Feilihua Quartz Glass Co Ltd from China was the smallest IPO in the sector, raising US\$50mn.

IT Consulting & Services improved in 2014 with proceeds of US\$2.2bn from six deals compared to US\$538mn from three deals in 2013. The subsector accounted for 4% of the total proceeds and 5% of total listings. IMS Health Holdings Inc from the US raised the highest proceeds of US\$1.4bn, while Citadel Group Ltd had the smallest issue of US\$41mn.

Semiconductors made a comeback in 2014 due in large part to the reopening of the Chinese IPO market. The subsector raised US\$1.8bn and had 12 listings during the year, compared to US\$308mn from four listings in 2013. Of the 12 listings, 10 were Chinese companies that listed in China. The subsector accounted for 4% of the total proceeds and 10% of the total listings in 2014. Hua Hong Semiconductor Ltd from China raised the highest proceeds of US\$332mn, while Jiangsu Pacific Quartz Co Ltd had the smallest issue of US\$59mn.

Communications Equipment was the only sector which witnessed a drop in total proceeds in 2014 when compared to 2013. The subsector raised total proceeds of US\$1.1bn from nine listings during the current year, while in 2013 it raised US\$1.5bn from five listings. In 2014, it accounted for 2% of the total proceeds raised and 8% of the total listings. The average deal size of the subsector declined by 62% in 2014 compared to 2013. The largest deal was from Arista Networks Inc from the US which raised US\$226mn, while the smallest deal was of Link Net PT of Indonesia which raised US\$42mn.

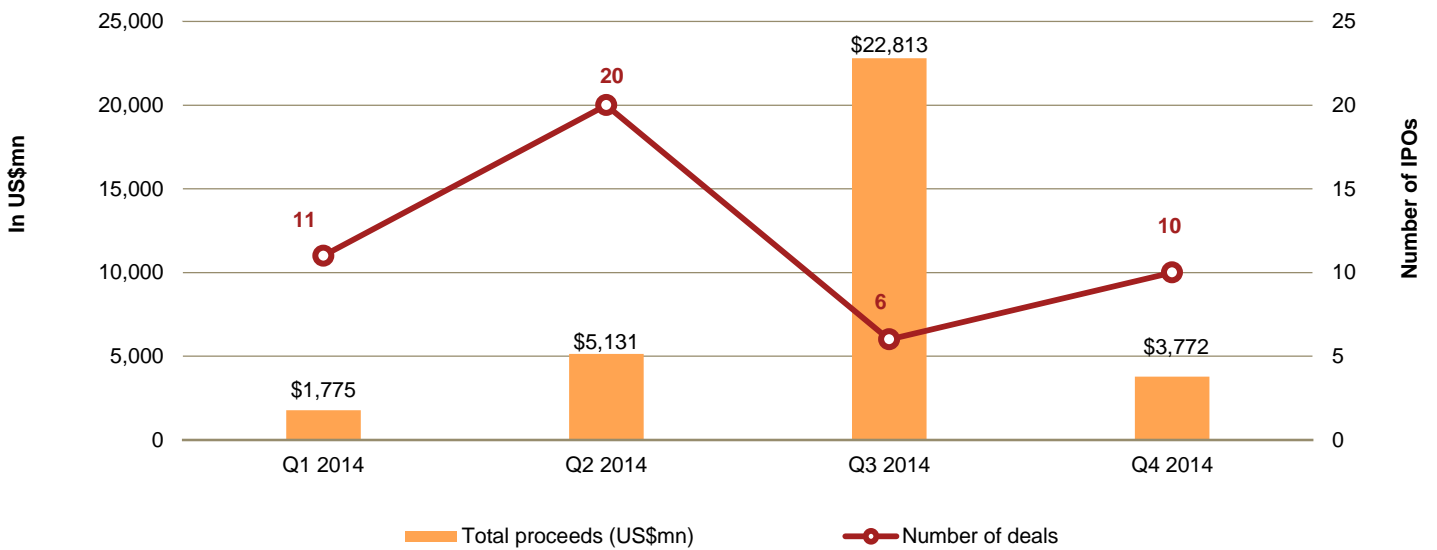
**Figure 15: Full-year 2014 subsector distribution**



Source: Dealogic with analysis by PwC.

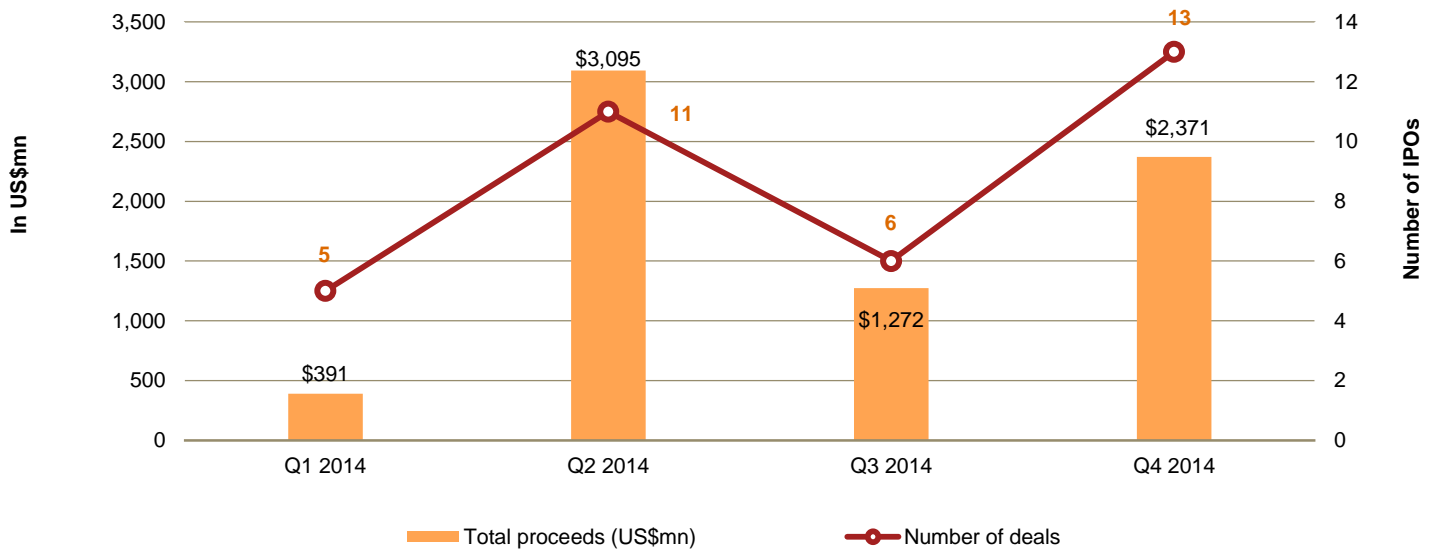
### Quarterly summary by subsector

**Figure 16: Full-year 2014 Internet Software & Services IPOs**



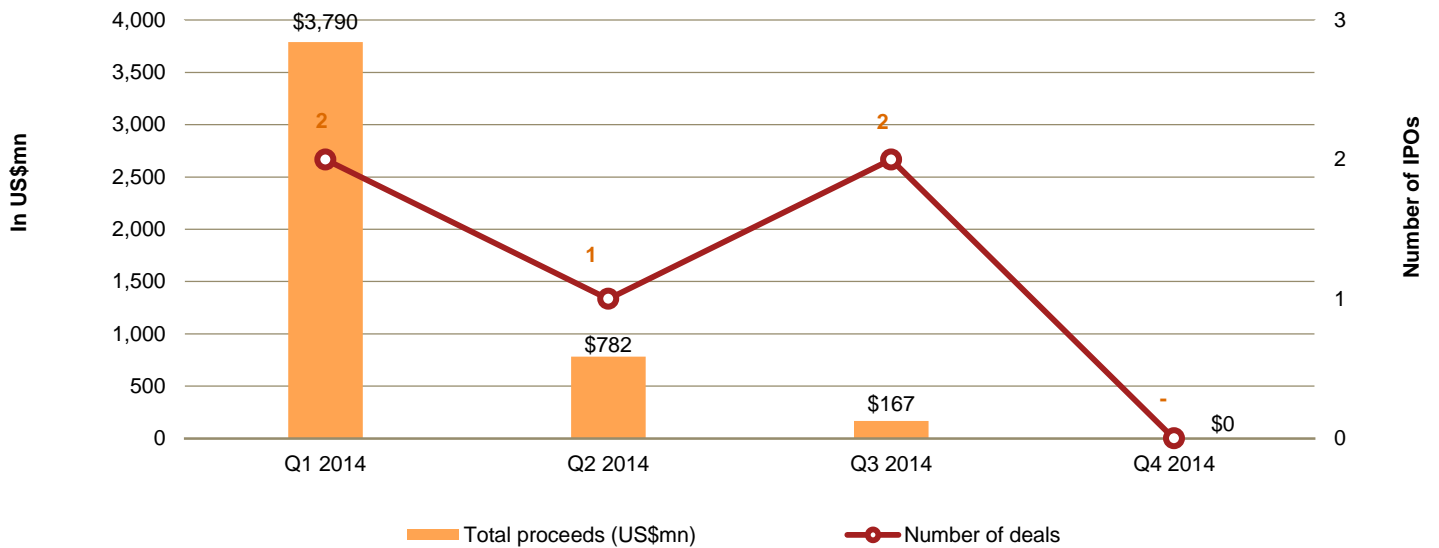
Source: Dealogic with analysis by PwC.

Figure 17: Full-year 2014 Software IPOs



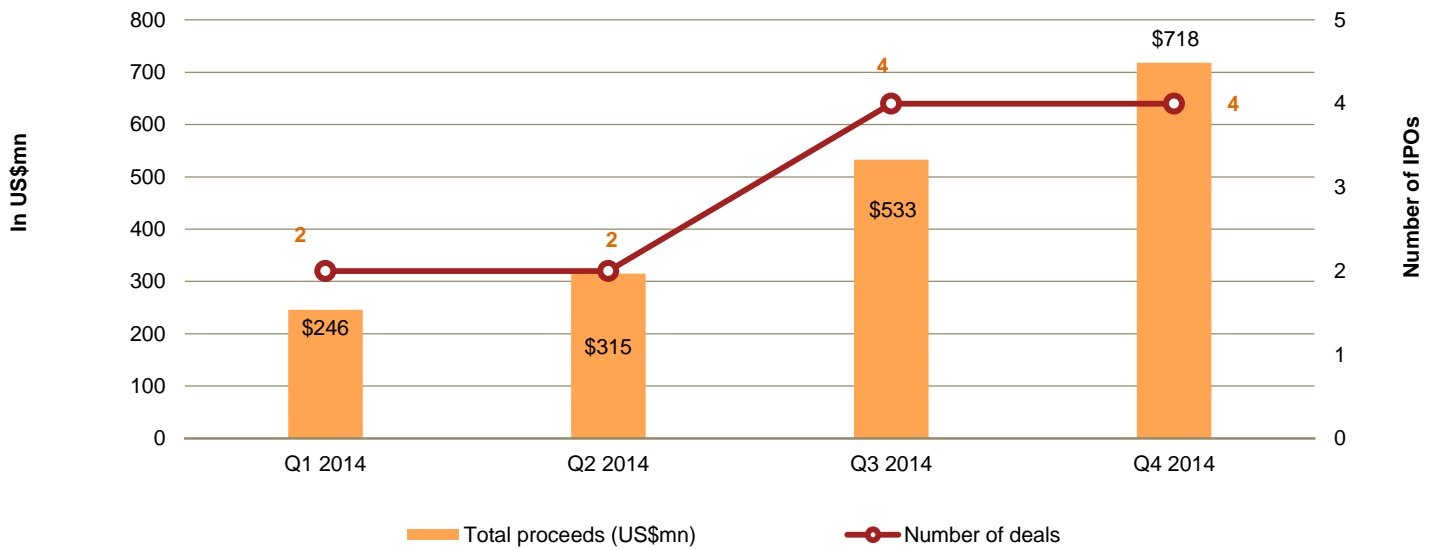
Source: Dealogic with analysis by PwC.

Figure 18: Full-year 2014 Computer Storage & Peripherals IPOs



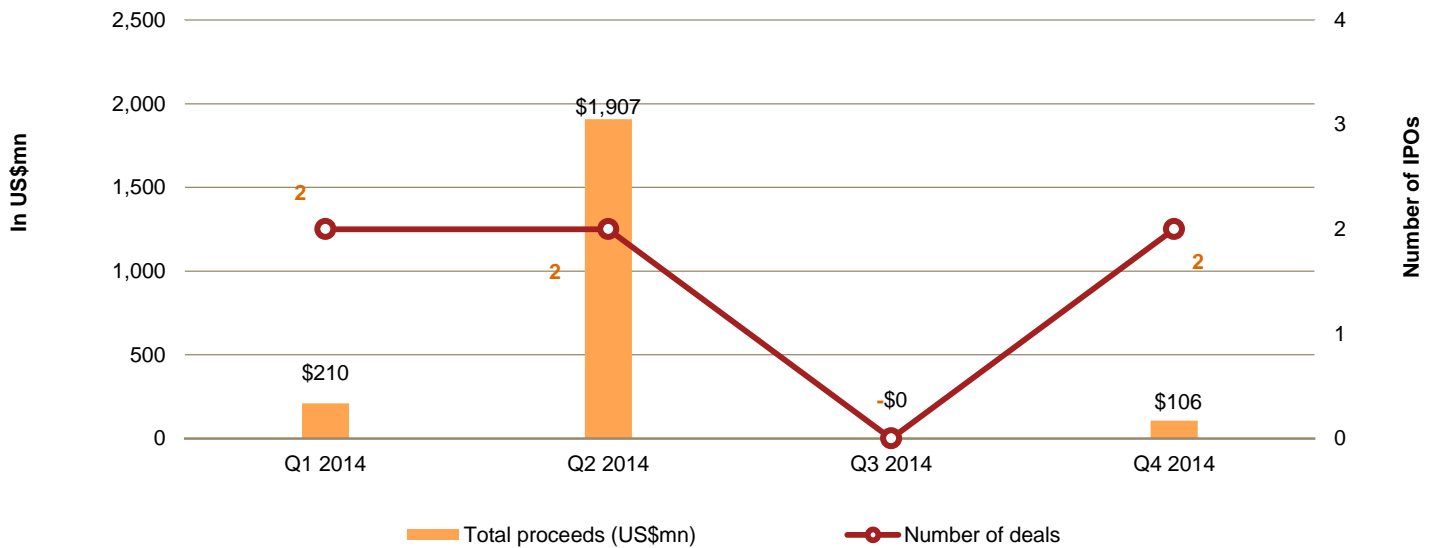
Source: Dealogic with analysis by PwC.

Figure 19: Full-year 2014 Semiconductor IPOs



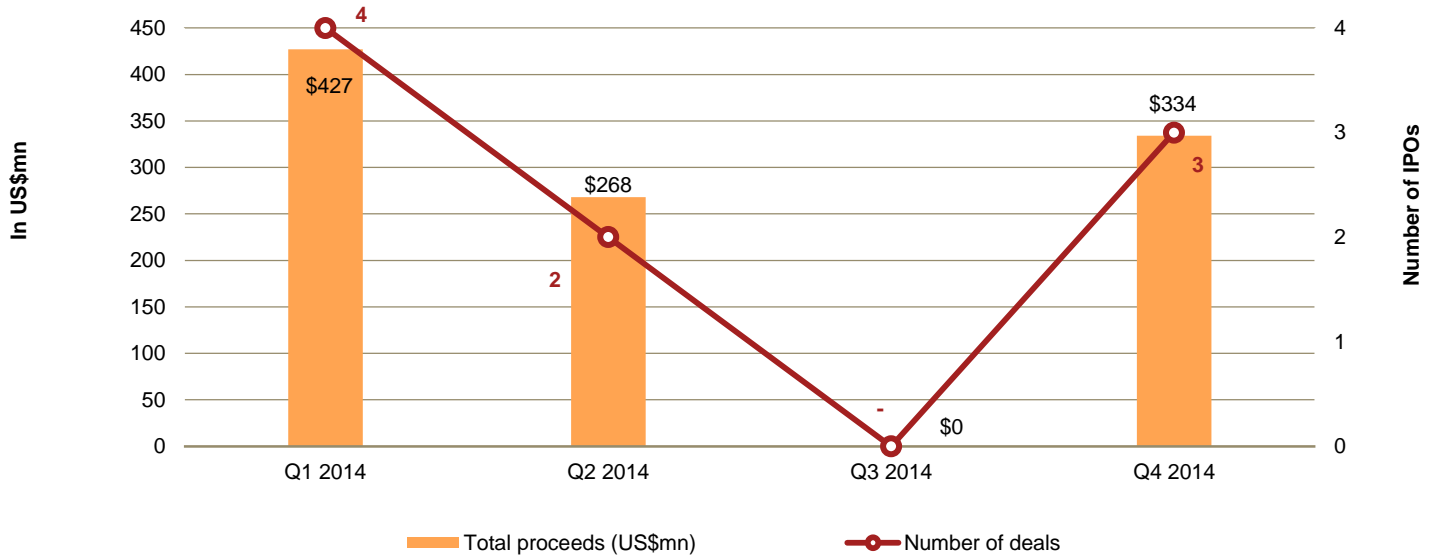
Source: Dealogic with analysis by PwC.

Figure 20: Full-year 2014 IT Consulting & Services IPOs



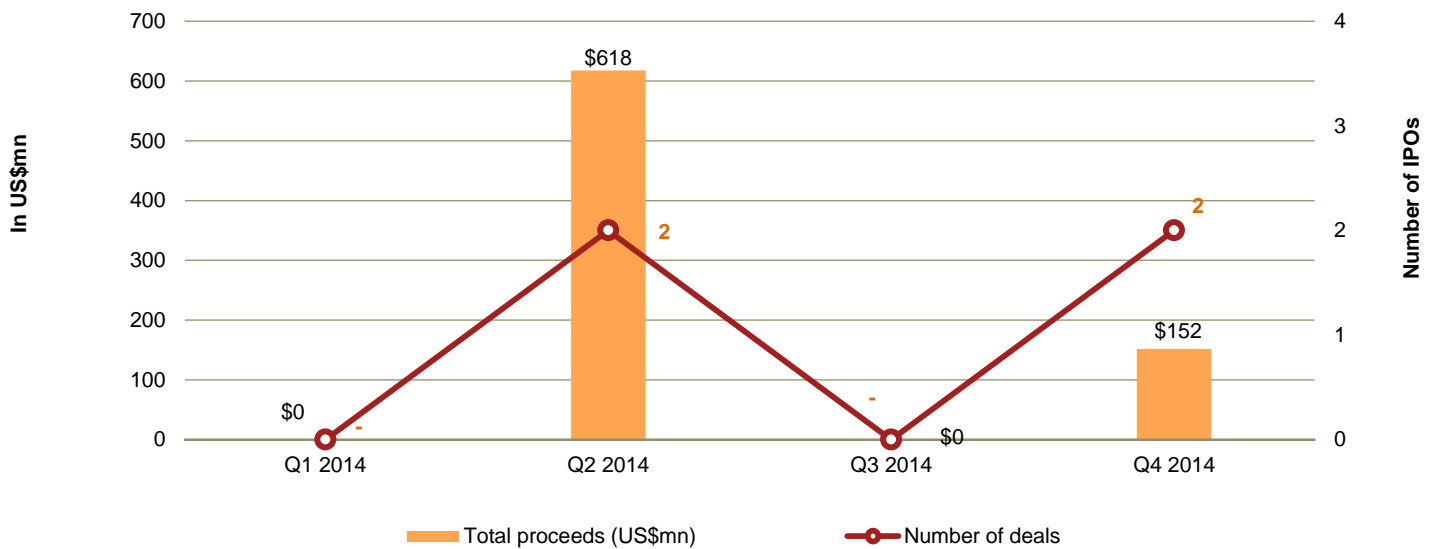
Source: Dealogic with analysis by PwC.

Figure 21: Full-year 2014 Communications Equipment IPOs



Source: Dealogic with analysis by PwC.

Figure 22: Full-year 2014 other subsector IPOs



Source: Dealogic with analysis by PwC.

## Stock exchange distribution

US exchanges (NYSE and NASDAQ) accounted for 71% of the total proceeds and 47% of the total listings in 2014. This was lower than 2013 when the exchanges accounted for 80% of the total proceeds and 70% of the total listings. As noted earlier, the reopening of China's IPO market was the primary factor impacting the decline in US share. The US exchanges together accounted for US\$36.1bn and the NYSE listed the big ticket IPO of Alibaba. The NYSE surpassed NASDAQ in both proceeds and number of listings and accounted for 81% of the proceeds and 54% of the listings in the US.

The NYSE alone raised US\$29.4bn from 30 listings, while proceeds from NASDAQ were US\$6.8bn from 26 listings. In addition, 27% of the offerings listed on the NYSE were non-US companies (8) compared to 22% (6) in 2013, while 42% of the companies listed on NASDAQ in 2014 were non-US companies (11). The average deal size in the US exchanges was US\$645mn.

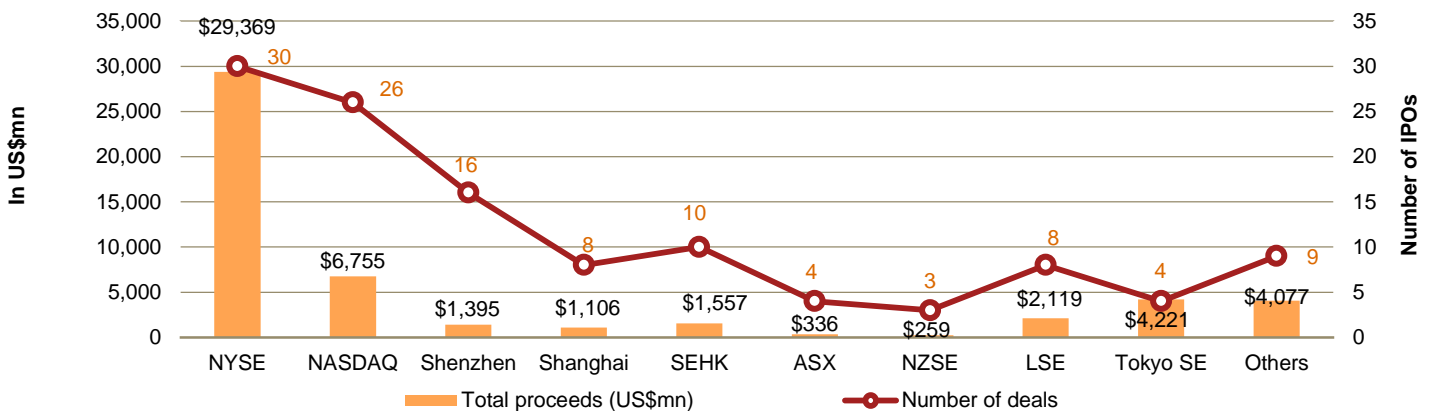
Over the last five years (2010-2014), the number of listings has been gradually rising on the NYSE while that of NASDAQ has been falling. In 2012, the NYSE overtook NASDAQ in terms of volume (18 technology company listings versus 16) and in 2013 it surpassed NASDAQ in both volume and proceeds.

The US exchanges surpassed the Chinese exchanges (Shenzhen, Shanghai and Hong Kong) in both volume and proceeds in 2014. Together, the Chinese exchanges raised US\$4.1bn from 34 listings. Compared to the US exchanges, the Chinese exchanges saw smaller IPOs with an average deal size of US\$119mn, whereas the US exchanges had an average deal size of US\$645mn. The Hong Kong exchange accounted for 38% of total proceeds raised in China, which was the highest among the three Chinese exchanges. The Shenzhen exchange accounted for the highest deal volume, contributing 47% of all listings in the Chinese exchanges. No foreign companies listed in China in 2014.

The London AIM raised US\$2.1bn from eight listings in 2014, compared to US\$730mn from four listings in 2013. The first half of the year for European exchanges was positive due in part to US capital investment in European equities.

