

# *Global Technology IPO Review Full-year and Q4 2015*

*Technology Institute*

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

*February 2016*



# *A resilient end to 2015, but momentum may not be sustained\**



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

Welcome to the full-year and fourth quarter 2015 issue of PwC's Global Technology IPO Review. Overall, 2015 was the second best year for technology IPOs globally in the last five years with broad geographic participation. 2015 highlights:

- Rebound of Europe as a source of technology IPOs
- Broader geographical distribution of IPOs with 15 countries participating
- Internet Software & Services continuing as top subsector
- Abundant pre-IPO funding supporting a healthy pipeline

The tech IPO market encountered challenges as well. Uncertainties over Federal Reserve and European monetary policies and concern over the Chinese economy led to weak and volatile markets in the US and China. Further, a large unresolved disparity between public and private market valuations tempered technology IPO activity in the second half of the year.

Overall, 2015 represented 21% of both the number of tech IPOs (92) and total proceeds (US\$27.1 billion) during the 2011-2015 period, just behind 2014 (40% and 27%, respectively). Though average proceeds were higher in both 2012 (US\$336 million) and 2014 (US\$434 million), owing to the mega Facebook and Alibaba IPOs, 2015 included a number of big-ticket (US\$1 billion plus) offerings which resulted in average proceeds of US\$295 million.

Europe had its biggest year in a decade, delivering big-ticket IPOs and broad market participation. Three of the five big-ticket tech IPOs in 2015 were from Europe, compared to two out of seven in 2014 and none in 2011, 2012 or 2013. Seven European countries participated in 2015: Denmark, Germany, Ireland, Italy, Poland, Sweden and the UK. The UK had a particularly strong year with two of the five 2015 US\$1-billion-plus tech IPOs (Auto Trader Group Plc in the first quarter and Worldpay Group Plc in the fourth quarter), and 45% of the European technology offerings.

The Internet Software & Services subsector continued to cash in on strong investor sentiment with US\$15.9 billion in proceeds and 40 listings in 2015. Tremendous upside from social media, e-commerce, and online applications across industries boosted investors' confidence. The subsector contributed 59% of total proceeds and 43% of total offerings.

In terms of geographic distribution, the US continued to lead with US\$8.4 billion in proceeds, followed by the UK at US\$7.8 billion. China posted relatively low proceeds, reflecting a more cautious approach by investors and keener focus on valuations. Shenzhen raised US\$1.5 billion from 17 IPOs and Shanghai US\$437 million from 5 IPOs.

Following a rather stable March to June, the VIX (Volatility Index) rose sharply in September, reaching a high near 30 and then came back down in October to roughly 15. It then rose and fell again in November and December to end the year at 18. The falling price of crude oil, worries about the health of the high-yield bond market, negative macro-economic indications in China, and heightening geopolitical conflict all contributed to high third and fourth quarter market volatility.

As we go into 2016 we see a number of highly anticipated tech IPOs waiting on the sidelines. There are definite headwinds for technology IPOs. First and foremost, capital markets will need to stabilize if we are to expect a healthy IPO market in 2016.

Sincerely,

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## Executive summary

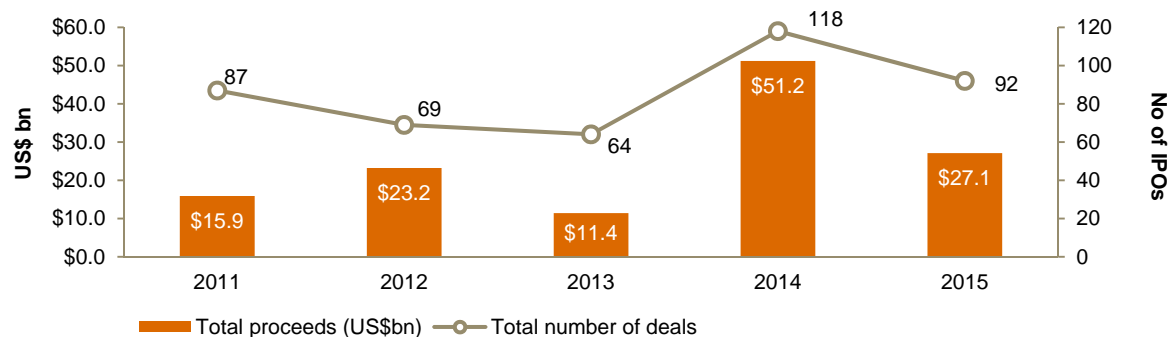
Overall, 2015 continued the trend set in 2014. It was the second best year for tech IPOs in five years in terms of amounts raised and number of listings. Global technology IPO activity was lower in 2015 than 2014 due primarily to two factors—uncertainties about Federal Reserve and European monetary policies, and concern over the Chinese economy. Ninety-two IPOs were listed with US\$27.1 billion in proceeds, a decline of 22% in terms of listings and 47% in proceeds compared to 2014. Also, with the blockbuster Alibaba IPO, 2014 was a remarkable year for tech IPOs and those numbers are unlikely to be surpassed soon. So, excluding Alibaba's proceeds, the decline in total proceeds was 8%, mainly driven by a lower number of big-ticket IPOs (five in 2015 versus seven in 2014).

US tech IPOs were relatively flat year on year, while China showed a sharp decline in proceeds and number of listings (86% and 33%, respectively). Weak and volatile markets in the US and China led to this decline. Additionally, unprecedented inflation in pre-IPO valuations as evidenced by the strong growth in number and value of “Unicorns” in 2015 created a large unresolved disparity between public and private market valuations.

<sup>1</sup> <http://www.bloomberg.com/gadfly/articles/2015-11-15/tech-ipos-aren-t-in-a-bubble>

While overall activity was down, multi-country participation was encouraging. Asia (ex-China) and Europe had a strong IPO presence with 14 and 20 IPOs, respectively. There is evidence that some companies in these regions wishing to list are considering doing so at a lower valuation than their last private funding round which will help to correct the disparity between private and public valuations. <sup>1</sup>

Figure 1: Global technology IPOs 2011-2015



Source: S&P Capital IQ with analysis by PwC

***“Despite continued market volatility and global economic concerns, the accelerating pace of technological change across all industries helped to buoy global technology IPO activity in the fourth quarter and led to the second best year since 2010. While we can expect to see fewer technology IPOs until volatility subsides, it’s too early to say whether 2016 will mean a pullback across the technology sector as a whole.”***

**– Raman Chitkara**

Global Technology Industry Leader, PwC US

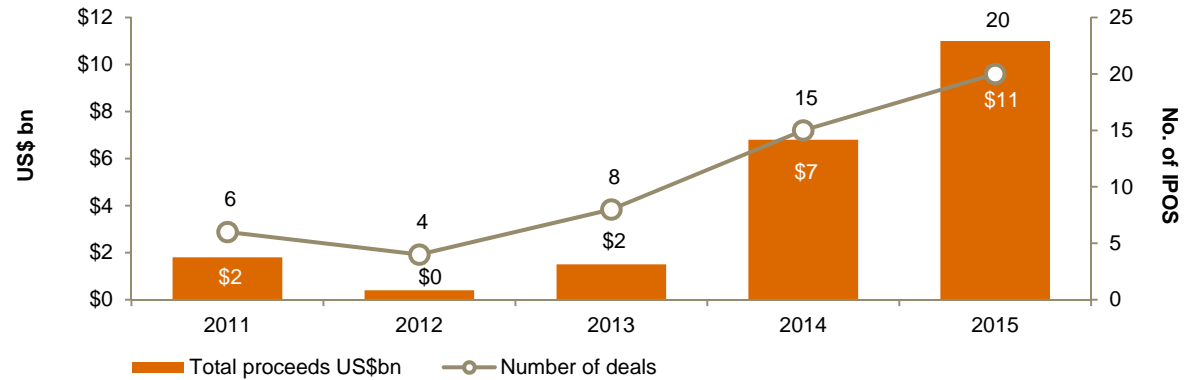


## European tech IPO activity surges in 2015

Posting the strongest performance in the last decade, across Europe there were 20 tech IPOs with proceeds of US\$11 billion. Three big-ticket IPOs with more than US\$1 billion each in proceeds, two from the UK and one from Germany, were listed by Auto Trader Group Plc in the first quarter, Scout24AG in the third quarter, and Worldpay Group Plc in the last quarter. All Internet Software & Services companies, they contributed to the momentum in tech IPOs in Europe. In fact, the Internet Software & Services subsector made up 55% of tech IPOs in Europe compared to 43% globally, and they represented 83% of proceeds in Europe compared to 59% globally in 2015.