The Tokyo Stock Exchange, too, showed resilience in 2014 with proceeds of US\$4.2bn from four listings. Though the Japanese economy continues to struggle and officially re-entered recession in the third quarter of 2014<sup>3</sup>, the technology IPO market of Japan bucked the trend. Three of the four listings were listed in the first half of 2014, when investor confidence was higher. Only one deal listed in December 2014.

Figure 23: 2014 Stock exchange distribution



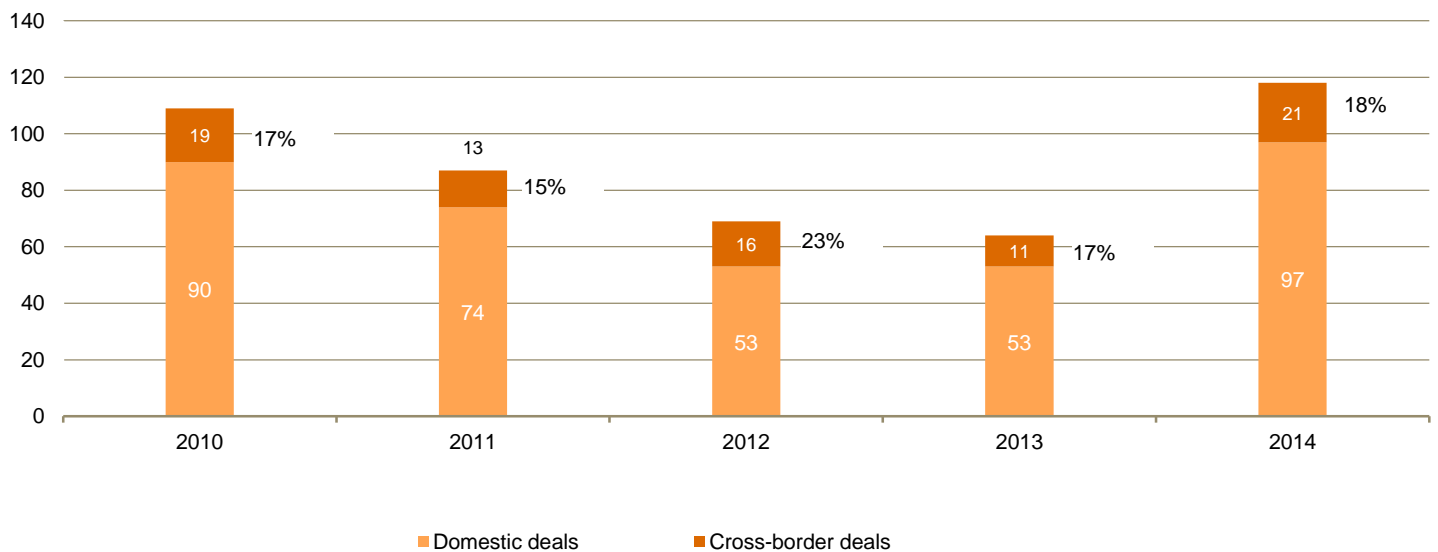
Source: Dealogic with analysis by PwC.

<sup>3</sup> [http://www.nytimes.com/2014/11/17/business/international/defying-expectations-japans-economy-shrinks-further.html?\\_r=0](http://www.nytimes.com/2014/11/17/business/international/defying-expectations-japans-economy-shrinks-further.html?_r=0)

## Cross-border listings

Cross-border listings in 2014 constituted 18% of the total, with 21 offerings listing on foreign exchanges. The percentage of cross-border listings rose in 2012 (23%) due to the CSRC action in China, but in 2013 (17%) and 2014 (18%), it returned to prior levels as Chinese tech companies were not forced to seek out alternate exchanges. Of the 21 cross-border listings in 2014, 52% of the listings were Chinese companies listing on US exchanges (NYSE and NASDAQ). Israel was the next highest with 19% (4) of the listings. Two of Israel's companies listed on the NYSE and NASDAQ, while the other two companies listed on the London exchange. Other cross-border listings included Belgium, Luxembourg, Malaysia, the Netherlands and the UK with one deal each. The US exchanges were the preferred destination garnering 90% (19) of the cross-border listings.

Figure 24: 2010–2014 Cross-border listings



Source: Dealogic with analysis by PwC.



## Technology IPO listing detail

Table 1: 2014 IPOs – By issue date

Issue date	Company	Sector	Proceeds (US\$ mn)	Primary exchange	Domicile nation
<b>Q1</b>					
01/21/2014	Guangdong Qtone Education Co Ltd	Internet Software & Services	82	Shenzhen	China
01/23/2014	Beijing Forever Technology Co Ltd	Software	86	Shenzhen	China
01/23/2014	Yangzhou Yangjie Electronic Technology Co Ltd	Semiconductors	66	Shenzhen	China
01/24/2014	Care.com, Inc	Internet Software & Services	91	NYSE	United States
01/27/2014	DigiWin Software Co Ltd	Software	103	Shenzhen	China
01/27/2014	Shenzhen Ysstech Info-Tech Co Ltd	Software	49	Shenzhen	China
01/27/2014	Sichuan Troy Information Technology Co Ltd	Communications Equipment	43	Shenzhen	China
01/28/2014	Shanghai Amarsoft Information Technology Co Ltd	IT Consulting & Services	67	Shenzhen	China
01/28/2014	Beijing Tongtech Co Ltd	Software	47	Shenzhen	China
01/29/2014	NSFOCUS Information Technology Co Ltd	IT Consulting & Services	143	Shenzhen	China
01/29/2014	NetPosa Technologies, Ltd	Communications Equipment	121	Shenzhen	China
02/10/2014	China Wafer Level CSP Co Ltd	Semiconductors	180	Shanghai	China
02/28/2014	Varonis Systems, Inc	Software	106	NASDAQ	United States
03/07/2014	Coupons.com, Inc	Internet Software & Services	168	NYSE	United States
03/14/2014	Castlight Health, Inc	Internet Software & Services	178	NYSE	United States
03/18/2014	Hitachi Maxell Ltd	Computer Storage & Peripherals	706	Tokyo SE	Japan
03/19/2014	Japan Display, Inc	Computer Storage & Peripherals	3,084	Tokyo SE	Japan
03/19/2014	Paylocity Holding Corp	Internet Software & Services	120	NASDAQ	United States
03/20/2014	Q2 Holdings, Inc	Internet Software & Services	101	NYSE	United States
03/21/2014	A10 Networks, Inc	Communications Equipment	188	NYSE	United States
03/21/2014	Amber Road, Inc	Internet Software & Services	96	NYSE	United States
03/21/2014	Borderfree, Inc	Internet Software & Services	80	NASDAQ	United States
03/26/2014	King Digital Entertainment Plc	Internet Software & Services	500	NYSE	Ireland
03/27/2014	TriNet Group, Inc	Internet Software & Services	240	NYSE	United States
03/28/2014	2U, Inc	Internet Software & Services	119	NASDAQ	United States
03/28/2014	Aerohive Networks, Inc	Communications Equipment	75	NYSE	United States
<b>Q2</b>					
04/01/2014	The Rubicon Project, Inc	Internet Software & Services	102	NYSE	United States
04/03/2014	IMS Health Holdings Inc	IT Consulting & Services	1,495	NYSE	United States
04/03/2014	GrubHub Inc	Internet Software & Services	221	NYSE	United States
04/03/2014	Opower Inc	Software	133	NYSE	United States
04/03/2014	Five9 Inc	Internet Software & Services	81	NASDAQ	United States
04/03/2014	JUST EAT Plc	Internet Software & Services	597	LSE	United Kingdom
04/09/2014	BAIOO Family Interactive Limited	Internet Software & Services	196	SEHK	China
04/14/2014	Paycom Software Inc	Internet Software & Services	115	NYSE	United States
04/16/2014	Sabre Corp	Software	721	NASDAQ	United States
04/16/2014	Weibo Corp	Internet Software & Services	328	NASDAQ	China
04/16/2014	Leju Holdings Limited	Internet Software & Services	100	NYSE	China
05/07/2014	Cheetah Mobile Inc	Software	193	NYSE	China
05/08/2014	Tuniu Corp	Internet Software & Services	83	NASDAQ	China

Issue date	Company	Sector	Proceeds (US\$ mn)	Primary exchange	Domicile nation
<b>Q2</b>					
05/13/2014	Link Net PT	Communications Equipment	42	JKSE	Indonesia
05/14/2014	Zendesk Inc	Software	115	NYSE	United States
05/15/2014	TrueCar Inc	Internet Software & Services	80	NASDAQ	United States
05/16/2014	Jumei International holding Ltd	Internet Software & Services	245	NYSE	China
05/21/2014	SunEdison Semiconductor Ltd	Semiconductors	94	NASDAQ	United States
05/21/2014	JD.com, Inc	Internet Software & Services	1,780	NASDAQ	China
05/22/2014	Marimedia Ltd	Software	50	LSE	Israel
06/03/2014	Kinaxis Inc	Internet Software & Services	92	TSX	Canada
06/05/2014	Arista Networks, Inc	Communications Equipment	226	NYSE	United States
06/06/2014	Game Digital Plc	Software	203	LSE	United Kingdom
06/06/2014	Gentrack Group Ltd	Software	84	NZSE	New Zealand
06/11/2014	MobileIron Inc	Software	100	NASDAQ	United States
06/11/2014	Zhaopin Ltd	Internet Software & Services	76	NYSE	China
06/16/2014	Feitian Technologies Co Ltd	Electronics	126	Shanghai	China
06/17/2014	FDM Group(Holdings)PLC	IT Consulting & Services	412	LSE	United Kingdom
06/17/2014	Guangdong Ellington Electn	Semiconductors	221	Shanghai	China
06/18/2014	Zoopla Property Group PLC	Internet Software & Services	598	LSE	United Kingdom
06/23/2014	Chanjet Information Technology	Software	116	SEHK	China
06/23/2014	VOYAGE GROUP Inc	Internet Software & Services	103	Tokyo SE	Japan
06/23/2014	Xunlei Ltd	Internet Software & Services	101	NASDAQ	China
06/23/2014	IMImobile Ltd	Internet Software & Services	51	LSE	United Kingdom
06/24/2014	Imprivata Inc	Internet Software & Services	75	NYSE	United States
06/18/2014	Markit Ltd	Software	1,283	NASDAQ	United Kingdom
06/24/2014	Materialise NV	Software	96	NASDAQ	Belgium
06/25/2014	GoPro Inc	Electronics	491	NASDAQ	United States
06/25/2014	Ourgame International Holdings	Internet Software & Services	107	SEHK	China
06/26/2014	Worldline SA	Computer Storage & Peripherals	782	EPA	France
<b>Q3</b>					
07/02/2014	Smartgroup Corporation Ltd	Internet Software & Services	106	ASX	Australia
07/08/2014	Tian Ge Interactive Holdings Limited	Internet Software & Services	207	SEHK	China
07/17/2014	Cogobuy Group	Internet Software & Services	177	SEHK	China
07/17/2014	Globant SA	Software	59	NYSE	Luxembourg
07/17/2014	TubeMogul, Inc	Software	44	NASDAQ	United States
07/31/2014	Mobileye NV	Software	890	NYSE	Israel
07/31/2014	Shenzhen Absen Optoelectronic Co Ltd	Semiconductors	59	Shenzhen	China
08/06/2014	iDreamSky Technology Limited	Software	116	NASDAQ	China
08/08/2014	Vista Group International Limited	Software	79	NZSE	New Zealand
08/27/2014	Jolywood (Suzhou) Sunwatt Co Ltd	Semiconductors	80	Shenzhen	China
8/27/2014	Hollyland (China) Electronics Technology Corporation Limited	Semiconductors	129	Shanghai	China
09/18/2014	Alibaba Group Holding Ltd	Internet Software & Services	21,767	NYSE	China
09/23/2014	CyberArk Software	Software	86	NASDAQ	Israel
09/24/2014	Travelport Worldwide	Internet Software & Services	480	NYSE	United States
09/30/2014	Crossrider Plc	Internet Software & Services	75	LSE	Israel
9/01/2014	Hangzhou First Pv Material Co Ltd	Semiconductors	265	Shanghai	China
9/01/2014	XiAn Tian He Defense Technology Co Ltd	Computer Storage & Peripherals	117	Shenzhen	China
9/01/2014	Hubei Feilihua Quartz Glass Co Ltd	Computer Storage & Peripherals	50	Shenzhen	China

Issue date	Company	Sector	Proceeds (US\$ mn)	Primary exchange	Domicile nation
<b>Q4</b>					
10/02/2014	Rocket Internet AG	Internet Software & Services	1,764	XTRA	Germany
10/02/2014	Scatec Solar ASA	Semiconductors	107	OSE	Norway
10/03/2014	Yodlee Inc	Software	75	NASDAQ	United States
10/06/2014	DEV SISTERS Corp	Software	133	South Korea	South Korea
10/09/2014	MOL Global Inc	Internet Software & Services	169	NASDAQ	Malaysia
10/10/2014	Gamma Communications Plc	Communications Equipment	133	LSE	United Kingdom
10/10/2014	HubSpot Inc	Software	125	NYSE	United States
10/15/2014	Hua Hong Semiconductor Ltd	Semiconductors	332	SEHK	China
10/31/2014	Jiangsu Pacific Quartz Co Ltd	Semiconductors	59	Shanghai	China
11/05/2014	Spigen Korea Co Ltd	Communications Equipment	49	South Korea	South Korea
11/06/2014	Sugon Info Ind Co Ltd/Dawning Information Industry Co Ltd	IT Consulting & Services	65	Shanghai	China
11/06/2014	Upland Software Inc	Software	46	NASDAQ	United States
11/12/2014	Citadel Group Ltd	IT Consulting & Services	41	ASX	Australia
11/14/2014	Samsung SDS Co Ltd	Software	1,063	South Korea	South Korea
11/20/2014	Cnova NV	Internet Software & Services	188	NASDAQ	Netherlands
11/26/2014	Orion Health Group Ltd	Software	96	NZSE	New Zealand
12/02/2014	Q Technology (Group) Co Ltd	Electronics	90	SEHK	China
12/03/2014	Chaozhou Three-Circle Group Co Ltd	Semiconductors	220	Shenzhen	China
12/04/2014	Tianjin Keyvia Electric Co.,Ltd	Electronics	62	Shenzhen	China
12/05/2014	Feiyu Technology	Software	85	SEHK	China
12/09/2014	Aconex Ltd	Internet Software & Services	117	ASX	Australia
12/10/2014	Yangtze Optical Fibre And Cable Joint Stock Limited Company	Communications Equipment	152	SEHK	China
12/11/2014	LendingClub Corporation/Liberty Corp	Internet Software & Services	870	NYSE	United States
12/11/2014	Momo Inc	Internet Software & Services	216	NASDAQ	China
12/12/2014	New Relic Inc	Software	115	NYSE	United States
12/12/2014	Workiva Inc	Software	101	NYSE	United States
12/12/2014	Hortonworks Inc	Software	100	NASDAQ	United States
12/12/2014	Connecture Inc	Internet Software & Services	53	NASDAQ	United States
12/16/2014	Surfstitch Group Ltd	Internet Software & Services	71	ASX	Australia
12/16/2014	OnDeck Capital Inc	Internet Software & Services	230	NYSE	United States
12/18/2014	Gumi Inc	Software	328	Tokyo SE	Japan
12/22/2014	Cartrack Holdings Limited	Software	44	JSE	South Africa
12/30/2014	Linekong Interactive Co Ltd	Internet Software & Services	93	SEHK	China
12/30/2014	Linewell Software Co Ltd	Software	60	Shanghai	China

Source: Dealogic with analysis by PwC.

---

# *2010-2014 technology IPO summary*

During the period 2010-2014, technology IPOs raised total proceeds of US\$119.6bn from 447 listings. In the last five years, 2014 has been the best year for technology IPOs contributing 43% of proceeds and 26% of offerings. The number of listings witnessed a consistent drop from 109 in 2010 to 64 in 2013, but shot up in 2014 to 118, owing to strong capital markets and investor interest in participating and benefiting from the digital revolution. Total proceeds also exhibited a steady decline from 2010 (excluding the US\$16bn Facebook IPO in 2012) to 2013, which was reversed in 2014. During the period 2010-2014, total proceeds witnessed a CAGR of 30%, and a CAGR of 13% (excluding Alibaba's IPO).

The Internet Software & Services subsector has consistently outperformed all other sectors in the last four years (2011-2014), and has raised a total of US\$63.5bn from 112 listings. The Alibaba.com IPO further boosted the subsector's performance. Given the increase and rapid acceptance of e-commerce and mobile solutions, Internet Software & Services is likely benefit for some time to come.

The Software subsector has maintained second place during the last three years (2012-2014), raising proceeds of US\$12.2bn from 72 listings. The three Software innovation mega trends, which included the shift from desktop computing to mobile computing (including phones and tablets), from physical infrastructure to cloud and from installed software to software delivered 'as-a-service' (SaaS), have helped the subsector to evolve and hold its place.<sup>4</sup>

Computer Storage and Peripherals made a comeback in 2014 in terms of proceeds raised after its lowest contribution in 2012. In the last five years, the subsector has raised a total of US\$9.1bn from 30 listings. In 2014, the subsector raised US\$4.7bn—more than total proceeds raised during the period 2010-2013, US\$4.4bn.

The Semiconductor subsector also made a comeback in 2014 after its declining performance over the last four years. The decline was attributable to the freeze in Chinese IPOs imposed by the CSRC. The subsector raised US\$12.2bn from 87 listings during the period 2010-2014. 2014 witnessed proceeds of US\$1.8bn from 12 listings. The proceeds raised were the highest since 2012.

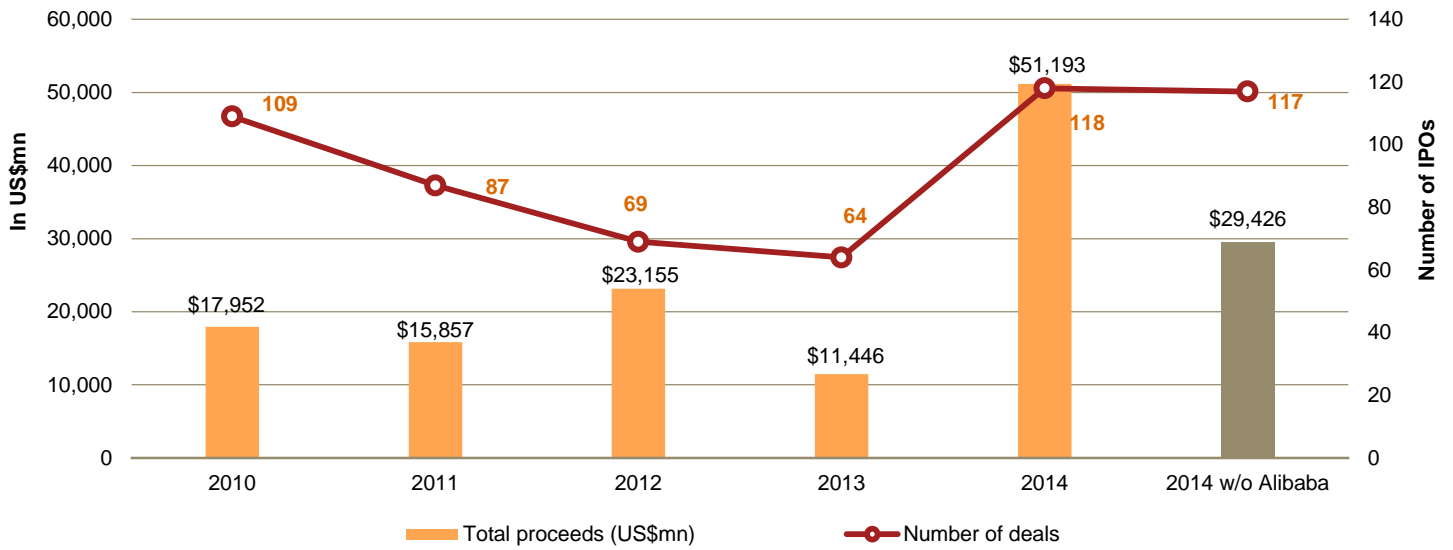
The IT Consulting and Services subsector raised US\$2.2bn from six listings in 2014. The subsector has experienced flat performance since 2011. Between 2010 and 2014 US\$8.4bn was raised from 47 listings.

The Telecommunications Equipment subsector was the only sector which declined in terms of total proceeds raised. Proceeds fell by 32% in 2014 to US\$1bn from US\$1.5bn in 2013. During the period 2010-2014 the subsector raised total proceeds of US\$5.7bn from 33 listings.

---

<sup>4</sup> <http://www.forbes.com/sites/truebridge/2013/09/17/the-software-revolution-a-sector-trends-series/>

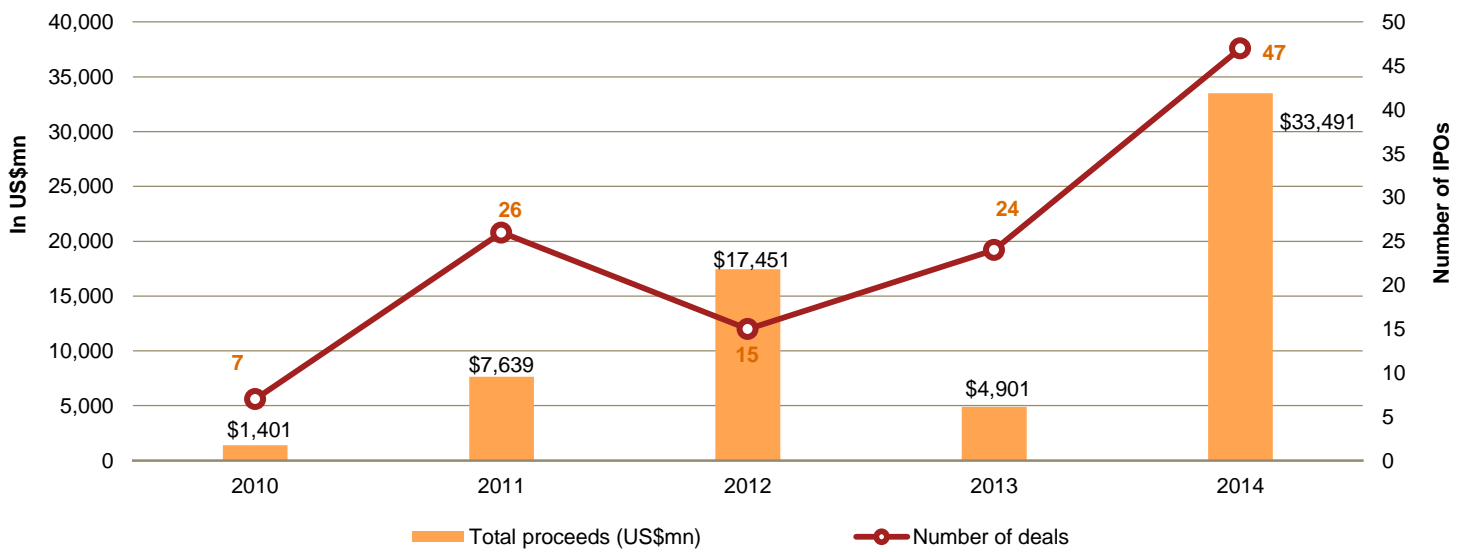
**Figure 25: 2010-2014 Technology IPOs**



Source: Dealogic with analysis by PwC.