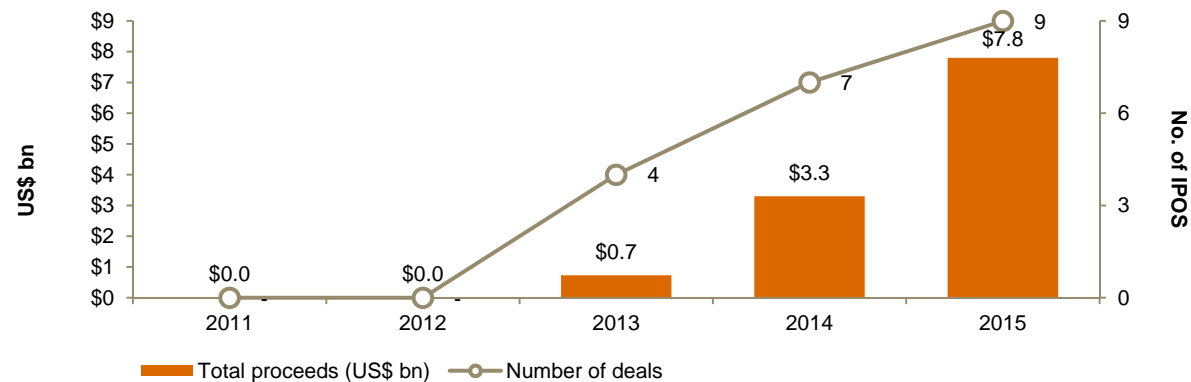
The UK posted the strongest performance in Europe, raising US\$7.8 billion from nine offerings, five of which occurred in the fourth quarter. This was followed by Sweden with US\$542 million and four tech IPOs, Germany with US\$2.1 billion and three offerings, and one each in Denmark, Ireland, Italy, and Poland with aggregate proceeds of US\$558.3 million.

Figure 2: 2011-2015 Full-year European tech IPOs



Source: S&P Capital IQ with analysis by PwC

Figure 3: 2011-2015 Full-year UK tech IPOs



Source: S&P Capital IQ with analysis by PwC



**“Having two of the largest tech IPOs of the year demonstrates the strength and confidence in the UK technology market. Further, we see a healthy, growing pipeline in the UK and across Europe. Though markets have been volatile, the generally good performance of these companies post-IPO suggests we may see continued strength into 2016.”**

– Jass Sarai

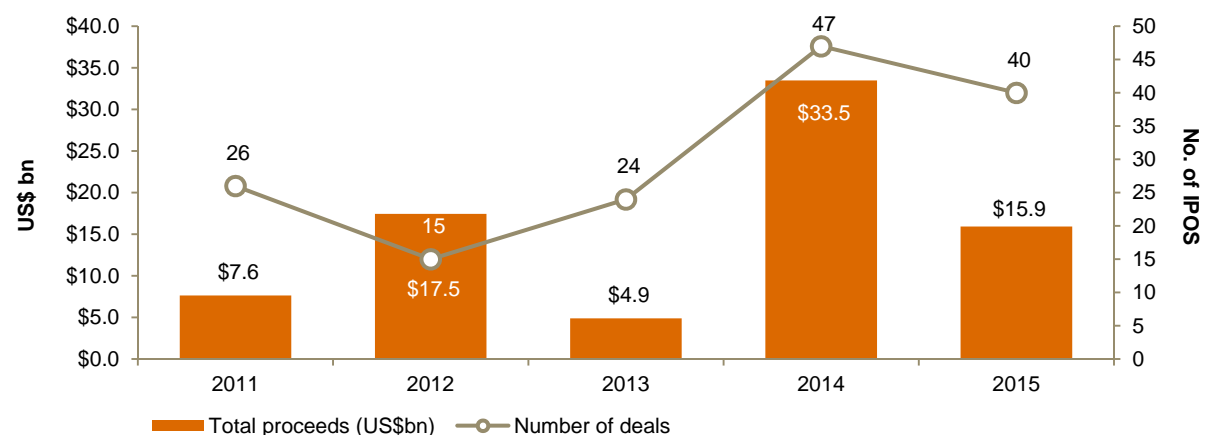
European Technology, Media and Telecom Industry Leader, PwC UK

### ***Social, e-commerce and mobile applications led to continued prominence of Internet Software & Services IPOs***

From the subsector perspective, Internet Software & Services maintained its top position raising US\$15.9 billion in 2015 with 40 listings. It contributed 59% of the total proceeds and 43% of the total offerings as compared to 65% of the proceeds and 40% of offerings in 2014. The dip in proceeds' share was impacted by the Alibaba IPO in 2014. Of the total number of technology companies listed in the last five years (above US\$40 million), 35% were from the Internet Software & Services sector and contributed 62% of the total amount raised. These companies have also enjoyed a premium valuation from private funding as investors are attracted to companies disrupting established players. Both retail and institutional investors expect significant upside from these companies.

Even with the impressive results, there is a significant pipeline of Internet Software & Services companies on the sideline.

**Figure 4: 2011-2015 Full-year Internet Software & Services IPOs**



Source: S&P Capital IQ with analysis by PwC



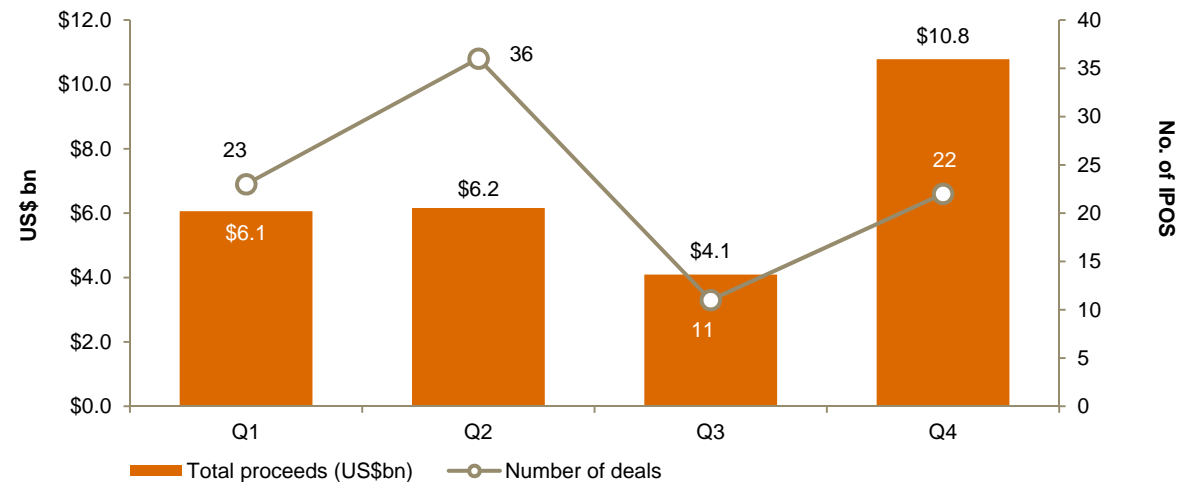
## Full-year 2015 tech IPO summary

The global tech IPO market in 2015 was the second best year in the 2011-15 period with 92 listings and US\$27.1 billion in proceeds. The last quarter drove the proceeds to this level after a relatively modest previous three quarters. Q4 2015 had reported average proceeds of US\$490.2 million, bolstered by the two largest tech IPOs of the year: Worldpay Group Plc (US\$3.8 billion on the London Stock Exchange) and First Data Corp (US\$2.6 billion on the New York Stock Exchange).

The third quarter was the slowest in 2015 with only 11 IPOs and proceeds of US\$4.1 billion. This lackluster show was due to subdued activity in the US and China, led by unstable monetary policy in the US as well as macro-economic turmoil and listing restrictions imposed in China.