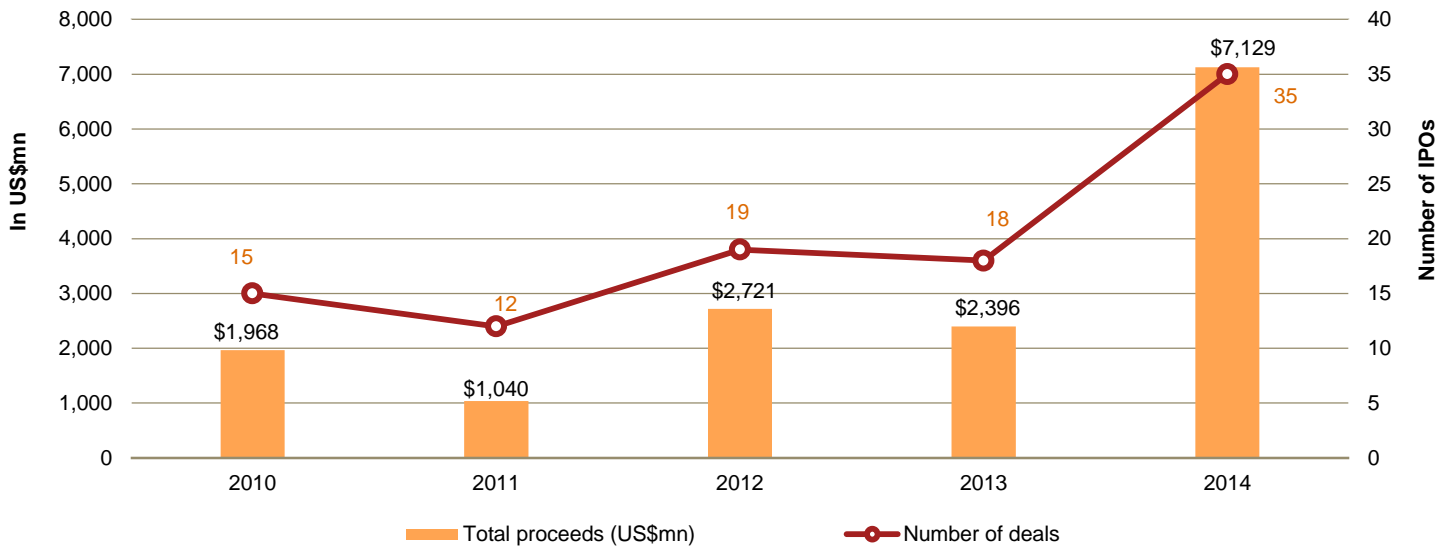
**Summary by subsector**

**Figure 26: 2010-2014 Internet Software & Services IPOs**



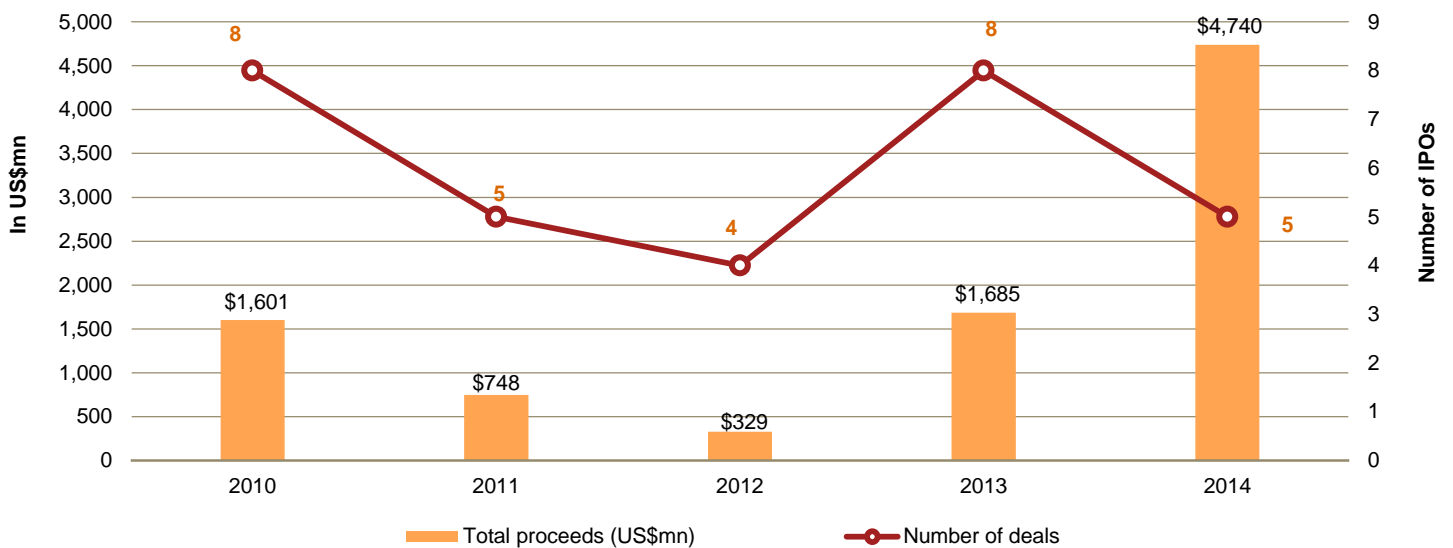
Source: Dealogic with analysis by PwC.

**Figure 27: 2010-2014 Software IPOs**



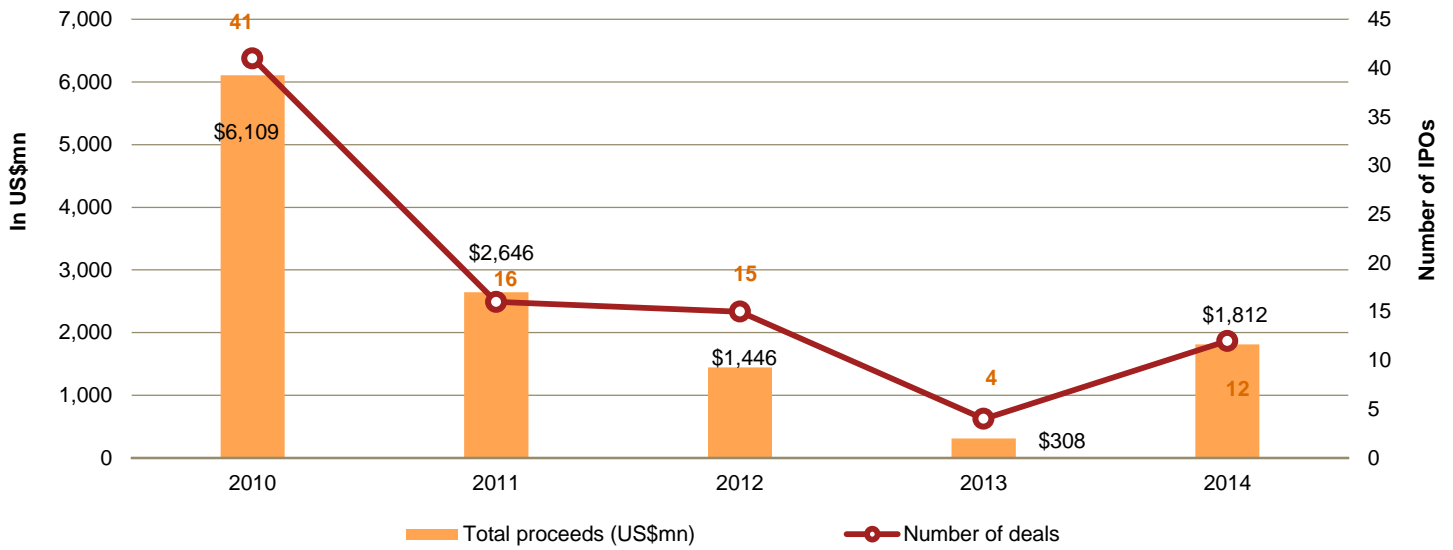
Source: Dealogic with analysis by PwC.

**Figure 28: 2010-2014 Computer Storage & Peripherals IPOs**



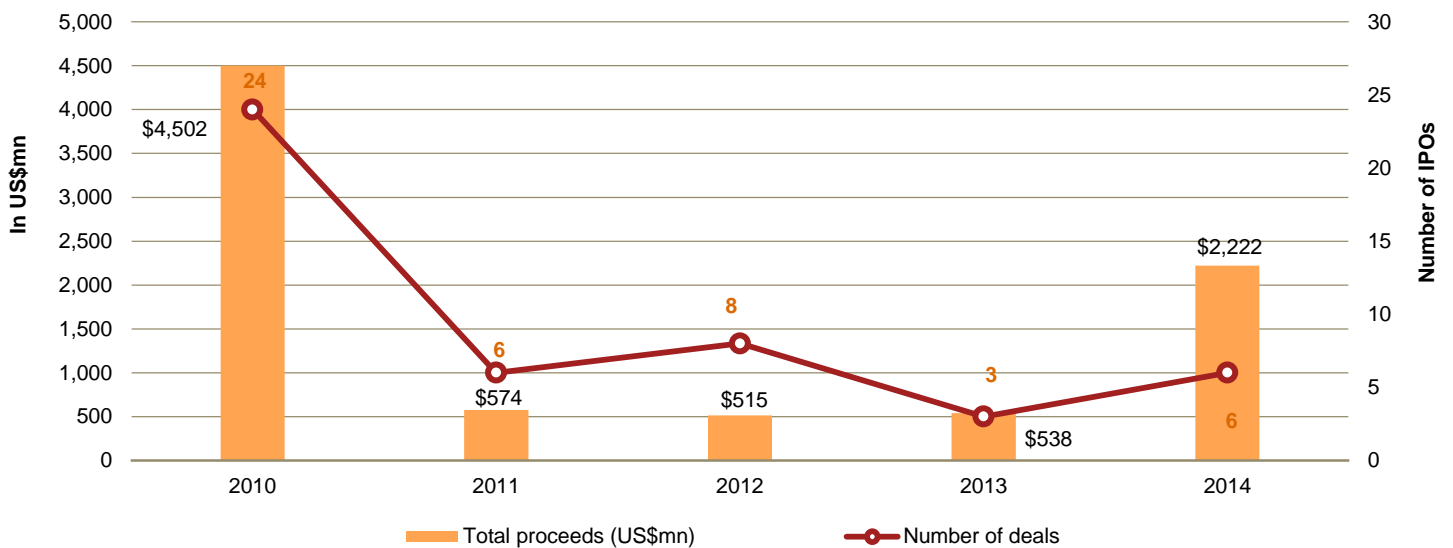
Source: Dealogic with analysis by PwC.

**Figure 29: 2010-2014 Semiconductor IPOs**



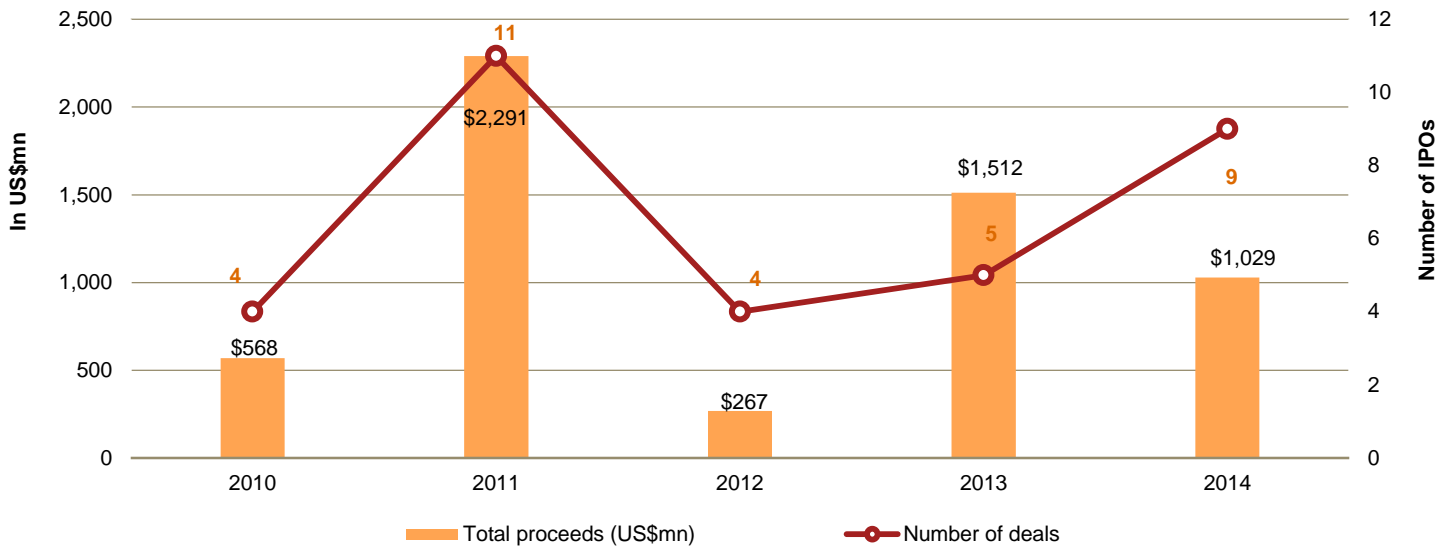
Source: Dealogic with analysis by PwC.

**Figure 30: 2010-2014 IT Consulting & Services IPOs**



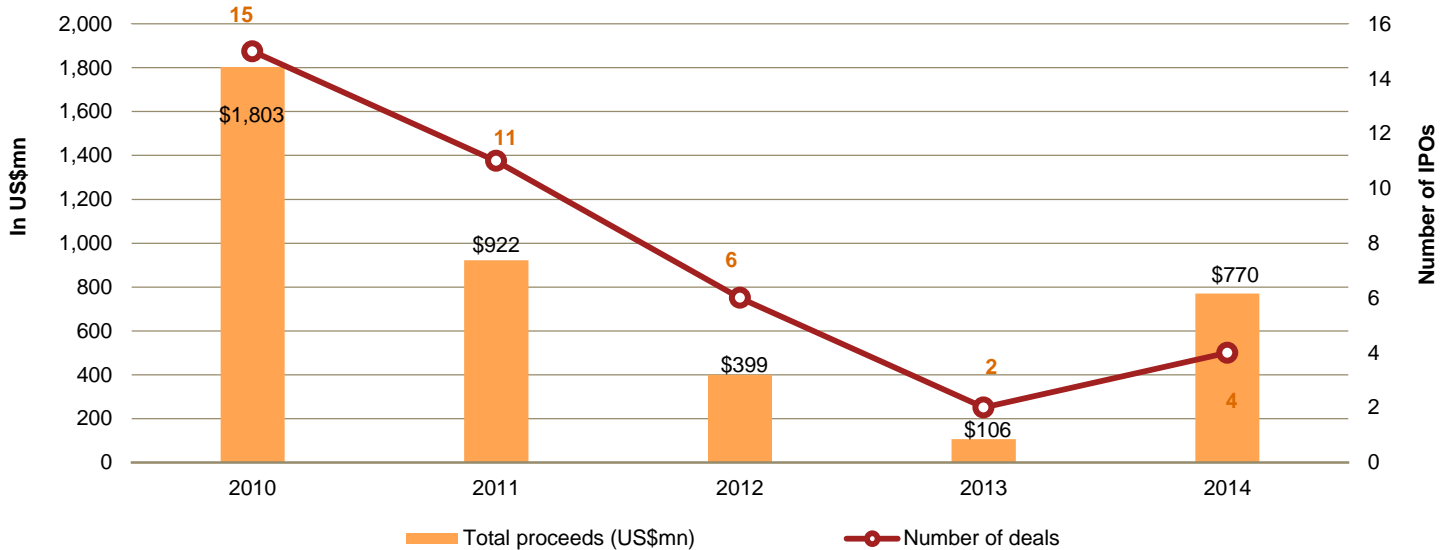
Source: Dealogic with analysis by PwC.

**Figure 31: 2010-2014 Telecommunications Equipment IPOs**



Source: Dealogic with analysis by PwC.

**Figure 32: 2010-2014 Other subsectors**



Source: Dealogic with analysis by PwC.



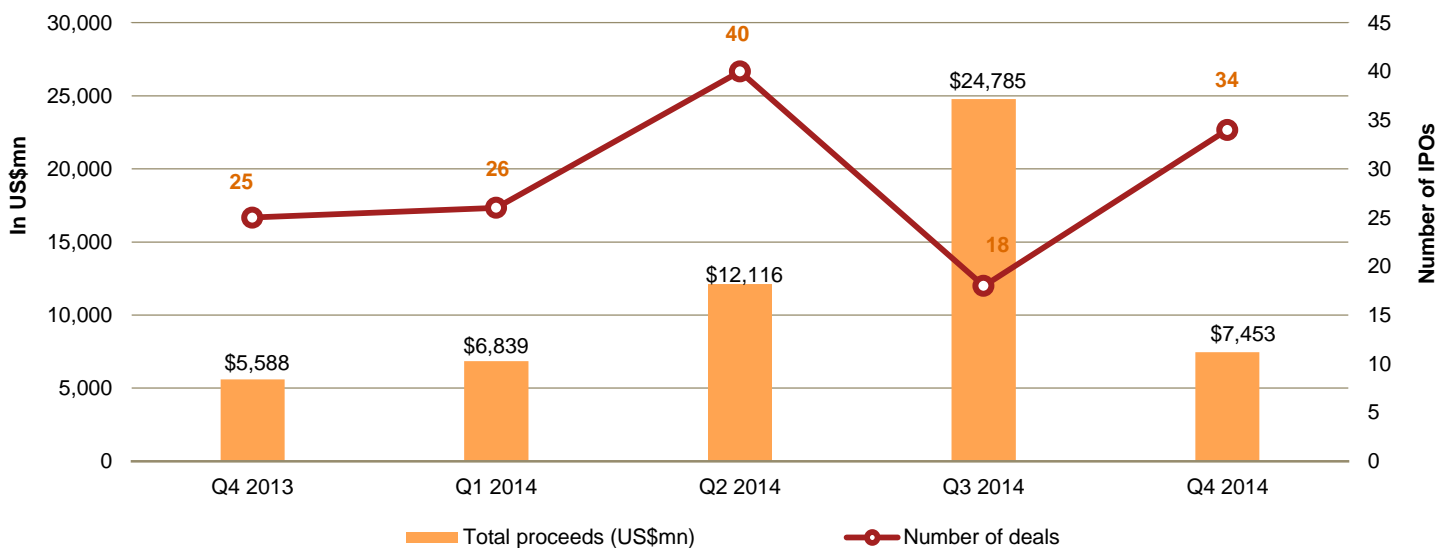
# Q4 2014 technology IPO summary

The technology sector reported 34 IPOs in the fourth quarter. This was higher than all the quarters under study except for Q2 2014, which reported 40 IPOs. Total proceeds raised through these IPOs were US\$7.5bn, which was lower than the last two quarters. The significant drop in amount raised (70%) compared to the last quarter was due to Alibaba's mega IPO in Q3 2014.

Year over year, the amount raised increased by 33% and the number of IPOs increased 36%. This quarter witnessed two billion-dollar IPOs—Rocket Internet AG (US\$1.76bn) and Samsung SDS Co Ltd (US\$1.06bn). The third biggest tech IPO this quarter was Lending Club Corporation with US\$870mn.

Early indicators are that the strength in Q4 is carrying over to 2015.

Figure 33: Q4 2013–Q4 2014 Global technology IPO trends



Source: Dealogic with analysis by PwC.

## Top 10 technology IPOs

Internet Software & Services again dominated the top 10 listings for the quarter, with 60% share. The Software and Semiconductor subsectors followed with two each in the top 10.

Total proceeds from the top 10 IPOs came to US\$5.4bn. US stock exchanges led the way with five companies out of the top 10 listed in the US. In terms of participation, there were seven exchanges where the top 10 IPOs raised funds indicating a healthier market for tech companies. Korean, Tokyo and Frankfurt exchanges listed technology IPOs in Q4. The top two IPOs of Rocket Internet AG and Samsung SDS Co were listed in Germany and Korea respectively, which is an aberration to the general historic trend which shows that the largest IPOs are raised in US-based stock exchanges.

**Table 2: IPO summary – Top 10 listings**

Issue date	Company	Sector	Proceeds (US\$mn)	Primary exchange	Domicile nation
10/02/2014	Rocket Internet AG	Internet Software & Services	1,764	XTRA	Germany
11/14/2014	Samsung SDS Co Ltd	Software	1,063	South Korea	South Korea
12/11/2014	Lending Club Corporation/Liberty Corp	Internet Software & Services	870	NYSE	United States
10/15/2014	Hua Hong Semiconductor Ltd	Semiconductors	332	SEHK	China
12/18/2014	Gumi Inc	Software	328	Tokyo SE	Japan
12/16/2014	OnDeck Capital Inc	Internet software & services	230	NYSE	United States
12/03/2014	Chaozhou Three-Circle Group Co Ltd	Semiconductors	220	Shenzhen	China
12/11/2014	Momo Inc	Internet Software & Services	216	NASDAQ	China
11/20/2014	Cnova NV	Internet Software & Services	188	NASDAQ	Netherlands
10/09/2014	MOL Global Inc	Internet Software & Services	169	NASDAQ	Malaysia

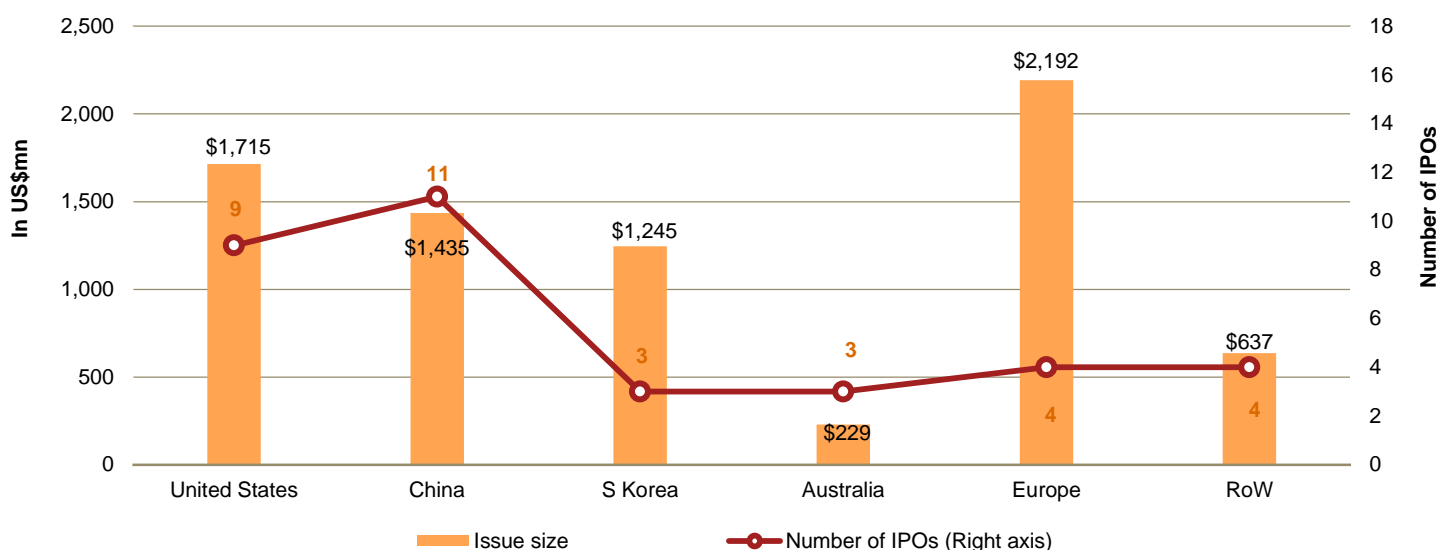
Source: Dealogic with analysis by PwC.

## Geographic distribution

In terms of number of IPOs, China led the way with 11 IPOs. China was followed by the US with nine technology IPOs. But in terms of proceeds, US companies raised more than their Chinese counterparts, US\$1.7bn versus US\$1.4bn, and due to the smaller number of offerings, US companies received higher average proceeds.

European participation included Germany, with the largest tech IPO of the quarter—US\$1.8bn—the Netherlands, with US\$188mn, was also in the top 10 for the quarter, followed by the UK with US\$133mn and Norway with US\$107mn. Rest of the World (RoW) includes Japan with US\$328mn, Malaysia with US\$188mn, New Zealand with US\$96mn and South Africa, the only African country with a tech IPO in 2014, raising US\$44mn.

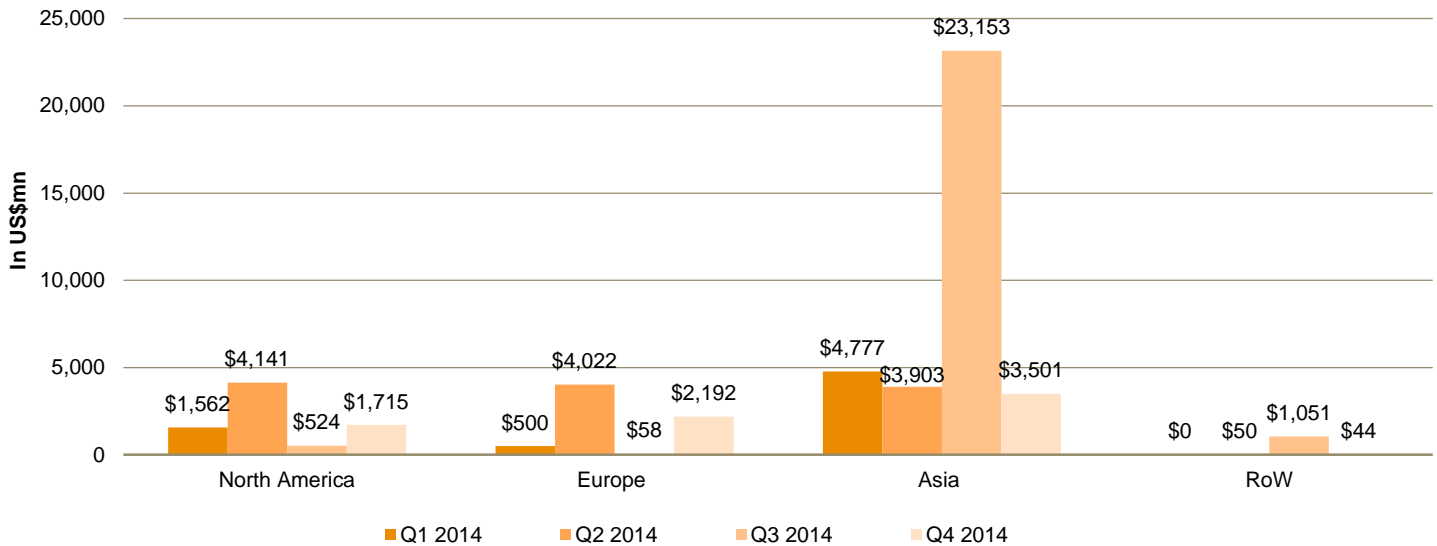
Figure 34: Q4 2014 Geographic distribution



Source: Dealogic with analysis by PwC.

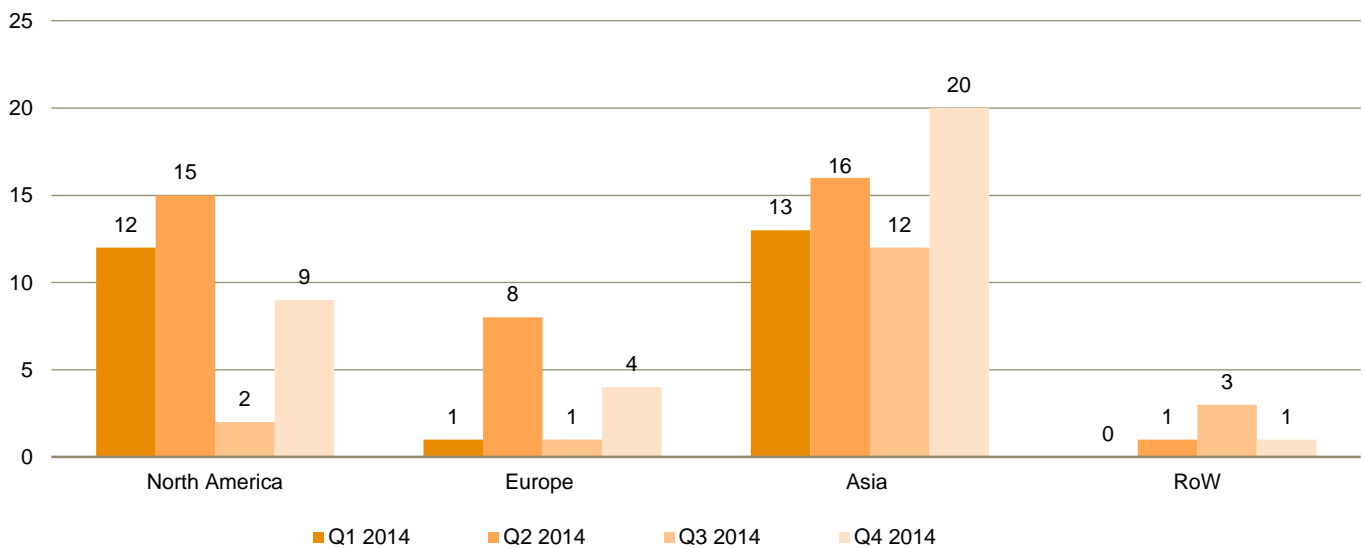
On a regional basis, Asia led with US\$3.5bn in proceeds and 20 listings, followed by Europe with US\$2.2bn and four listings. North America came in third with US\$1.7bn and nine listings. With the reopening of the Chinese IPO market, it is anticipated Asia will remain a dominant force in the year ahead. However, it is encouraging to see innovation and entrepreneurialism spread across the globe, which is a very healthy sign for the future of the technology industry.

**Figure 35: Q4 2014 Regional analysis – Proceeds in US\$ millions**



Source: Dealogic with analysis by PwC.

**Figure 36: Q4 2014 Regional analysis – Number of listings**



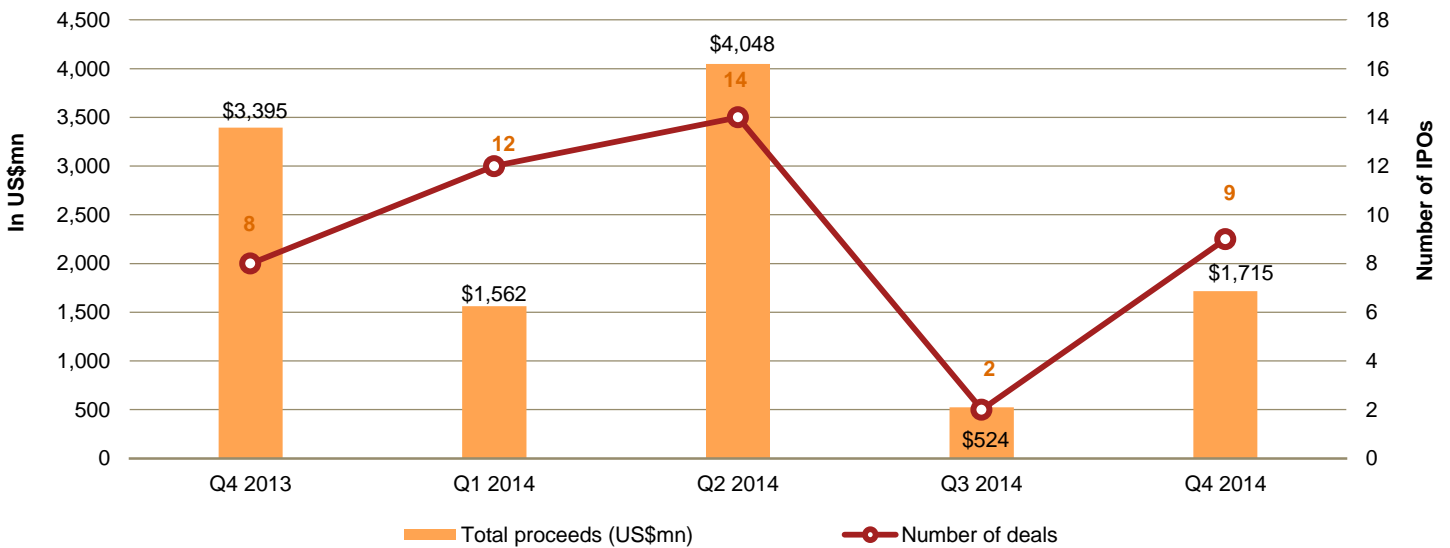
Source: Dealogic with analysis by PwC.

## United States

The US recorded 9 IPOs with US\$1.7bn raised in Q4 2014. Year over year, the number of listings increased by 13%, but the amount raised decreased by 49%. Quarter over quarter, the number of listings and the amount raised increased by 350% and 227%, respectively. US-domiciled companies constituted 26% of the total 34 IPOs in Q4 2014. Two companies out of the top 10 IPOs were domiciled in the US.

The number of US companies listing is expected to maintain momentum given the relative strength of the US economy and the diversity of the technology ecosystem.

Figure 37: Q4 2014 US technology IPOs



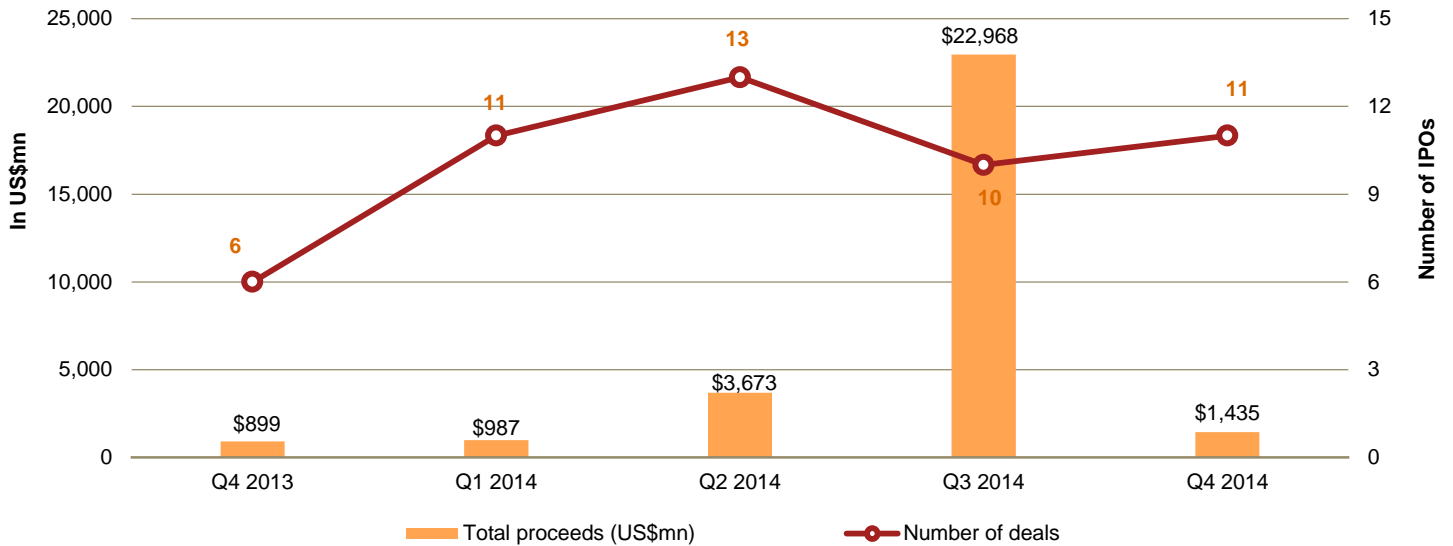
Source: Dealogic with analysis by PwC.

## China

China reported 11 IPOs with US\$1.4bn of proceeds. In terms of number of listings, it was 10% higher sequentially, but declined sharply in terms of proceeds due to the Alibaba IPO in the third quarter. Year over year, the proceeds increased by 60% and the number of listings increased by 83%.

In contrast to prior quarters, only one Chinese company went public on a foreign exchange (NASDAQ), but consistent with past listings, it was one of the top 10 tech IPOs of the quarter.

Figure 38: Q4 2014 Chinese technology IPOs



Source: Dealogic with analysis by PwC.

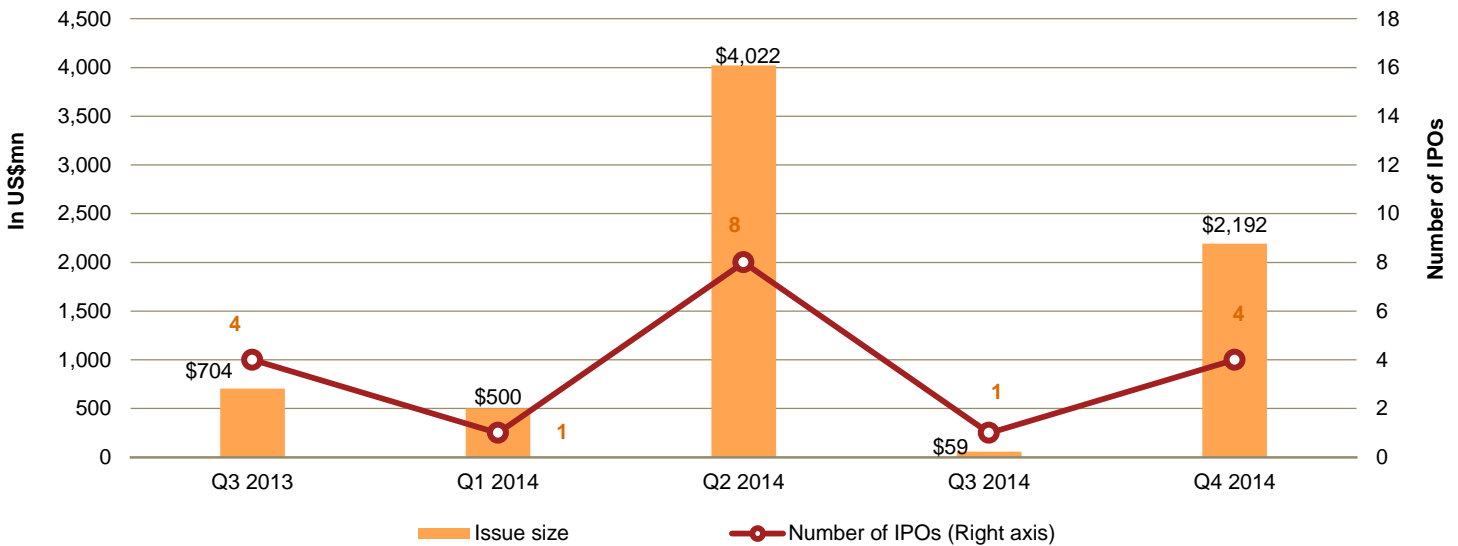
*"Coming on the heels of Alibaba Group Holding Ltd, Rocket Internet AG is the largest German IPO since 2007, clearly demonstrating that demand for e-commerce stocks continues to heat up globally and has arrived in Europe now."*

**–Werner Ballhaus**  
*European Technology Industry Leader, PwC Germany*

### Europe

Two of the top 10 deals in the fourth quarter were European technology companies, Rocket Internet AG of Germany (#1) and Cnova NV of the Netherlands (#9). Europe witnessed only one IPO in the third quarter so sequentially its performance was very impressive in terms of both number of listings and proceeds. Year-over-year proceeds jumped over 200% and listings were equal, four each in Q4'13 and Q4'14, with three of the Q4'13 listings making the top 10.

**Figure 39: Q4 2014 European technology IPOs**



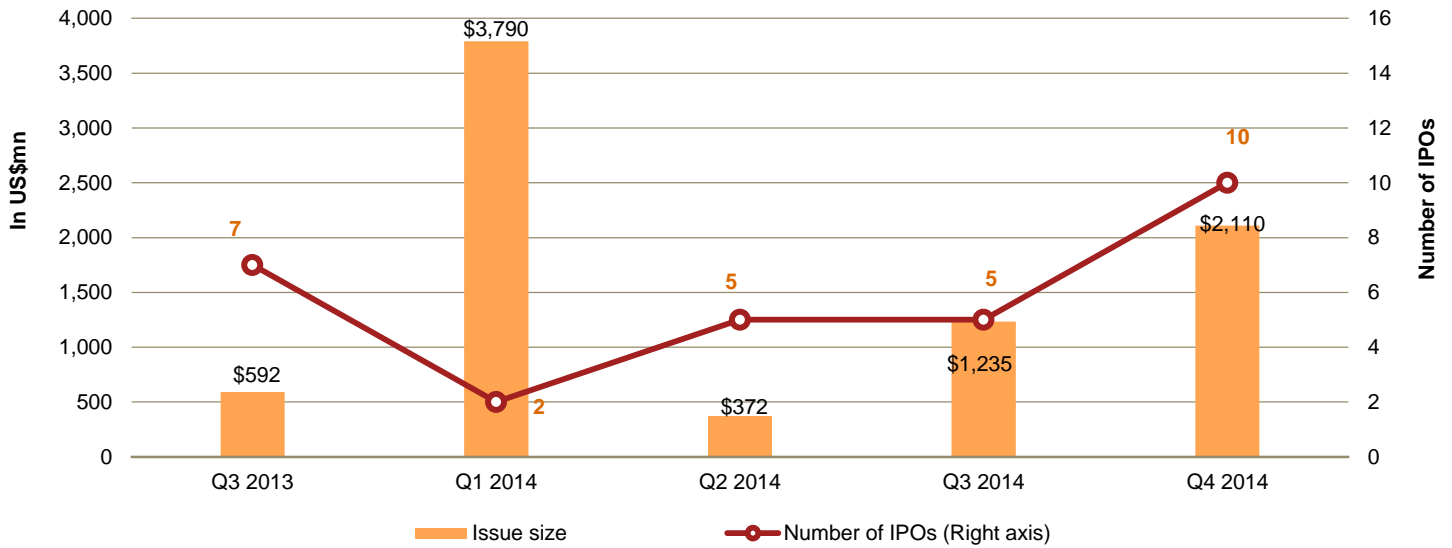
Source: Dealogic with analysis by PwC.

## All other geographies

The last few quarters have seen better global participation in the technology IPO market. US\$7.5bn was raised in 2014 from technology companies outside the US, China and Europe.

Q4 2014 saw participation from companies in Australia, Japan, Malaysia, New Zealand, South Africa and South Korea. Three of the top 10 IPOs were from other geographies, and 50% of the top 10 IPOs were from countries other than the US and China.

Figure 40: Q4 2014 All other geographies technology IPOs



Source: Dealogic with analysis by PwC.



## Subsector distribution

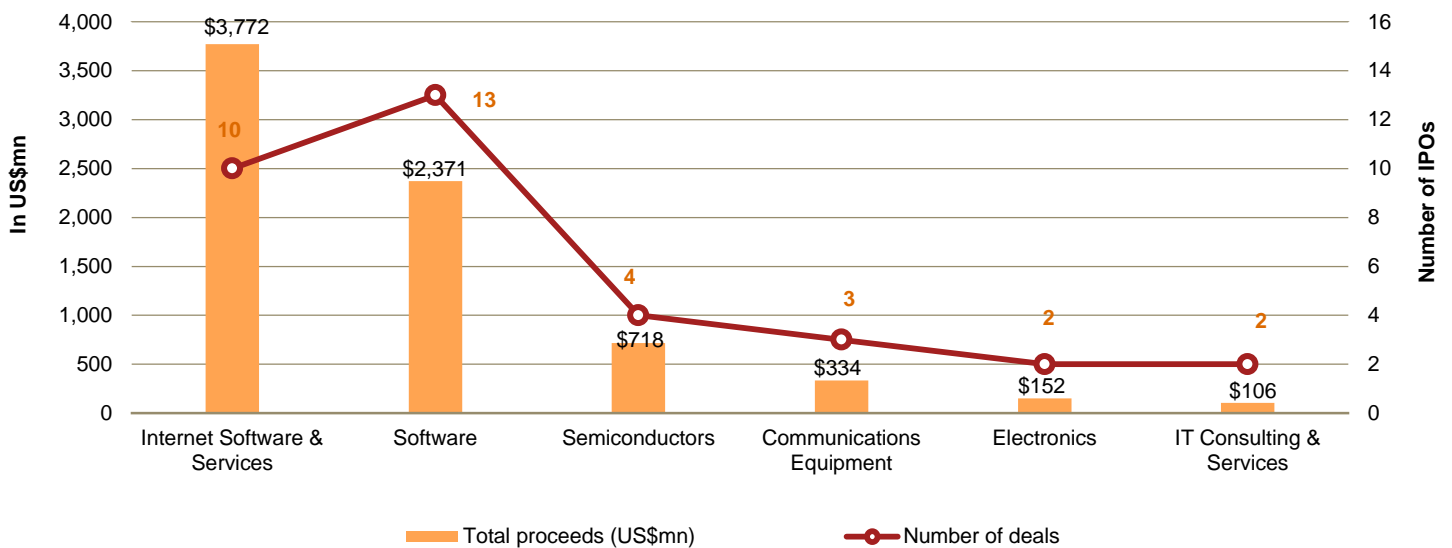
The Q4 2014 technology IPO subsector distribution was more in line with historical trends. Internet Software & Services led the way with 51% of the total proceeds and 29% of the total number of IPOs. Most of the big-ticket IPOs were from this subsector and many were in the top 10.

Internet Software & services was followed by the Software subsector with 32% of the total proceeds but 38% of the number of IPOs listed this quarter.

The Semiconductor subsector came in third, with 10% of the amount raised and 12% of the listings. The resurgence of Chinese technology companies responding to the reopening of the China IPO market has driven Semiconductor subsector IPOs in Q4 2014.

Communication Equipment had three listings with US\$334mn proceeds, followed by two listings each for Electronics and IT Consulting & Services with US\$152mn and US\$106mn, respectively.

Figure 41: Q4 2014 Subsector distribution



Source: Dealogic with analysis by PwC.

## Stock exchange distribution

In terms of amount raised, XTRA (Germany) led the way with 24% of total proceeds, but just one listing, Rocket Internet AG, the largest Q4 2014 tech IPO. It was followed by the NYSE with 19% of total proceeds. The NYSE's popularity in the technology sphere increased as the operator relaxed its standards in late 2008 to allow smaller, newer companies to list. Previously, firms needed a market value of US\$750mn and a track record of profitability to list. New rules dropped the threshold to US\$150mn in market value and no operating history before listing.<sup>5</sup>

South Korean exchanges listed three tech IPOs—Samsung SDS Co Ltd, Devsisters Corp and Spigen Korea Co Ltd—a 17% share of proceeds. NASDAQ followed with 11% share of proceeds. On a combined basis, Chinese stock exchanges, including Hong Kong, had a 16% share of proceeds.