IPO activity gained pace in the fourth quarter of 2015 due to the return of both US and China tech IPOs which were virtually absent in the third quarter. In the case of China, the freeze on IPOs put in place in the third quarter by the Chinese Securities and Regulatory Commission was lifted in November. For the US, volatile market activity in the third quarter led to companies delaying their listings to the fourth quarter or beyond.

Figure 5: Full-year 2015 global technology IPOs



Source: S&P Capital IQ with analysis by PwC

***“Market volatility notwithstanding, in 2015 proceeds from US technology IPOs increased to the highest total since 2012. Despite the general election and the US IPO market cooling in the first quarter, we still expect a number of technology companies to come to market in 2016.”***

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



## Full-year 2015 tech IPOs – Geographic distribution

In 2015, technology IPOs were geographically well-distributed with 15 countries participating. In terms of proceeds, the US led with US\$8.4 billion, followed by the UK with US\$7.8 billion. This was somewhat a surprise entry by the UK into the second spot, replacing China, and though the US garnered the highest proceeds, average offering size (US\$365 million) was significantly lower than both the UK and Germany (US\$868 million and US\$692, respectively), owing to the three US\$1-billion-plus offerings listed by those countries. Volatile markets in the US and high private valuations virtually halted IPO activity in the US in the third quarter.

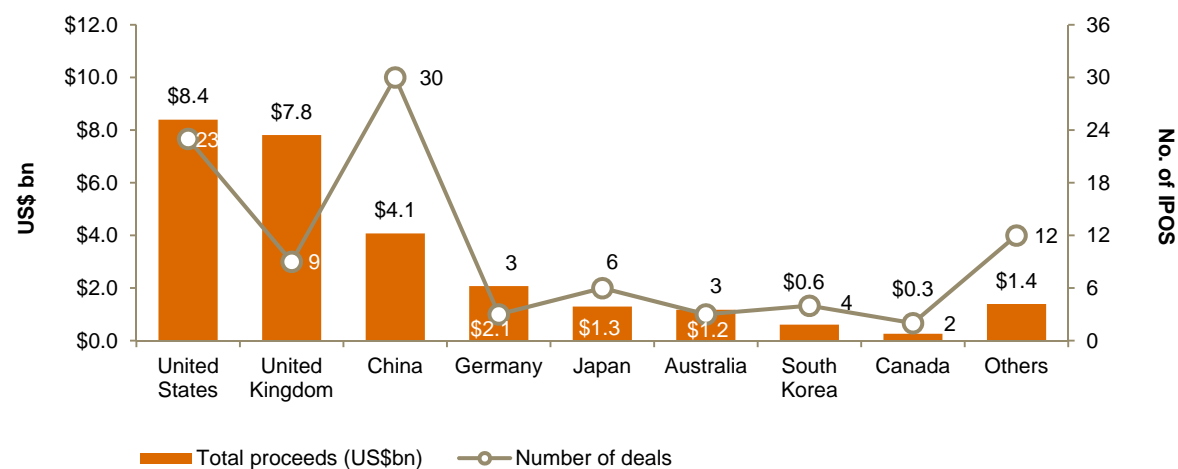
The UK emerged as a force in the technology startup space with nine IPOs and US\$7.8 billion in proceeds. A strong pipeline of companies that had been building over the past couple of years reached a level of maturity and stability suitable for public float.

China reported the highest number of offerings (30), but the amount raised at US\$4.1 billion was much lower than other years. The decline in proceeds was due to the listing restrictions from regulators and negative macroeconomic data, which led to downward pressure on valuations as investors became more risk averse. Also, very few Chinese companies had cross-border listings, leading to lower average proceeds as the depth and availability of funds on the Chinese exchanges are often lower than US and UK exchanges.

Three tech companies went public in Germany, raising US\$2.1 billion, of which US\$1.5 billion was raised by Scout24AG. Japan also had a strong year with six tech IPOs and US\$1.3 billion in proceeds. South Korea and Australia had four and three IPOs each with proceeds of US\$613 million and US\$1.2 billion, respectively. Canada listed two IPOs and raised US\$265 million.