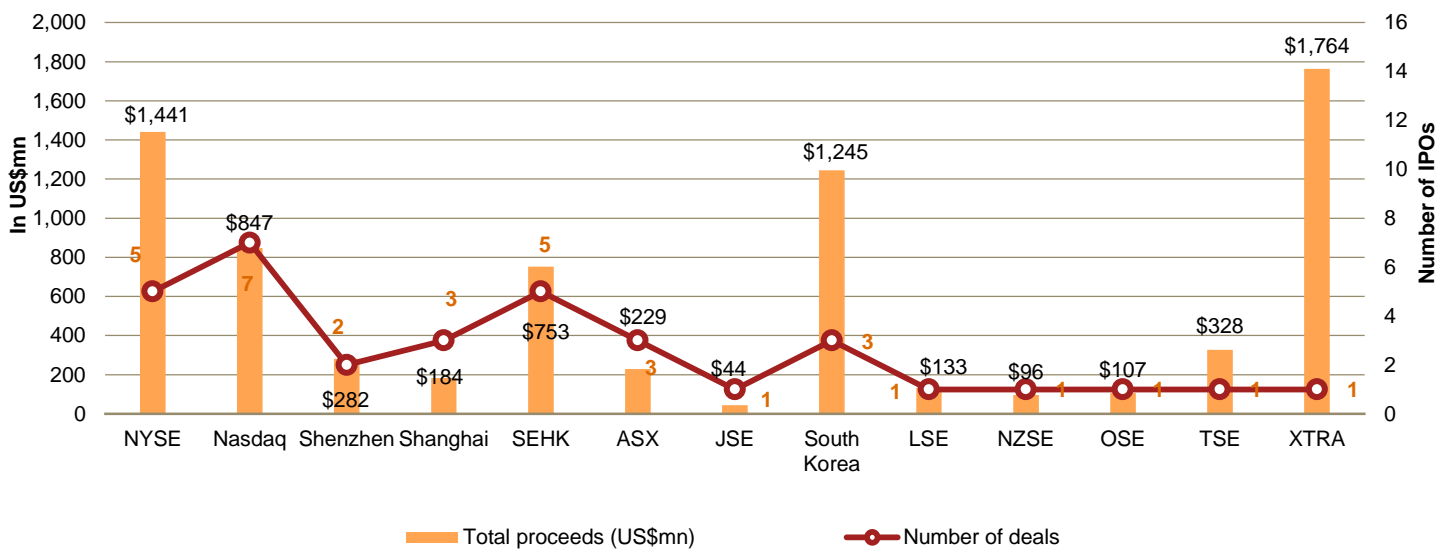
In terms of number of listings, NASDAQ led the way with seven listings, followed by the NYSE and SEHK with five technology IPOs each. Shanghai, Australia and South Korea exchanges had three IPOs each.

The number of stock exchanges where these 34 IPOs went public shows the slowly changing global dynamics in the technology world. With both markets and technology maturing across the world, companies are raising funds in a variety of countries. It is no longer a monopoly of US and Chinese markets. There were 13 stock exchanges supporting tech IPOs in Q4 2014.

*"The second half of 2014 was a very active period for IPOs in Australia. In particular, PE funds crystallised significant value from traditional businesses that they acquired several years ago through moving to new digital technology-based business models. This resulted in very successful IPOs in late 2014."*

**– David Wiadrowski**  
Technology Industry  
Leader, PwC Australia

Figure 42: Q4 2014 Stock exchange distribution



Source: Dealogic with analysis by PwC.

<sup>5</sup> <http://www.wsj.com/articles/SB10001424127887323894704578113183311774610>

**Table 3: Q4 2014 Stock exchanges – North America**

Issue date	Company	Sector	Proceeds (US\$ mn)	Primary exchange	Domicile nation
10/03/2014	Yodlee Inc	Software	75	NASDAQ	United States
10/09/2014	MOL Global Inc	Internet Software & Services	169	NASDAQ	Malaysia
10/10/2014	HubSpot Inc	Software	125	NYSE	United States
11/06/2014	Upland Software Inc	Software	46	NASDAQ	United States
11/20/2014	Cnova NV	Internet Software & Services	188	NASDAQ	Netherlands
12/11/2014	LendingClub Corporation/ Liberty Corp	Internet Software & Services	870	NYSE	United States
12/11/2014	Momo Inc	Internet Software & Services	216	NASDAQ	China
12/12/2014	New Relic Inc	Software	115	NYSE	United States
12/12/2014	Workiva Inc	Software	101	NYSE	United States
12/12/2014	Hortonworks Inc	Software	100	NASDAQ	United States
12/12/2014	Connecture Inc	Internet Software & Services	53	NASDAQ	United States
12/16/2014	OnDeck Capital Inc	Internet Software & Services	230	NYSE	United States

Source: Dealogic with analysis by PwC.

\* Deals have been classified based on the exchange where capital was raised.

**Table 4: Q4 2014 Stock exchanges – Asia\***

Issue date	Company	Sector	Proceeds (US\$ mn)	Primary exchange	Domicile nation
10/06/2014	DEVSISTERS Corp	Software	133	KOSDAQ	South Korea
10/15/2014	Hua Hong Semiconductor Ltd	Semiconductors	332	SEHK	China
10/31/2014	Jiangsu Pacific Quartz Co Ltd	Semiconductors	59	Shanghai	China
11/05/2014	Spigen Korea Co Ltd	Communications Equipment	49	KOSDAQ	South Korea
11/06/2014	Sugon Info Ind Co Ltd/Dawning Information Industry Co Ltd	IT Consulting & Services	65	SSE	China
11/12/2014	Citadel Group Ltd	IT Consulting & Services	41	ASX	Australia
11/14/2014	Samsung SDS Co Ltd	Software	1,063	KRX	South Korea
11/26/2014	Orion Health Group Ltd	Software	96	NZSE	New Zealand
12/02/2014	Q Technology (Group) Co Ltd	Electronics	90	SEHK	China
12/03/2014	Chaozhou Three-Circle Group Co Ltd	Semiconductors	220	Shenzhen	China
12/04/2014	Tianjin Keyvia Electric Co Ltd	Electronics	62	Shenzhen	China
12/05/2014	Feiyu Technology	Software	85	SEHK	China
12/09/2014	Aconex Ltd	Internet Software & Services	117	ASX	Australia
12/10/2014	Yangtze Optical Fibre And Cable Joint Stock Limited Company	Communications Equipment	152	SEHK	China
12/16/2014	Surfstitch Group Ltd	Internet Software & Services	71	ASX	Australia
12/18/2014	Gumi Inc	Software	328	Tokyo SE	Japan
12/30/2014	Linekong Interactive Co Ltd	Internet Software & Services	93	SEHK	China
12/30/2014	Linewell Software Co Ltd	Software	60	SHA	China

Source: Dealogic with analysis by PwC.

\* Deals have been classified based on the exchange where capital was raised.

**Table 5: Q4 2014 Stock exchanges – Europe\***

Issue date	Company	Sector	Proceeds (US\$ mn)	Primary exchange	Domicile nation
10/02/2014	Rocket Internet AG	Internet Software & Services	1,764	XTRA	Germany
10/02/2014	Scatec Solar ASA	Semiconductors	107	OSE	Norway
10/10/2014	Gamma Communications Plc	Communications Equipment	133	London Stock Exchange AIM	United Kingdom

Source: Dealogic with analysis by PwC.

\* Deals have been classified based on the exchange where capital was raised.

**Table 6: Q4 2014 Stock exchanges – Other\***

Issue date	Company	Sector	Proceeds (US\$ mn)	Primary exchange	Domicile nation
12/22/2014	Cartrack Holdings Limited	Software	44	JSE	South Africa

Source: Dealogic with analysis by PwC.

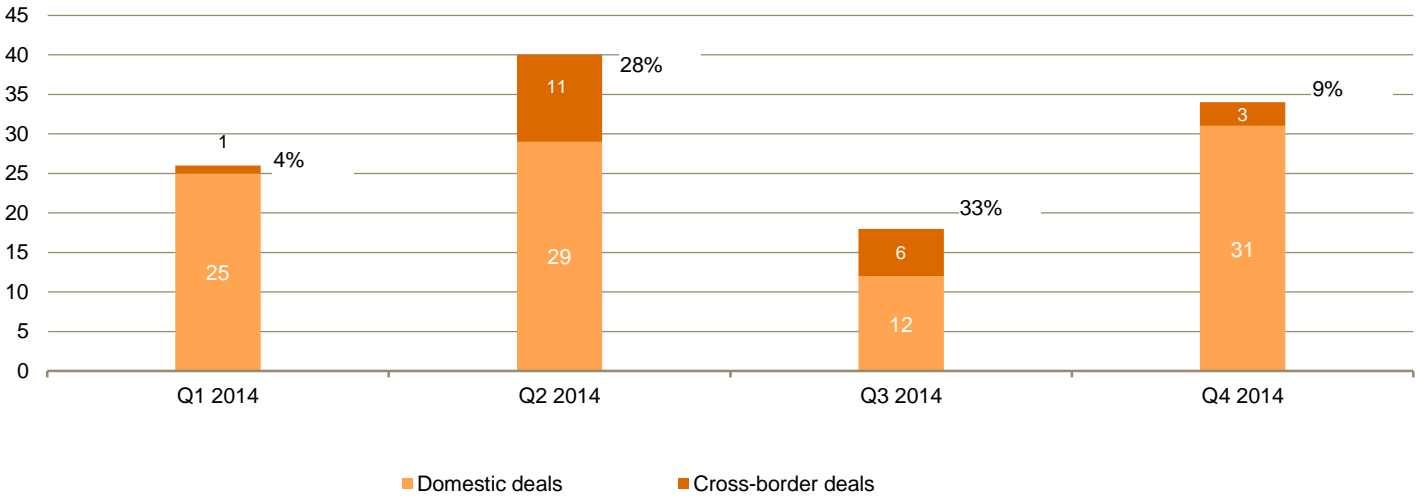
\* Deals have been classified based on the exchange where capital was raised.

### Cross-border listings

In contrast to the second and third quarters of 2014, just three of the 34 listings were cross-border IPOs in Q4. In the prior quarter, 33% of the listings were cross-border compared to only 9% in Q4. Reopening of the Chinese IPO market coupled with renewed interest and vigor in European and other Asian countries for emerging technology companies, may point to Q4 activity being more typical than what we've seen the past couple of years.

The three companies to list cross-border in Q4 were CNova NV from the Netherlands, MOL Global, a Malaysia-based company and Momo Inc, a Chinese company, all of which listed on NASDAQ.

Figure 43: Q4 2014 Cross-border listings

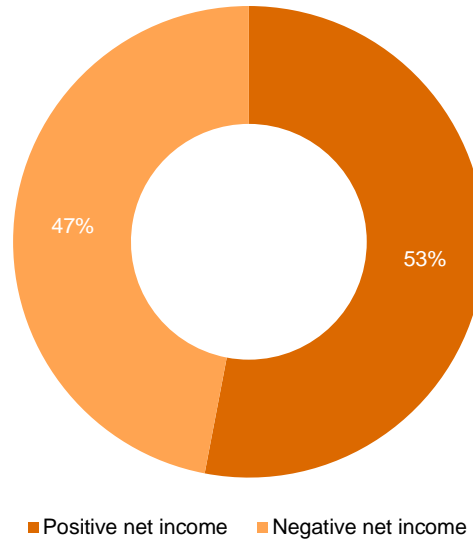


Source: Dealogic with analysis by PwC.

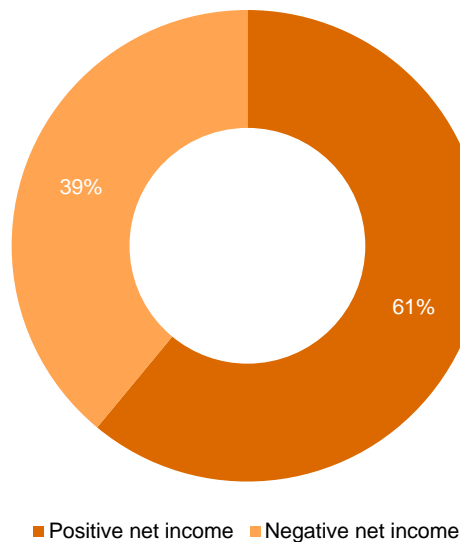
## Key financials

Figure 44: Q4 2014 and full-year 2014 Technology IPOs – Net income

### Q4 2014



### Full-year 2014



Source: Dealogic with analysis by PwC.

The average Last Twelve Months (LTM) net income for Q4 2014 was US\$14.2mn, with 53% of the companies reporting a positive net income. Samsung SDS Co Ltd reported the highest net income of US\$330.3mn, followed by Rocket Internet AG which reported net income of US\$190.7mn. Hortonworks Inc, a major Software company, reported the highest net loss of US\$10.7mn, followed by Linekong Interactive Co. Ltd, an Internet Software & Services company, reporting a net loss of US\$62.1mn.

In terms of full-year 2014, the percentage of companies with positive net income was much better than Q4 2014 with 61% declaring positive LTM net income. The overall improved net income situation among tech IPO companies was due to the profitability of several of this year's global tech IPO class.

There is one trend that clearly stands out—investors are growing more tolerant of tech companies going public with net loss. Previously, fewer companies with net losses filed. Looking at the last quarter vis-à-vis the full year, we see that 47% of the newly listed companies in Q4 2014 had net losses versus 39% for the whole year.

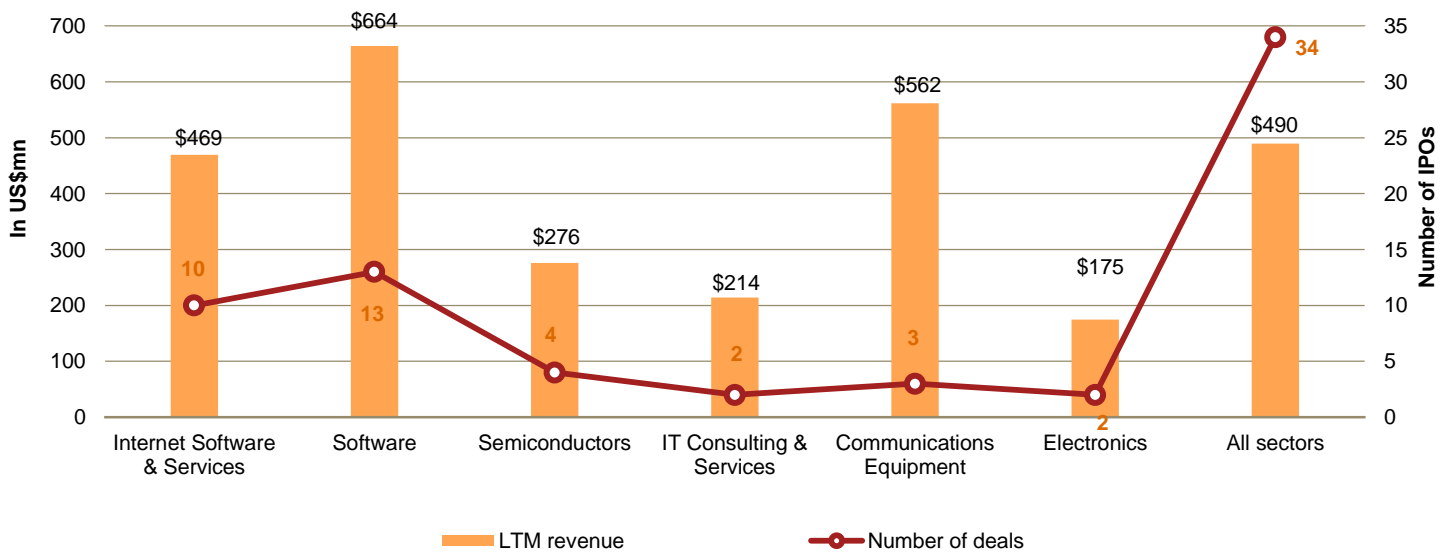
In terms of average revenue for the quarter, the Software subsector reported the highest average revenue of US\$664.2mn with 13 companies listing this quarter. Communications Equipment companies, with US\$561.7mn average revenue, were next, followed by Internet Software & Services with average revenue of US\$469.4mn.

The Semiconductor subsector reported the highest average EBITDA of US\$87.3mn, followed by the Communications Equipment subsector with US\$66.9mn. Coming in third was the Software subsector with US\$6.7mn, but its average was skewed by Samsung SDS Co Ltd. The revival of Chinese companies in the IPO market has led to positive momentum in the Semiconductor subsector.

In contrast to historical trends, the top two subsectors with the highest average net income were both hardware-oriented—Semiconductor and Communications Equipment—with US\$49.7mn and US\$41.6mn, respectively. As these subsectors are more capex-intensive, it generally takes longer for these companies to achieve positive net income.

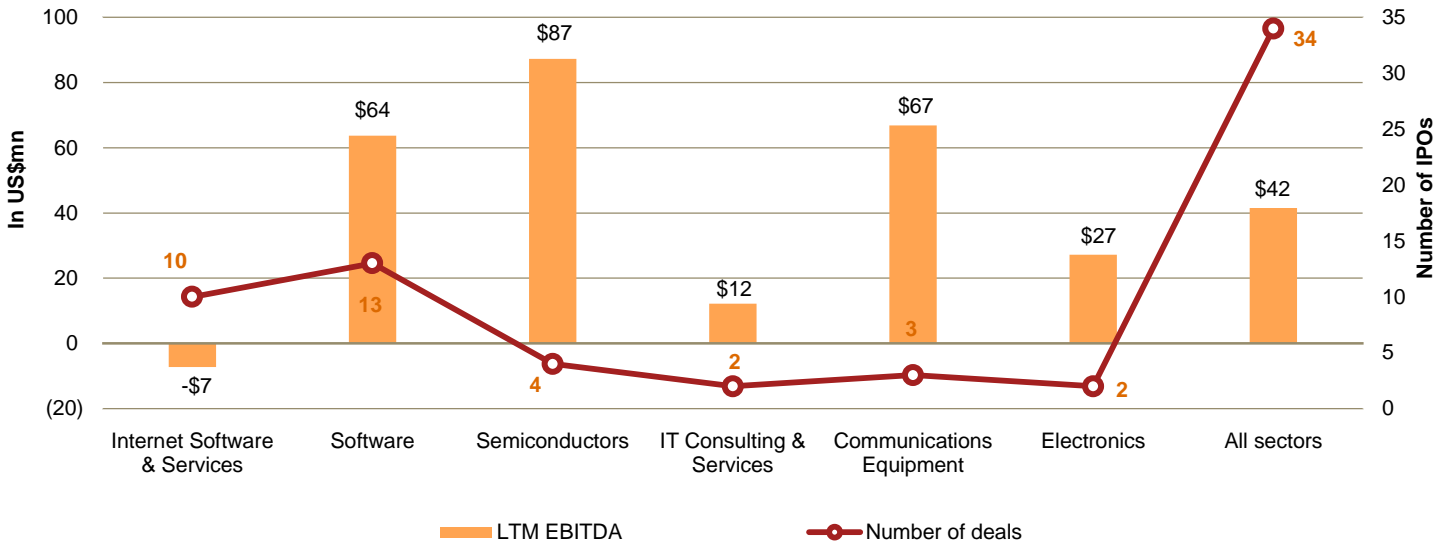
The average enterprise value of the Software subsector was the highest at US\$2.3bn, followed by the Internet Software & Services subsector at US\$2.0bn. Recent US tech IPOs have been in the Software and Internet Services subsectors. The booming US markets coupled with pre-IPO VC and PE investments led to extremely high valuations for companies in these two subsectors across the world.

**Figure 45: Q4 2014 – Average LTM revenue**



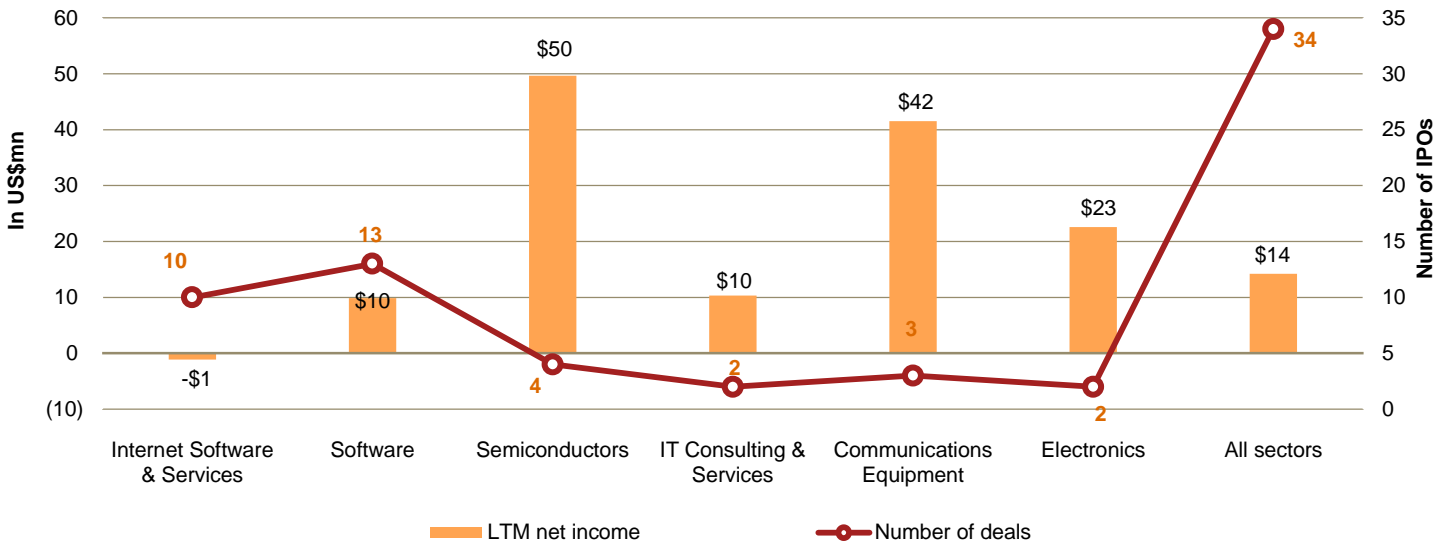
Source: Dealogic with analysis by PwC.

Figure 46: Q4 2014 – Average LTM EBITDA



Source: Dealogic with analysis by PwC.

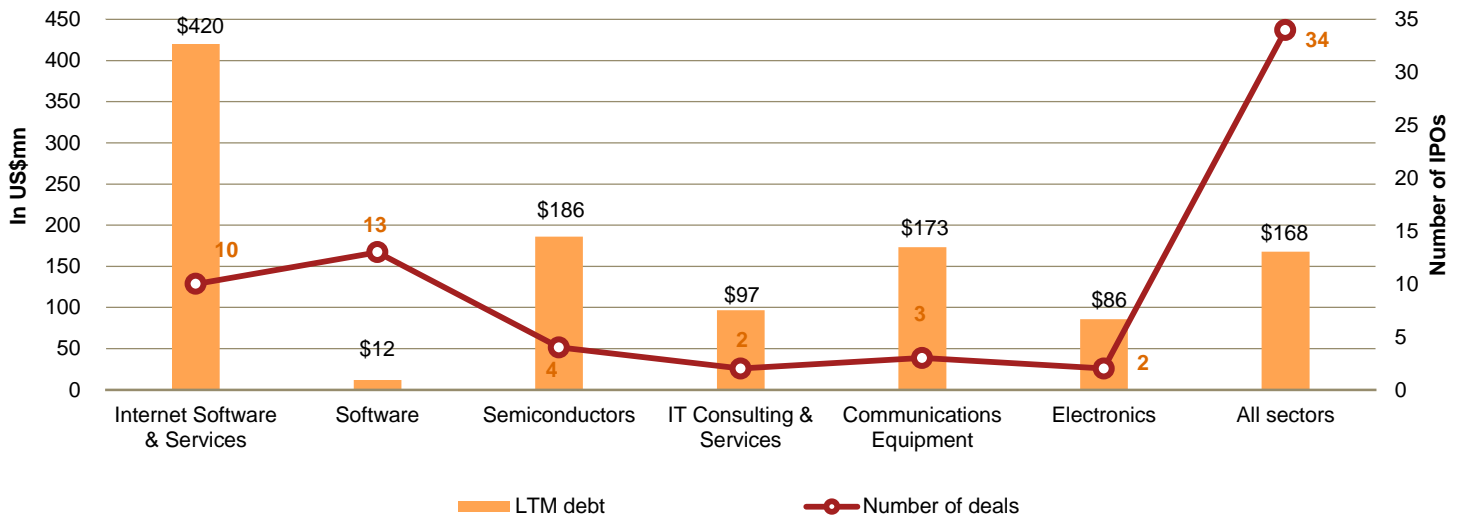
Figure 47: Q4 2014 – Average LTM net income



Source: Dealogic with analysis by PwC.

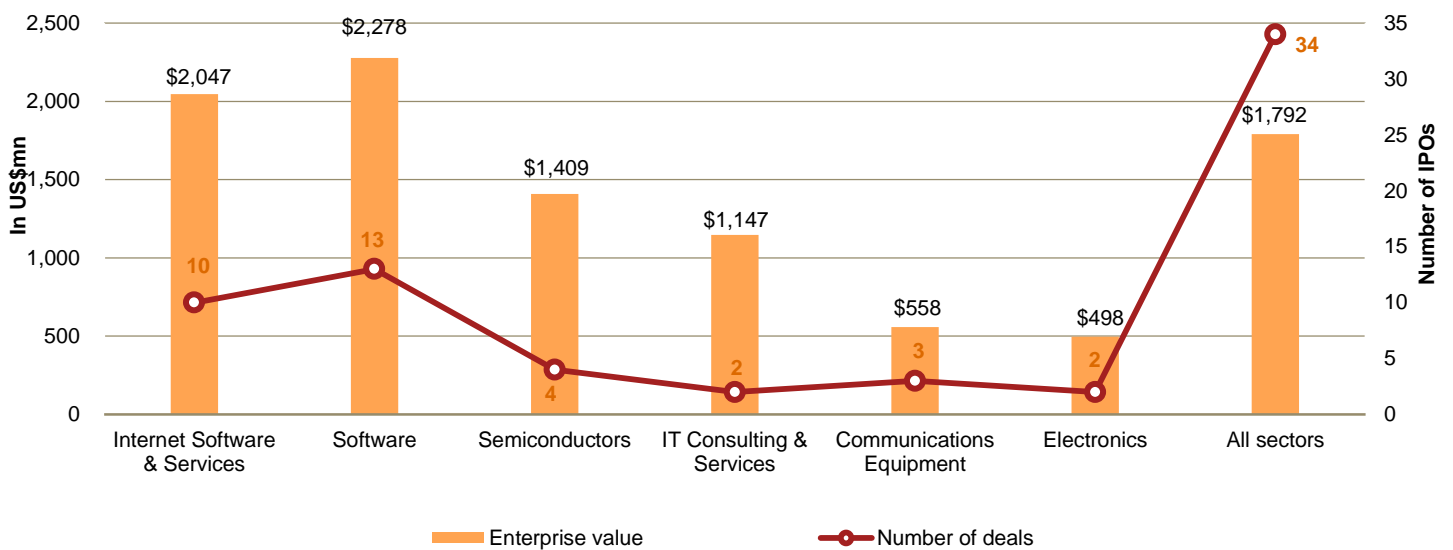


Figure 48: Q4 2014 – Average total debt



Source: Dealogic with analysis by PwC.

Figure 49: Q4 2014 – Average enterprise value



Source: Dealogic with analysis by PwC.

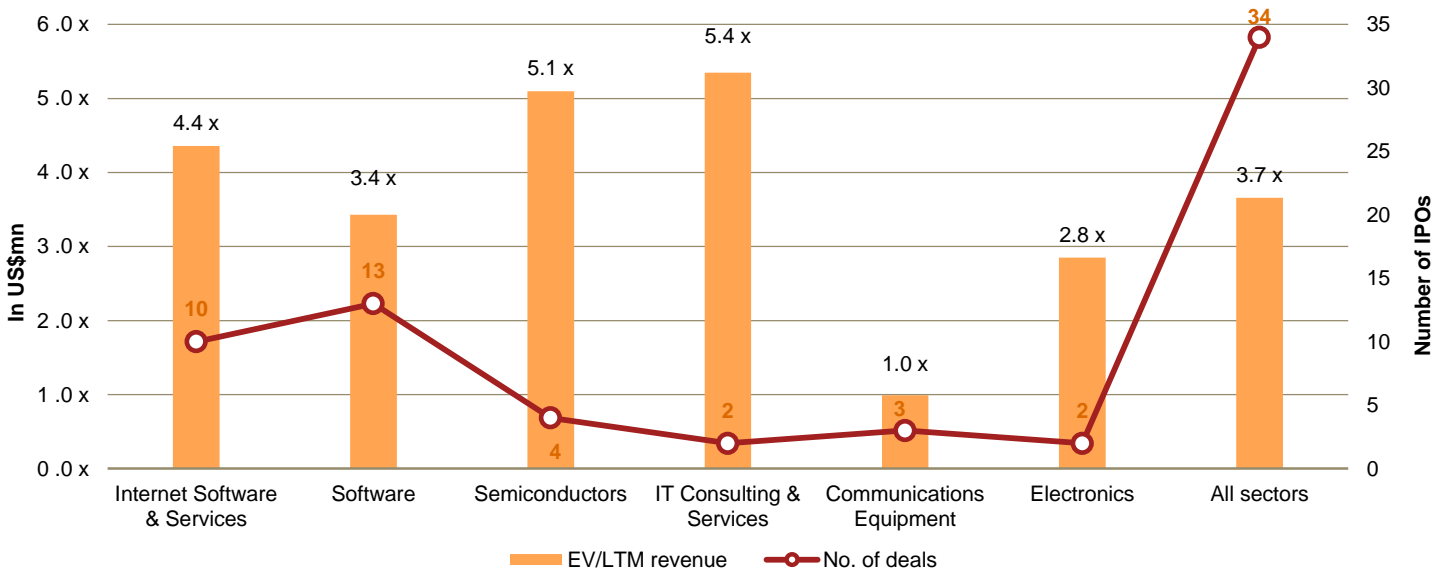
## Valuation metrics

The technology industry is undergoing an upward valuation shift with more positive investor sentiment towards the sector. Leading the valuation story are major Internet Software & Services companies that are listing with overly high valuations, based on rapid revenue growth but without a positive bottom line. Pre-IPO funding has also changed the market dynamics with easy money being available from VCs and PEs and even hedge funds coming into the fray.

The average EV/LTM revenue for all the companies in Q4 2014 was 3.7x, which is in line with other industries. Leading the multiple metrics was the IT Consulting & Services subsector with 5.4x, followed by the Semiconductor and Internet Software & Services subsectors with 5.1x and 4.4x, respectively. Communications Equipment had the lowest multiple of 1.1x.

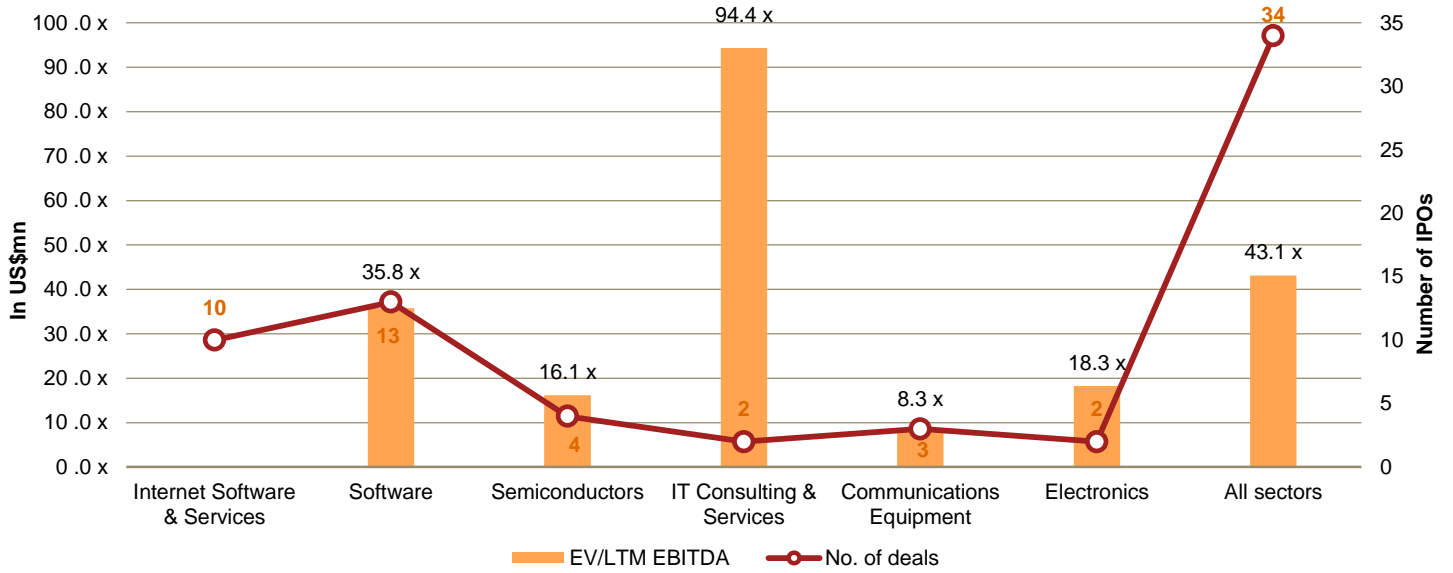
IT Consulting & Services reported the highest EV/LTM EBITDA multiple of 94.4x, followed by the Software subsector with 35.8x. The average industry multiple overall was 43.1x. Communications Equipment had the lowest multiple of 8.3x.

Figure 50: Q4 2014 EV/LTM revenue



Source: Dealogic with analysis by PwC.

Figure 51: Q4 2014 EV/LTM EBITDA



Source: Dealogic with analysis by PwC.

## Top three subsectors in Q4 2014

### Internet Software & Services

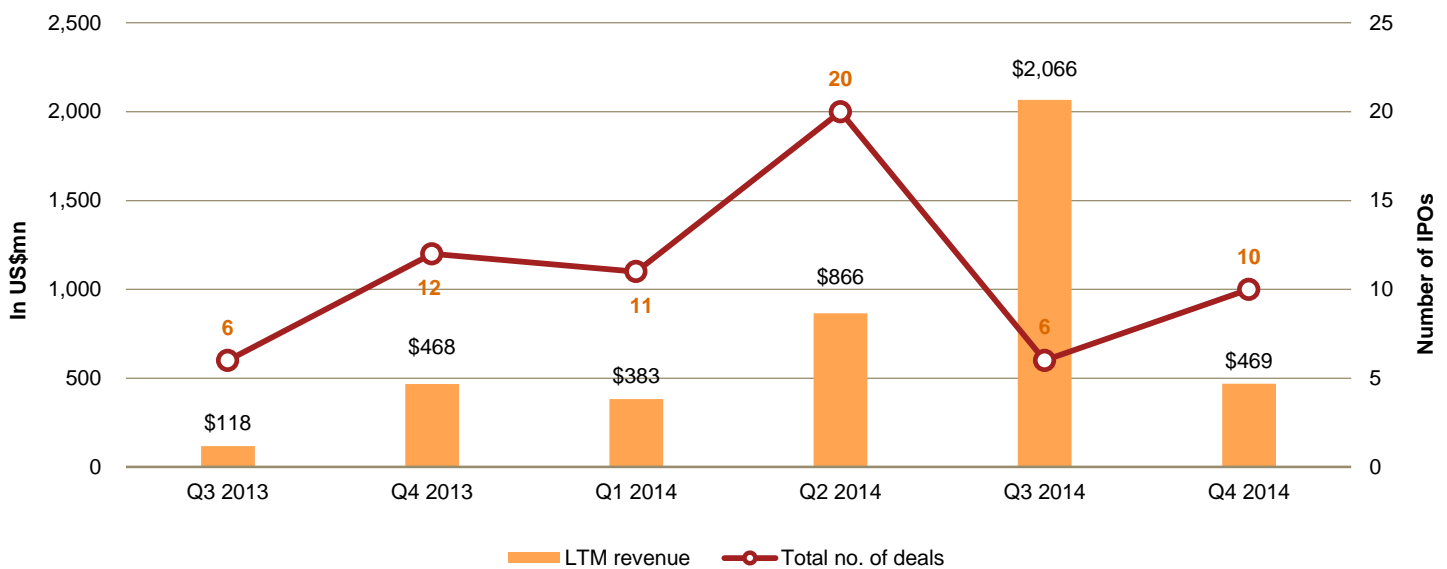
In terms of average revenue, Internet Software & Services was relatively flat year over year in the fourth quarter, but dipped sharply by 77% quarter over quarter. This drop resulted from the two big ticket IPOs in Q3—Alibaba and Travelport Worldwide—which had reported high revenue.

LTM EBITDA and net income are all in the negative in Q4 2014, compared to US\$896mn and US\$828mn, respectively, last quarter and US\$77mn and US\$13mn in Q4 2013.

Average debt levels increased sharply by US\$420mn year over year by more than 200%, but dropped compared to the last quarter.

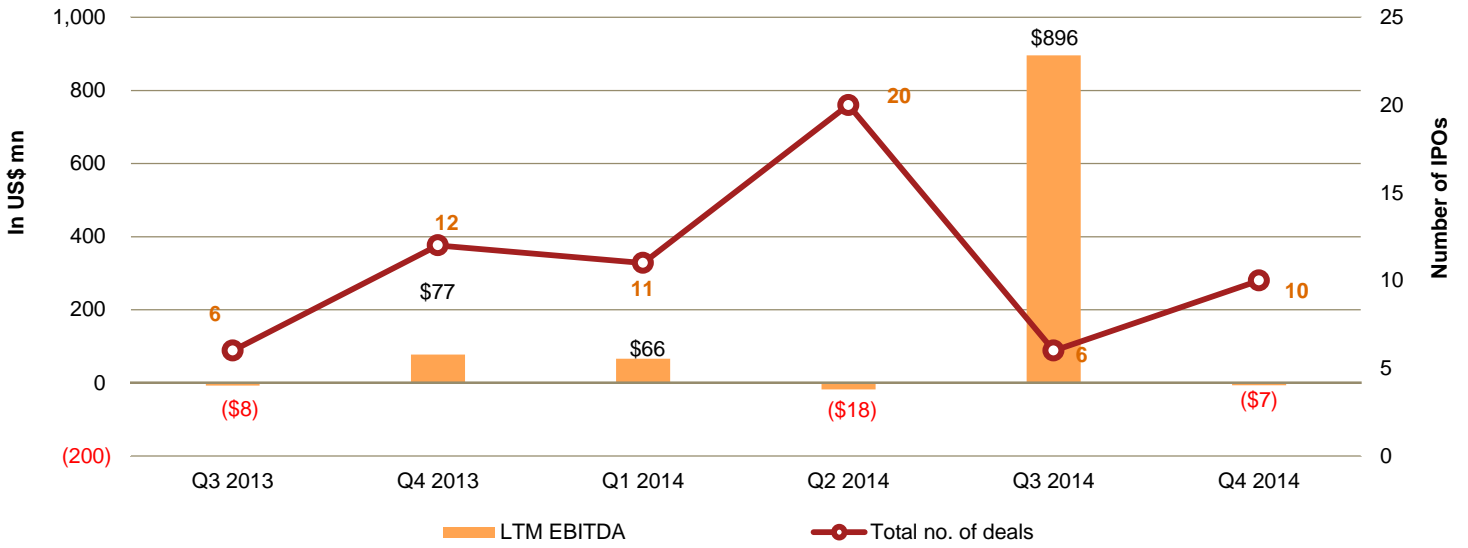
EV/LTM revenue (4.4.x) was down by 63% year-on-year and by 80% compared to the last quarter in Q4 2014.

Figure 52: Internet Software & Services – LTM revenue



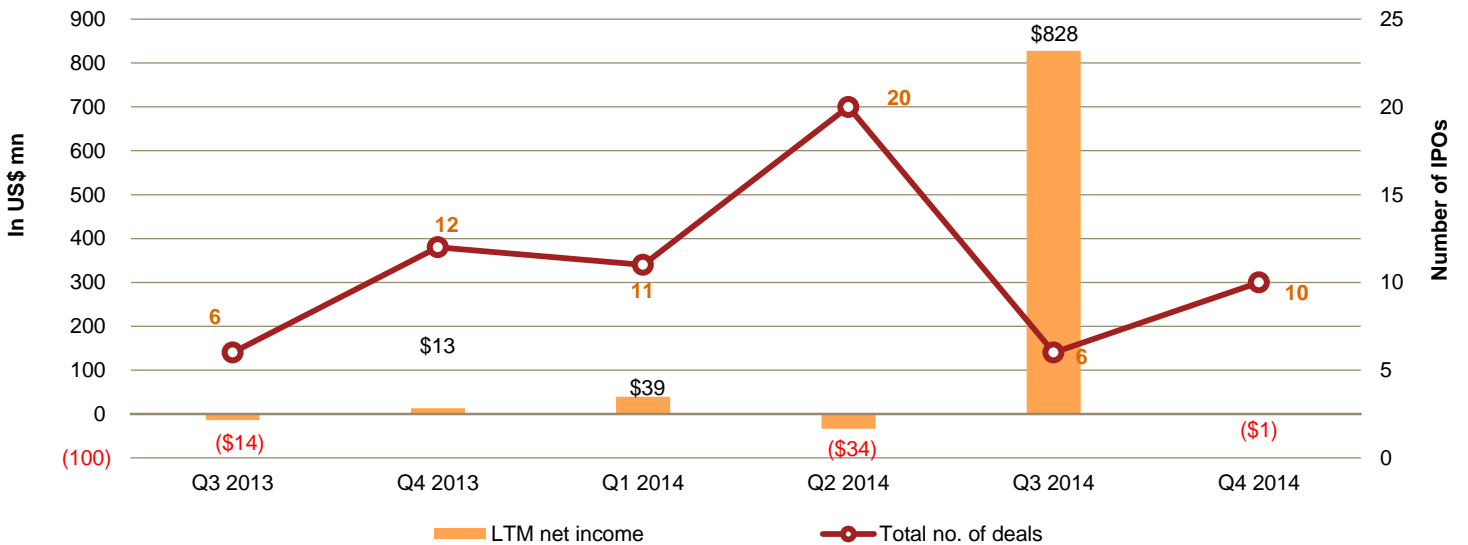
Source: Dealogic with analysis by PwC.

Figure 53: Internet Software & Services – LTM EBITDA



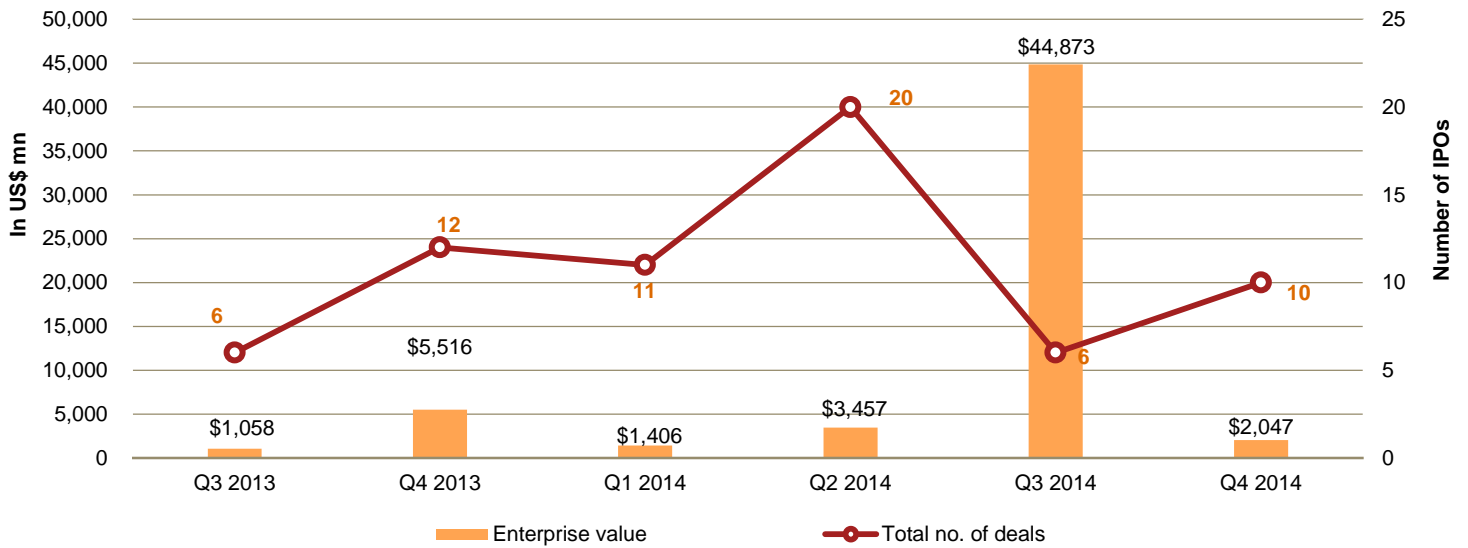
Source: Dealogic with analysis by PwC.

Figure 54: Internet Software & Services – LTM net income



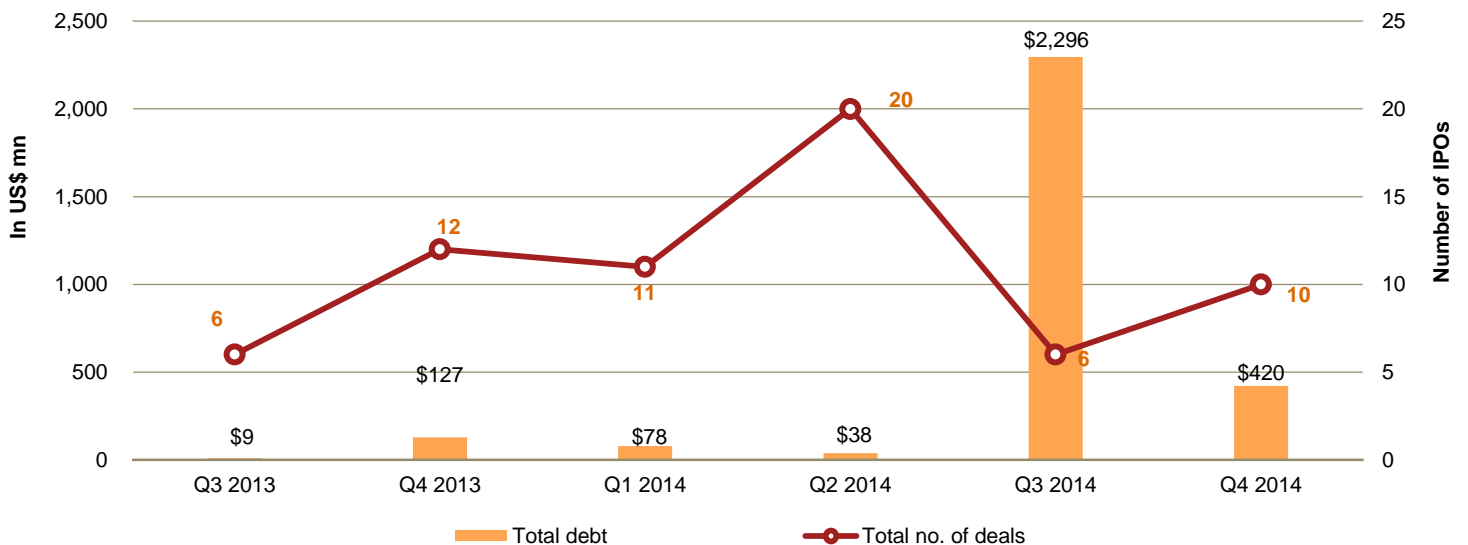
Source: Dealogic with analysis by PwC.