Sweden issued four IPOs with US\$542.3 million in proceeds, the first year since 2011 to list a tech IPO. Taiwan and Israel launched two IPOs each with proceeds of US\$109.1 million and US\$187.1 million, respectively. Poland, Ireland, Denmark, and Italy had one offering each with proceeds of US\$79.1 million, US\$203.3 million, US\$214.7 million and US\$61.1 million, respectively.

Figure 6: Full-year 2015 geographic distribution



Source: S&P Capital IQ with analysis by PwC

**“High market uncertainty and a freeze on IPOs in July impacted tech IPO activity, but resumption in November and approval of launching the registration-based IPO system led to a strong finish to the year. However, one can expect there will be an adaptation period following the introduction of the new registration policies. That, coupled with persistent downward pressure on the broader economy, adds uncertainty to 2016 tech IPO performance.”**

– **Jianbin Gao**

Technology Industry Leader, PwC China



## Full-year 2015 tech IPOs – Subsector distribution

Internet Software & Services retained its leadership position in 2015 with 40 IPOs and US\$15.9 billion in proceeds. It contributed 59% of the total proceeds raised this year and 43% of the number of listings. The sector was boosted by four of the five 2015 US\$1-billion-plus IPOs: Worldpay Group Plc, Auto Trader Group Plc, Scout24 AG, and First Data Corp. Of the 40 IPOs, 20 were listed on US exchanges and five on the London Stock Exchange (LSE). The increasing reach of Internet across regions and advanced connectivity has led to the sustained expansion of the Internet Software & Services subsector. Increased demand for ease of operations also lent support to this sector, as demand for improved logistics delivery systems in ecommerce continued to rise.

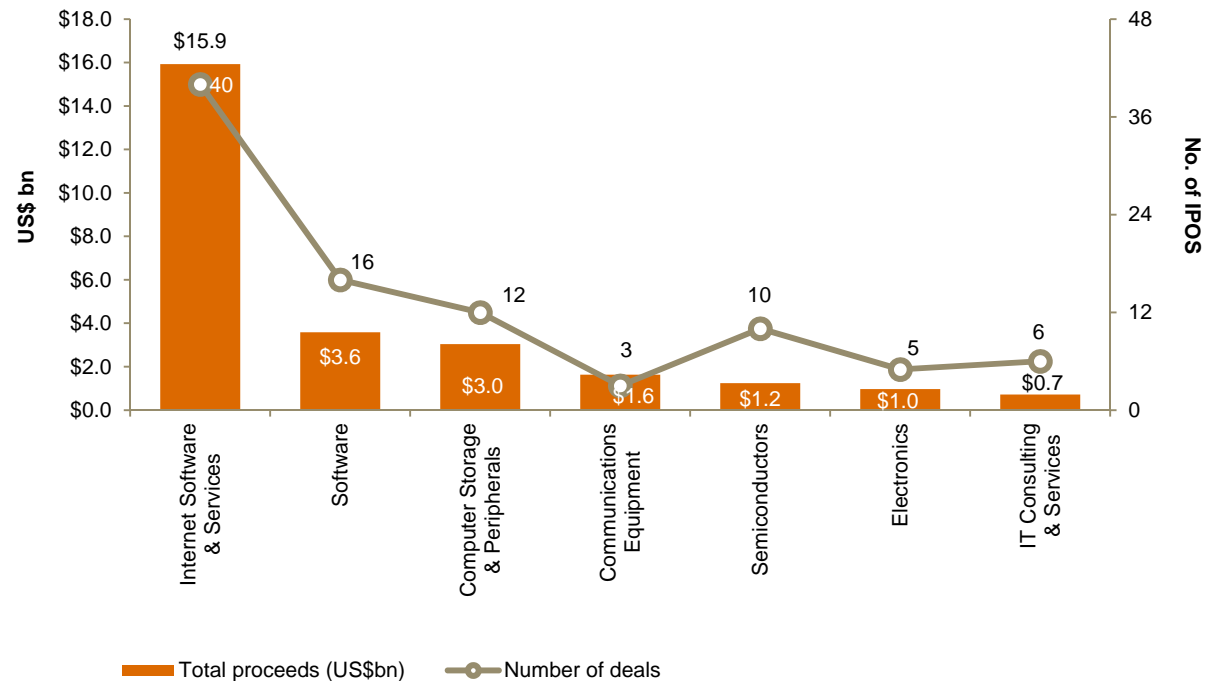
The Software subsector listed 16 IPOs and raised US\$3.6 billion. It contributed 13% in terms of total proceeds for the year and 17% in terms of number of IPOs. The sector did not have any billion-dollar-plus IPOs and only recorded two US\$500 million-plus IPOs, MYOB Group Ltd and Black Night Financial Services.