Figure 55: Internet Software & Services – Enterprise value



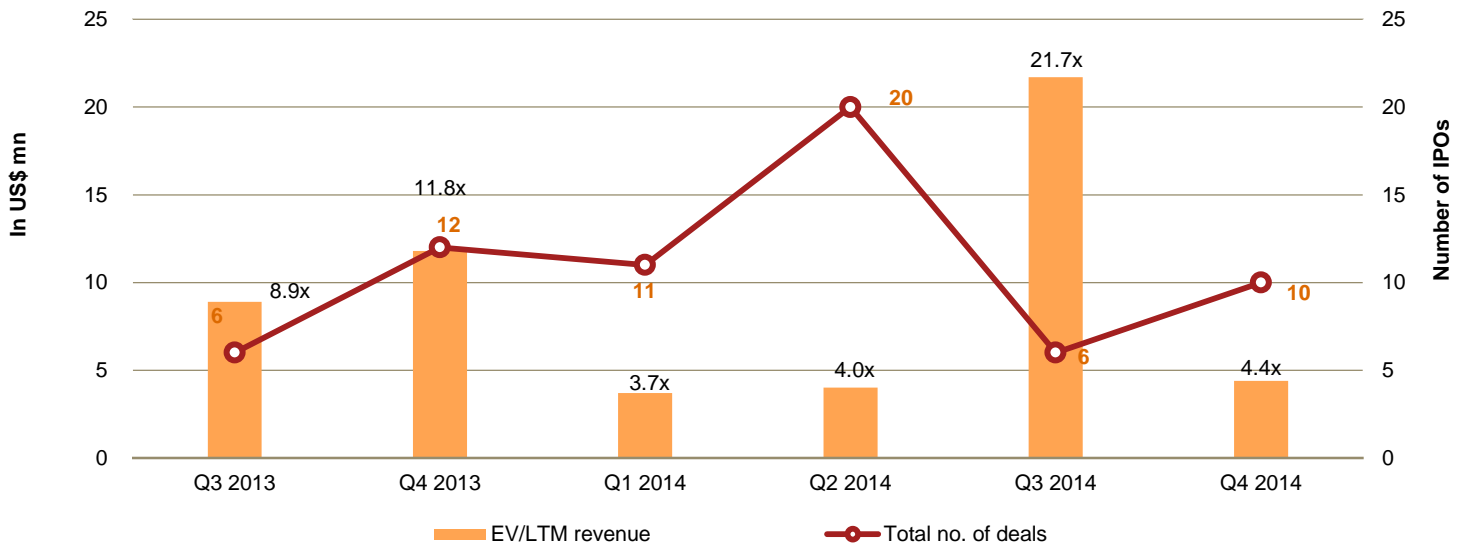
Source: Dealogic with analysis by PwC.

Figure 56: Internet Software & Services – Total debt



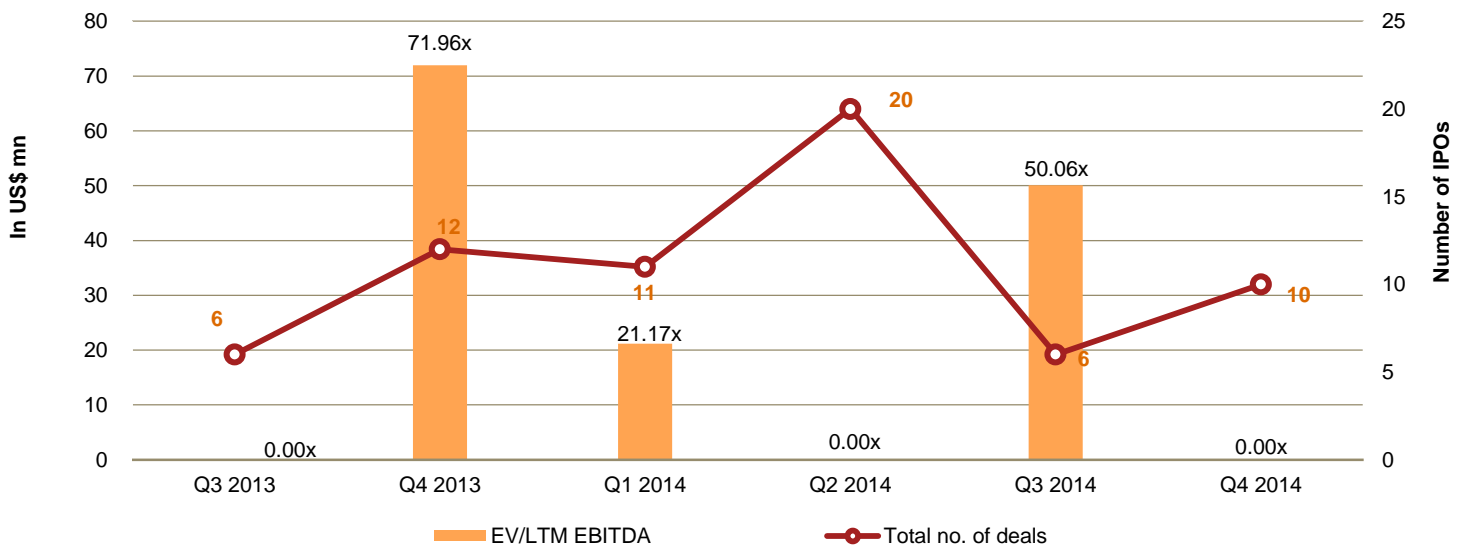
Source: Dealogic with analysis by PwC.

**Figure 57: Internet Software & Services – EV/LTM revenue**



Source: Dealogic with analysis by PwC.

**Figure 58: Internet Software & Services – EV/LTM EBITDA**



Source: Dealogic with analysis by PwC.

## Software

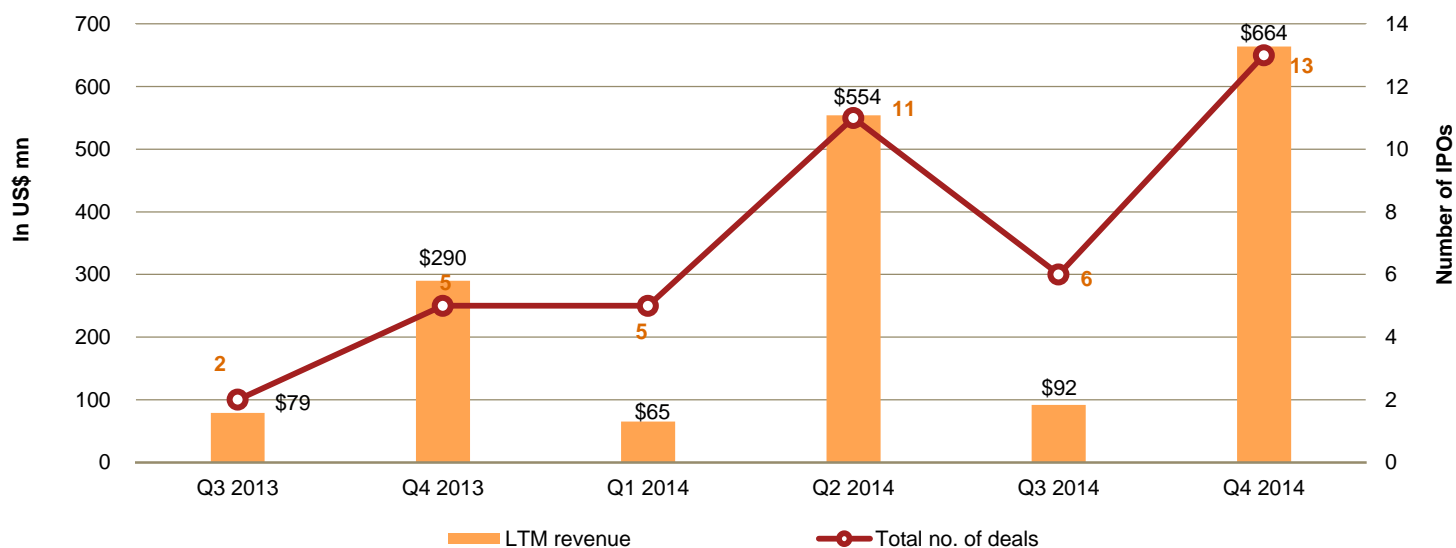
Fourth quarter average revenue of US\$664mn increased sharply sequentially (600%) and by 130% year over year. Compared to the last five quarters, the Software subsector reported its best performance, with the highest number of IPOs (13) in Q4 2014.

The average EBITDA and net income increased sharply quarter over quarter due to a very low average EBITDA and net income in Q3 2014. The average EBITDA and net income of US\$64mn and US\$10mn in Q4 2014 dropped by 20% and 147% year over year.

Average EV was flat quarter over quarter but dropped by 33% year over year to US\$2.2bn from US\$3.3bn. For the Software subsector, the debt levels were traditionally low and the average debt has dipped further in the last two quarters. An influx of funding has also positively contributed to keeping debt low; year over year, debt levels decreased by 93%.

The valuation multiples of EV/LTM revenue (3.4x) and EV/LTM EBITDA (35.8x) decreased by 70.7% and 15.5%, respectively, compared to the last year, and by 87% and 86% sequentially.

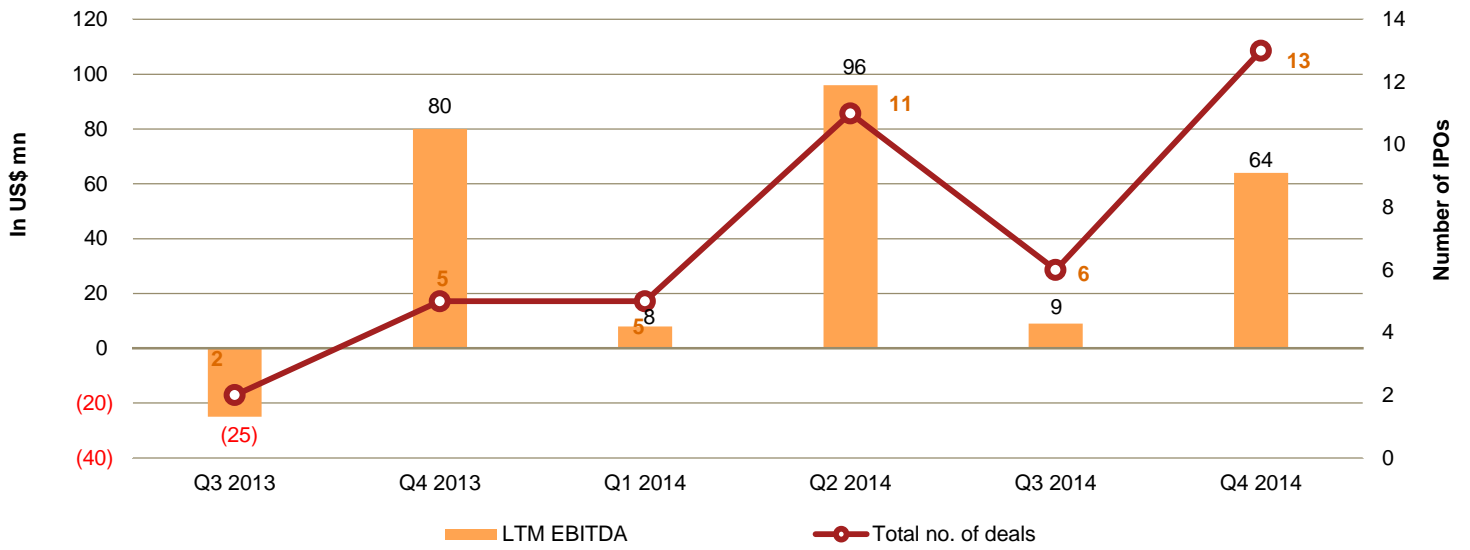
Figure 59: Software – LTM revenue



Source: Dealogic with analysis by PwC.

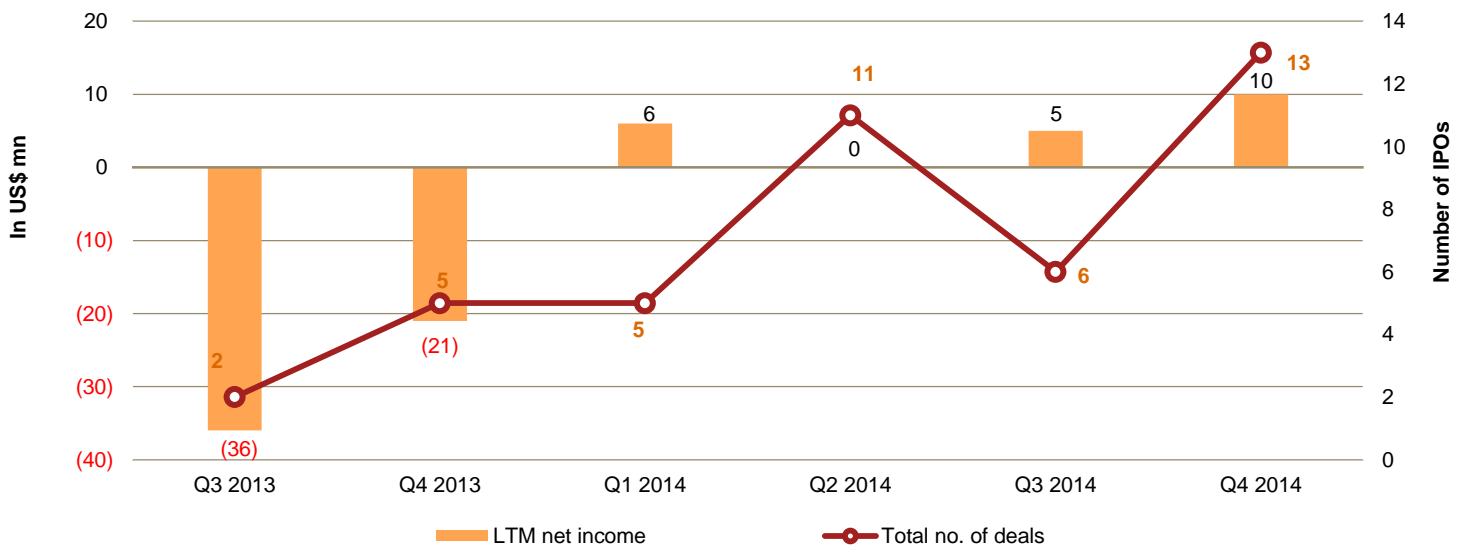


**Figure 60: Software – LTM EBITDA**



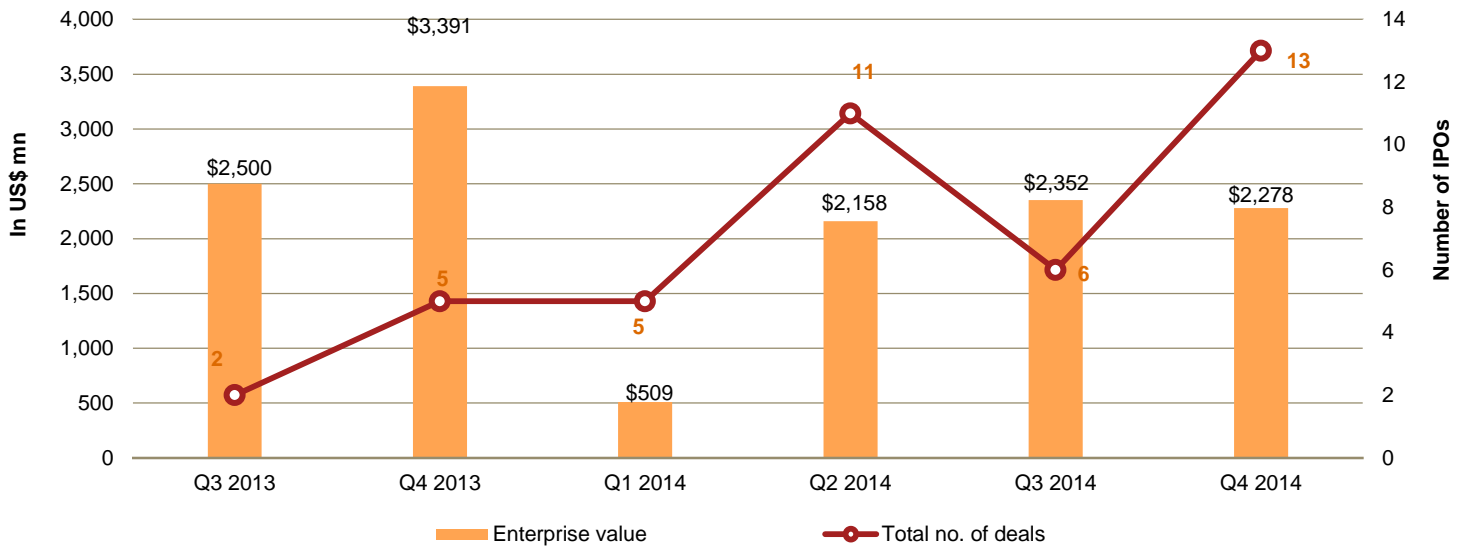
Source: Dealogic with analysis by PwC.

**Figure 61: Software – LTM net income**



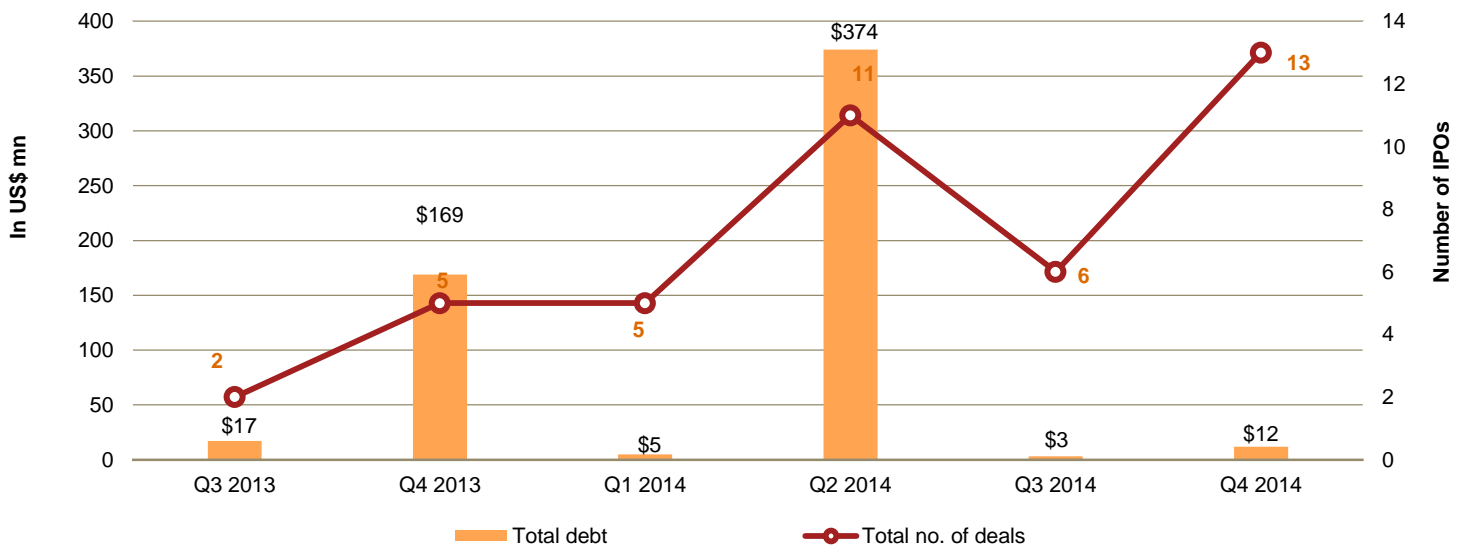
Source: Dealogic with analysis by PwC.

**Figure 62: Software – Enterprise value**



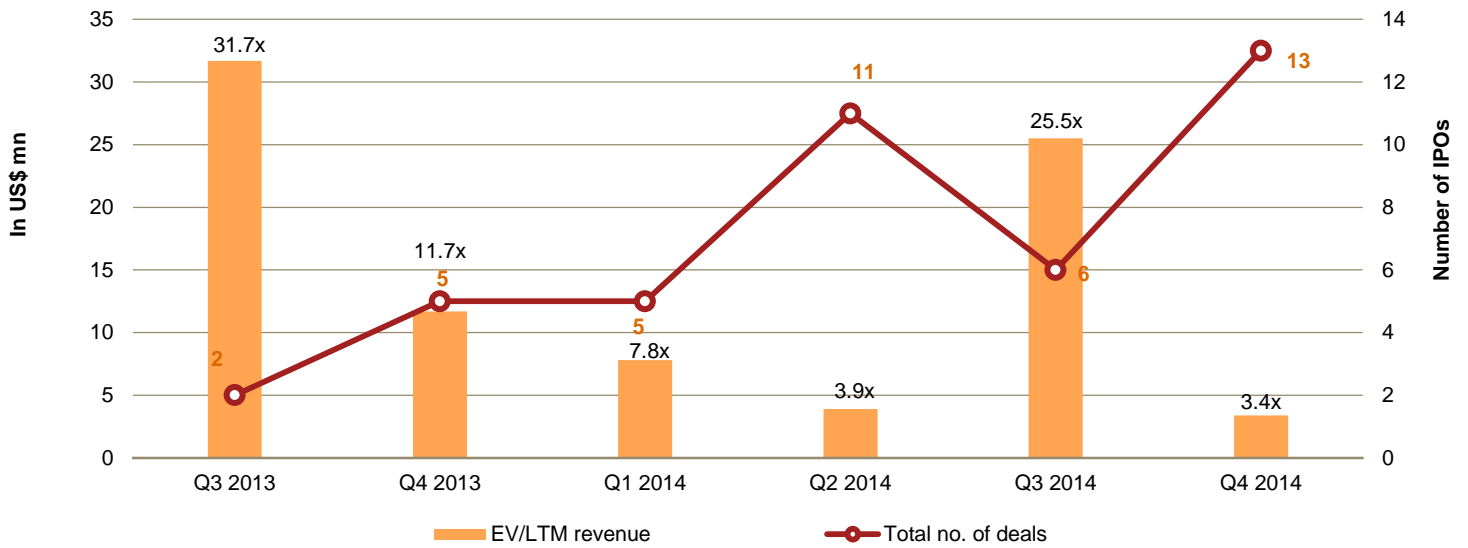
Source: Dealogic with analysis by PwC.

**Figure 63: Software – Total debt**



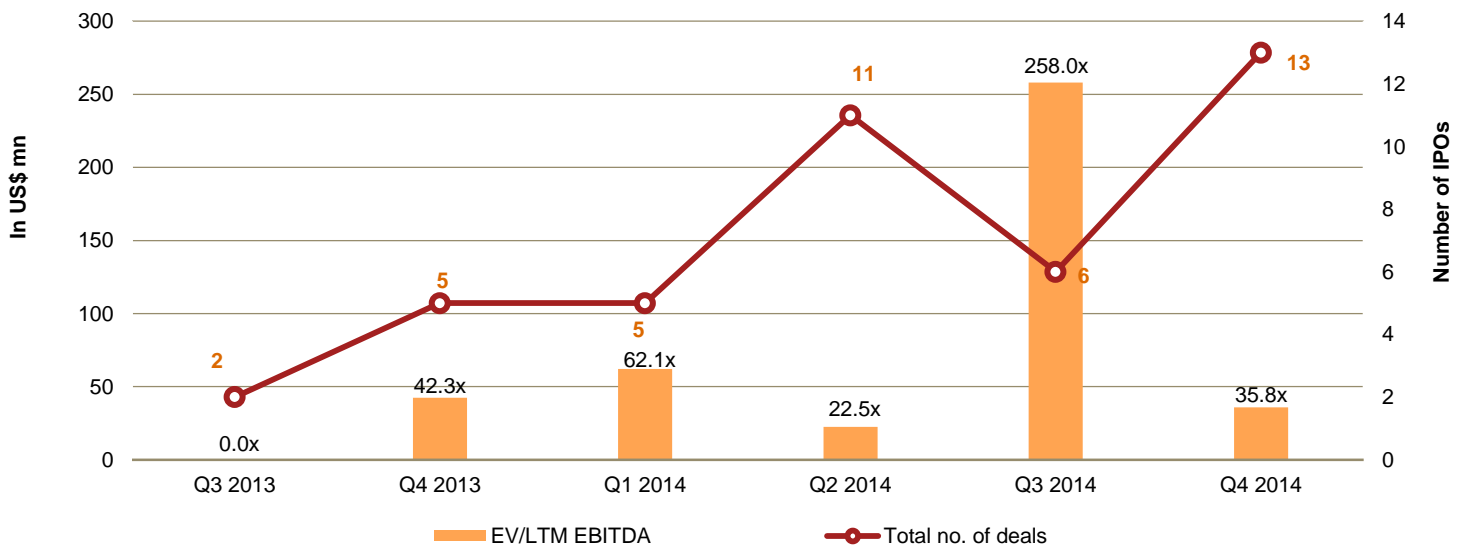
Source: Dealogic with analysis by PwC.

Figure 64: Software – EV/LTM revenue



Source: Dealogic with analysis by PwC.

Figure 65: Software – EV/LTM EBITDA



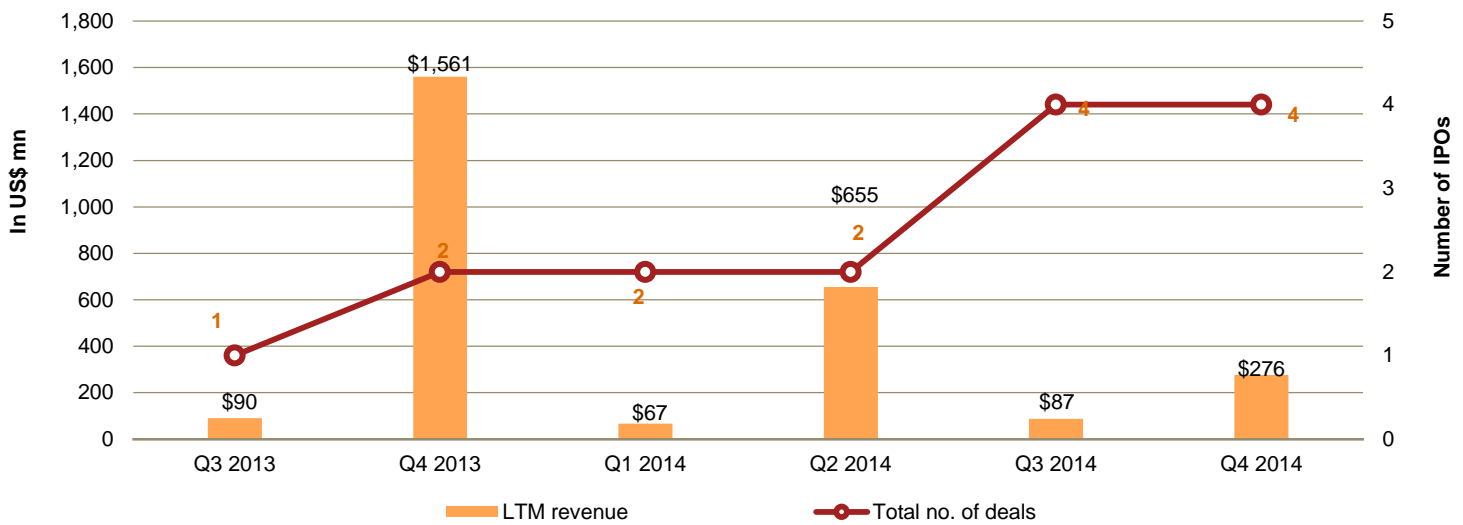
Source: Dealogic with analysis by PwC.

## Semiconductor

The Semiconductor subsector saw a more than 200% rise in average revenue compared to the last quarter, but dropped by 82% year over year. Average EBITDA also increased by more than 200% quarter over quarter. The resurgence of the Chinese IPO market and easing of policies have had a positive impact on the Semiconductor subsector which saw 12 IPOs in 2014 compared to four in 2013.

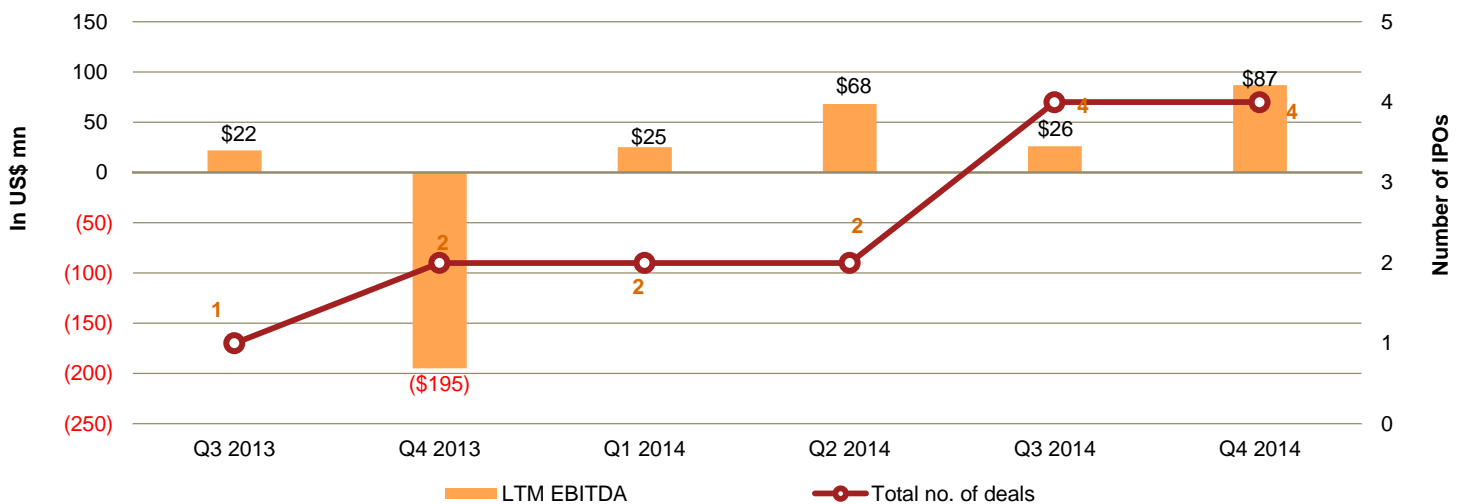
The average EV also jumped by more than 100% quarter over quarter, but it was still more fundamentally driven, and the EV multiples were reasonable and in line with industry standards of EV/revenue and EV/EBITDA of 5.1x and 16.2x, respectively. Both these valuation multiples were lower than the last quarter.

Figure 66: Semiconductor – LTM revenue



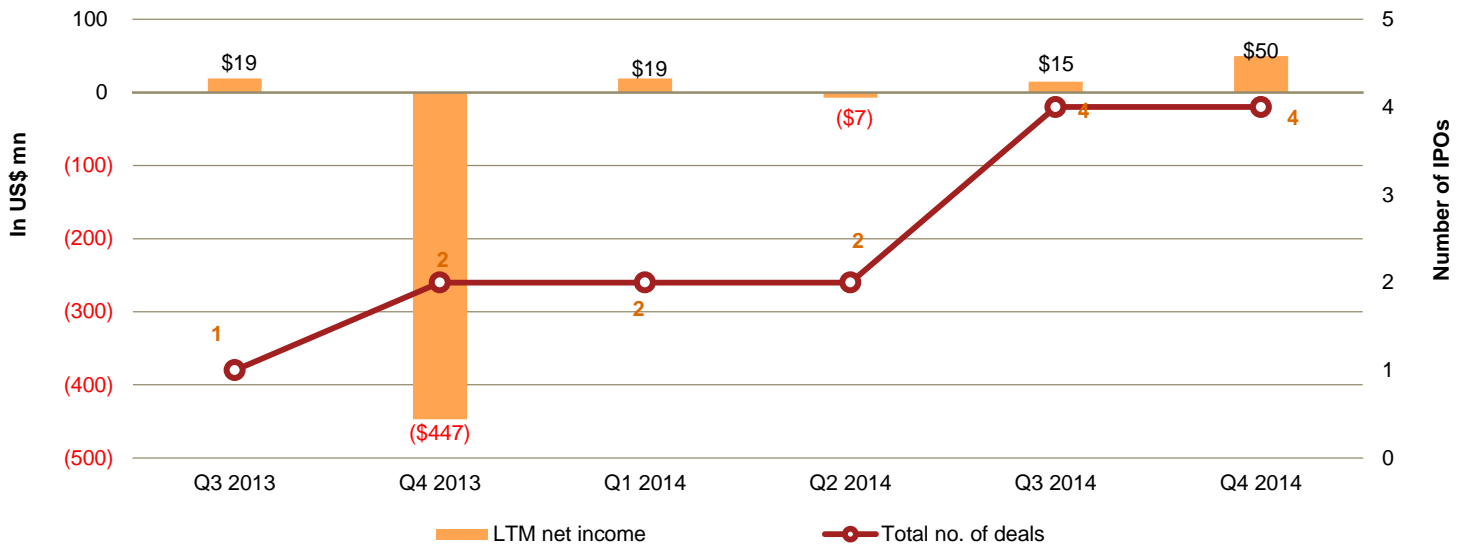
Source: Dealogic with analysis by PwC.

Figure 67: Semiconductor – LTM EBITDA



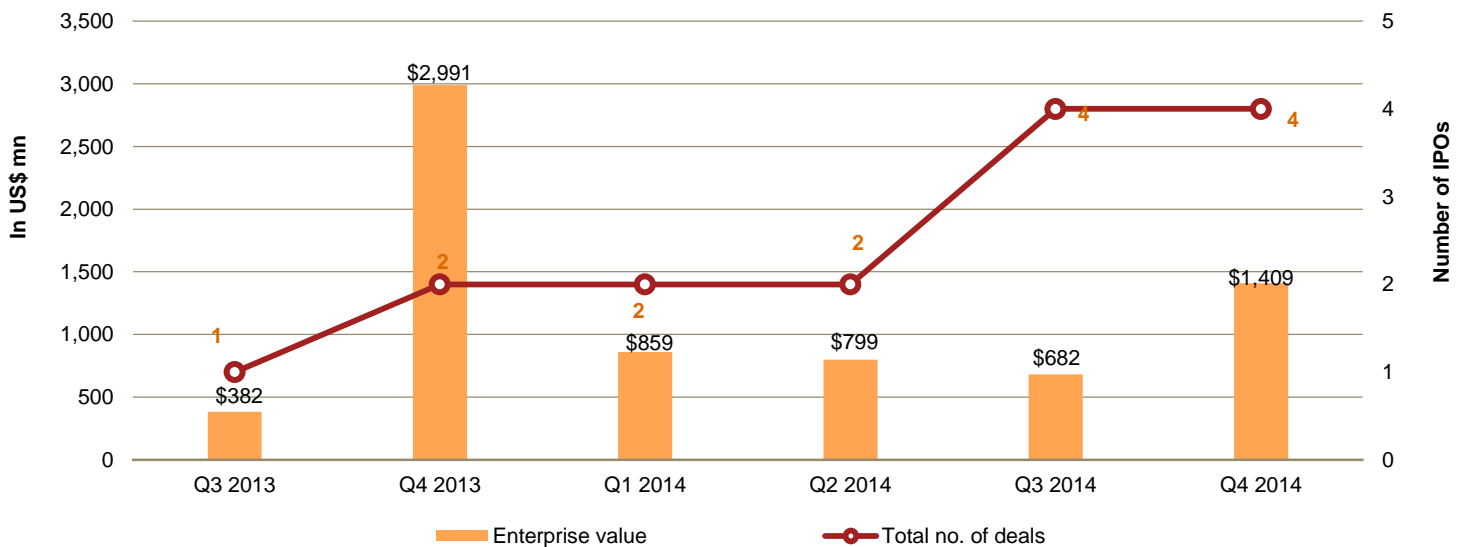
Source: Dealogic with analysis by PwC.

**Figure 68: Semiconductor – LTM net income**



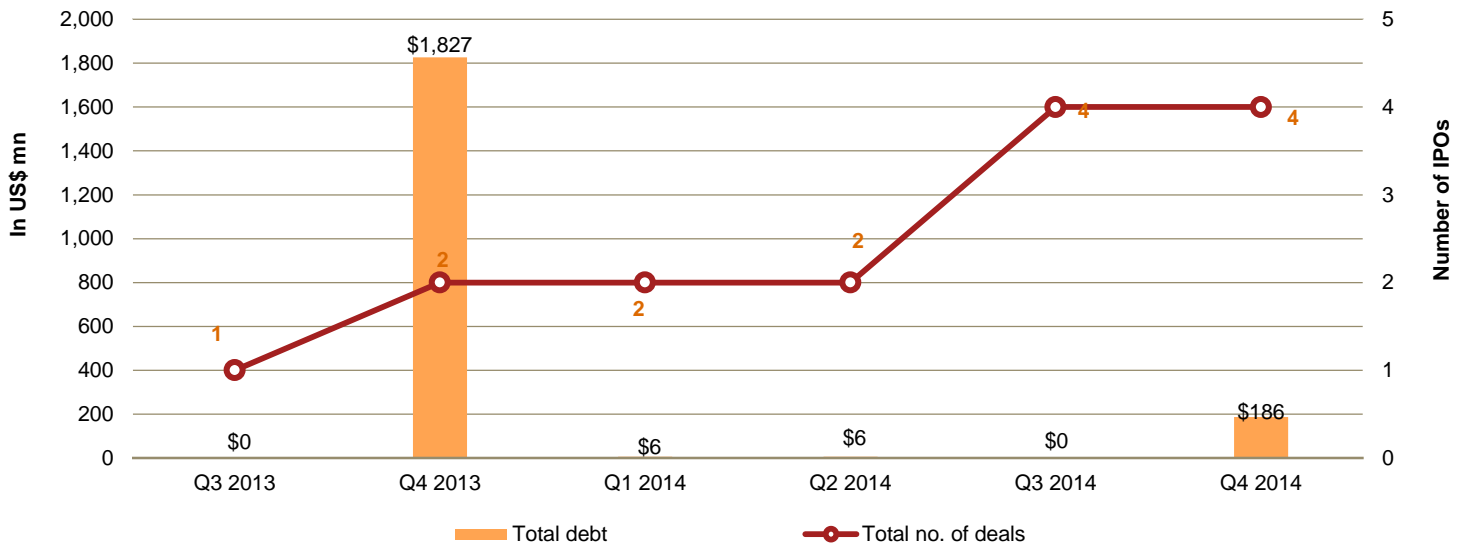
Source: Dealogic with analysis by PwC.

**Figure 69: Semiconductor – Enterprise value**



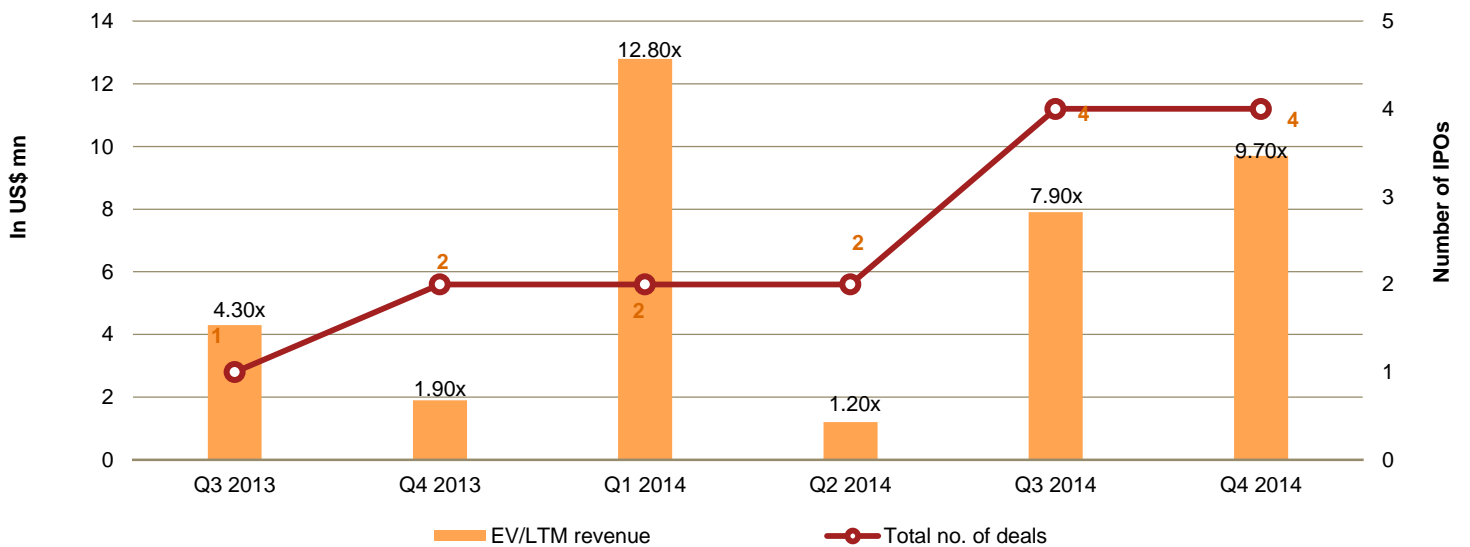
Source: Dealogic with analysis by PwC.

**Figure 70: Semiconductor – Total debt**



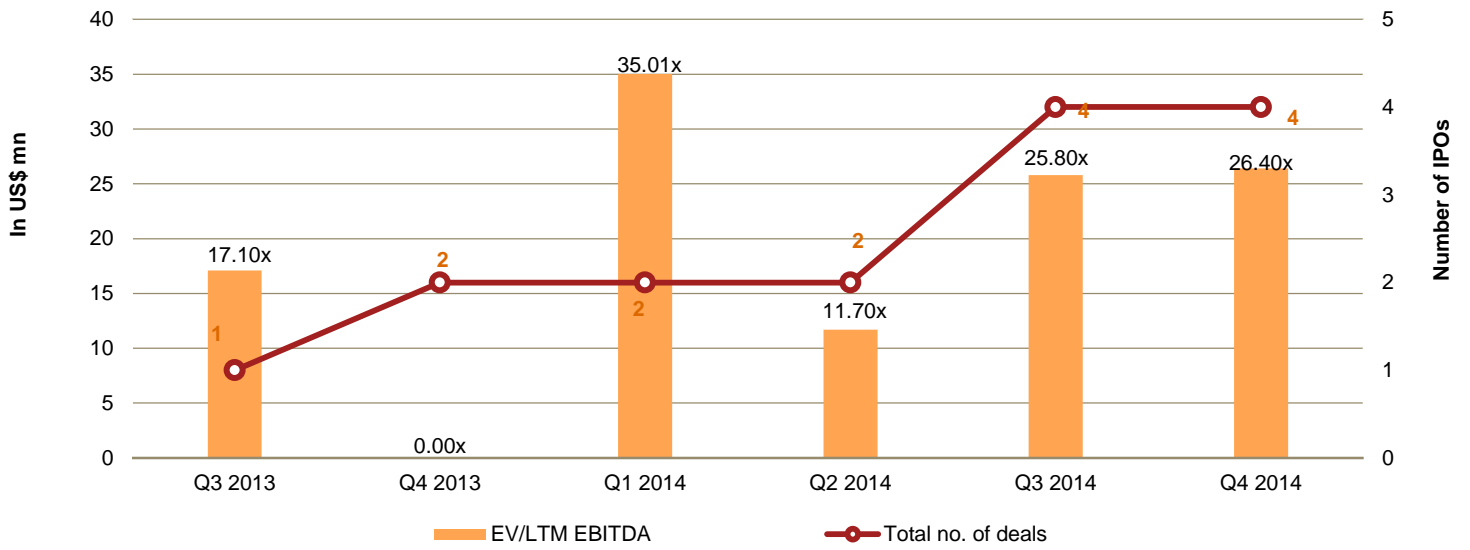
Source: Dealogic with analysis by PwC.

**Figure 71: Semiconductor – EV/LTM revenue**



Source: Dealogic with analysis by PwC.

Figure 72: Semiconductor – EV/LTM EBITDA



Source: Dealogic with analysis by PwC.

# Methodology

The Global Technology IPO Review for Q4 and full-year 2014 is based on PwC's analysis of transaction data extracted from Dealogic. The analysis considers IPOs across all countries worldwide during the period 1 October 2014 to 31 December 2014 (Q4), 1 January 2014 to 31 December 2014 (full-year) and from 2010-2014. Financial data was also obtained from Dealogic.

The definition of the Technology sector is based on the Dealogic database industry classifications and includes the following subsectors:

- Internet Software & Services
- IT Consulting & Services
- Professional Services (e.g., Application Software, Software Solutions)
- Semiconductors
- Software
- Computer Storage & Peripherals
  - Computer, Computer Peripheral Equipment
  - Computer Storage Device Manufacturing
- Electronic Computer Manufacturing
- Communications Equipment

Only IPOs with issue size greater than US\$40mn were included in the analysis.

All monetary amounts are in US dollars unless otherwise indicated.

mn – millions

bn - billions

LTM – Last twelve months

\* Figures are rounded



---

## For more information

If you would like to discuss how these findings might impact your business or your future strategy, please reach out to any of our technology industry leaders listed below.

### **Raman Chitkara**

Global Technology Leader

Phone: 1 408 817 3746

Email: [raman.chitkara@us.pwc.com](mailto:raman.chitkara@us.pwc.com)

### **Rod Dring – Australia**

Phone: 61 2 8266 7865

Email: [rod.dring@au.pwc.com](mailto:rod.dring@au.pwc.com)

### **Estela Vieira – Brazil**

Phone: 55 1 3674 3802

Email: [estela.vieira@br.pwc.com](mailto:estela.vieira@br.pwc.com)

### **Christopher Dulny – Canada**

Phone: 1 416 869 2355

Email: [christopher.dulny@ca.pwc.com](mailto:christopher.dulny@ca.pwc.com)

### **Jianbin Gao – China**

Phone: 86 21 2323 3362

Email: [gao.jianbin@cn.pwc.com](mailto:gao.jianbin@cn.pwc.com)

### **Pierre Marty – France**

Phone: 33 1 5657 58 15

Email: [pierre.marty@fr.pwc.com](mailto:pierre.marty@fr.pwc.com)

### **Werner Ballhaus – Germany**

Phone: 49 211 981 5848

Email: [werner.ballhaus@de.pwc.com](mailto:werner.ballhaus@de.pwc.com)

### **Sandeep Ladda – India**

Phone: 91 22 6689 1444

Email: [sandeep.ladda@in.pwc.com](mailto:sandeep.ladda@in.pwc.com)

### **Masahiro Ozaki – Japan**

Phone: 81 3 5326 9090

Email: [masahiro.ozaki@jp.pwc.com](mailto:masahiro.ozaki@jp.pwc.com)

### **Hoonsoo Yoon – Korea**

Phone: 82 2 709 0201

Email: [hoonsoo.yoon@kr.pwc.com](mailto:hoonsoo.yoon@kr.pwc.com)

### **Ilja Linnemeijer – The Netherlands**

Phone: 31 88 792 4956

Email: [ilja.linnemeijer@nl.pwc.com](mailto:ilja.linnemeijer@nl.pwc.com)

### **Yury Pukha – Russia**

Phone: 7 495 223 5177

Email: [yury.pukha@ru.pwc.com](mailto:yury.pukha@ru.pwc.com)

### **Greg Unsworth – Singapore**

Phone: 65 6236 3738

Email: [greg.unsworth@sg.pwc.com](mailto:greg.unsworth@sg.pwc.com)

### **Philip Shepherd – UAE**

Phone: 97 1 43043501

Email: [philip.shepherd@ae.pwc.com](mailto:philip.shepherd@ae.pwc.com)

### **Jass Sarai – UK**

Phone: 44 0 1895 52 2206

Email: [jass.sarai@uk.pwc.com](mailto:jass.sarai@uk.pwc.com)

### **Pierre-Alain Sur – US**

Phone: 1 646 471 6973

Email: [pierre-alain.sur@us.pwc.com](mailto:pierre-alain.sur@us.pwc.com)

### **Alan Jones - US (Deals Partner)**

Phone: 1 415 498 7398

Email: [alan.jones@us.pwc.com](mailto:alan.jones@us.pwc.com)

---

## About PwC's Technology Institute

The Technology Institute is PwC's global research network that studies the business of technology and the technology of business with the purpose of creating thought leadership that offers both fact-based analysis and experience-based perspectives. Technology Institute insights and viewpoints originate from active collaboration between our professionals across the globe and their first-hand experiences working in and with the technology industry.

## About PwC

PwC firms help organisations and individuals create the value they're looking for. We're a network of firms in 157 countries with more than 195,000 people who are committed to delivering quality in assurance, tax and advisory services. Tell us what matters to you and find out more by visiting us at <http://www.pwc.com/>