Computer Storage & Peripherals had 12 IPOs and raised US\$3.0 billion. This subsector contributed 11% of total proceeds and 13% of total IPOs in 2015. Out of the 12 IPOs, seven were listed on the Asian stock exchanges riding on the strengths of China, Hong Kong, and Taiwan in this business.

The Semiconductors subsector issued 10 IPOs with proceeds of US\$1.2 billion. All but two of the companies listed (Solar Edge Technologies, Israel, and Siltronic AG, Germany) were from Asia and listed on the Asian markets with much lower average proceeds of US\$124.3 million. The major drivers for semiconductors are the emerging markets in China, Brazil, Russia, and India, most of which face current economic challenges.

The IT Consulting & Services and Electronics subsectors had six and five IPOs each with proceeds of US\$718 million and US\$965 million, respectively.

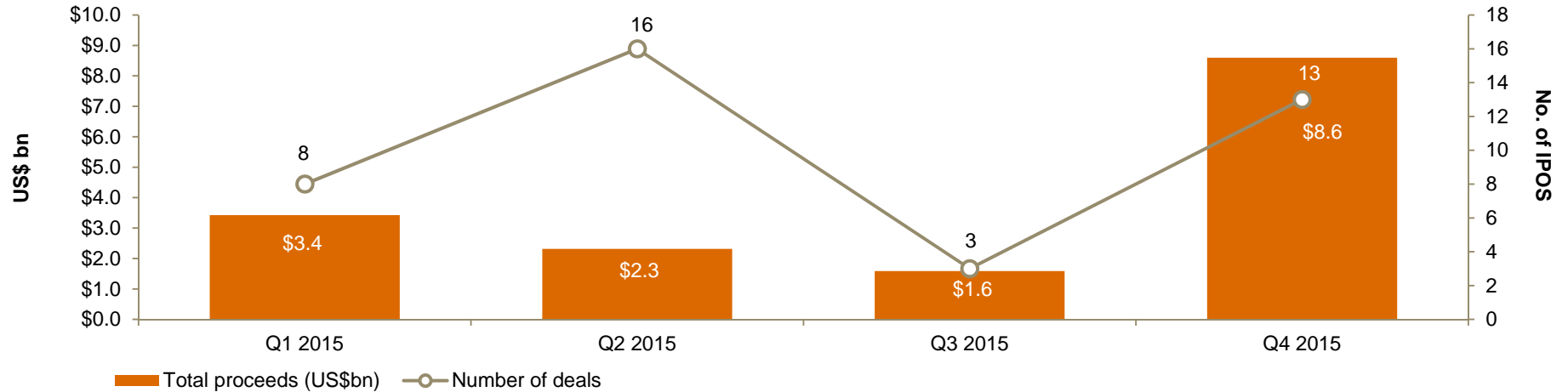
Figure 7: Full-year 2015 subsector distribution



Source: S&P Capital IQ with analysis by PwC

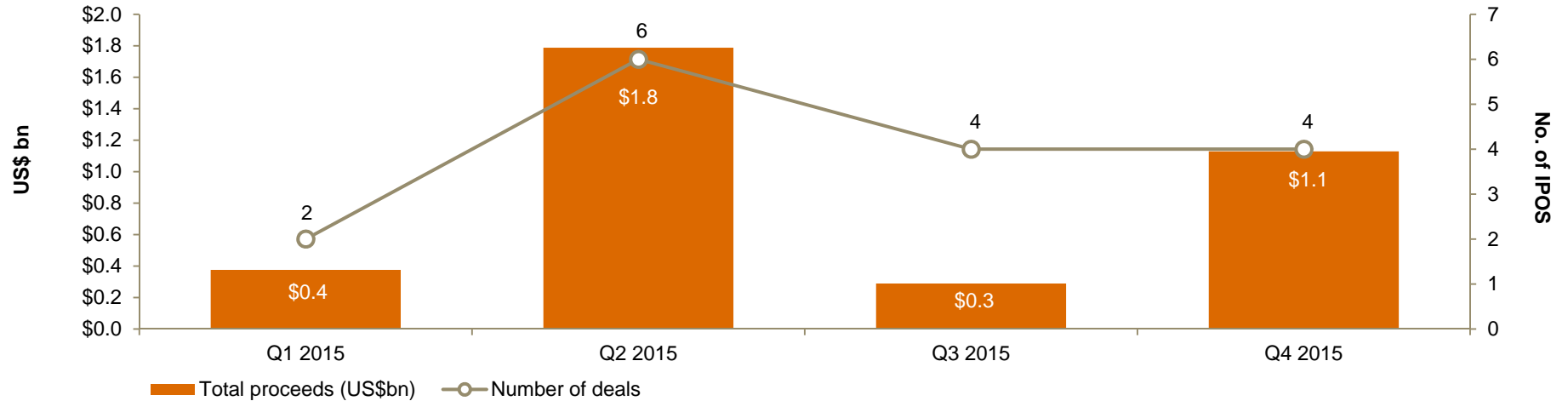
## Full-year 2015 tech IPOs – Quarterly summary by subsector

Figure 8: Full-year 2015 Internet Software & Services IPOs



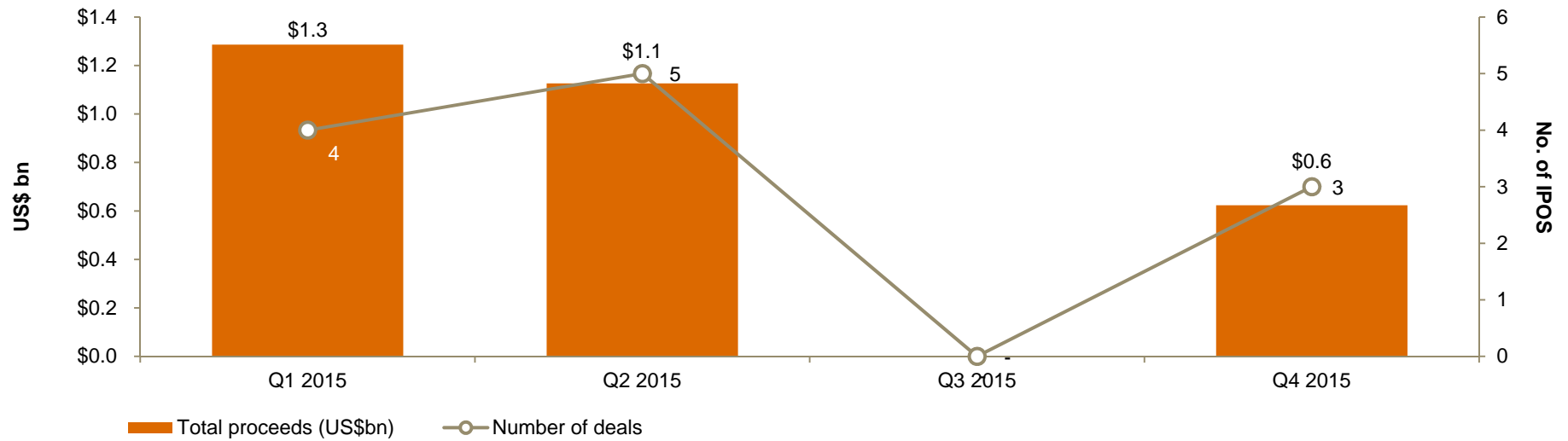
Source: S&P Capital IQ with analysis by PwC

Figure 9: Full-year 2015 Software IPOs



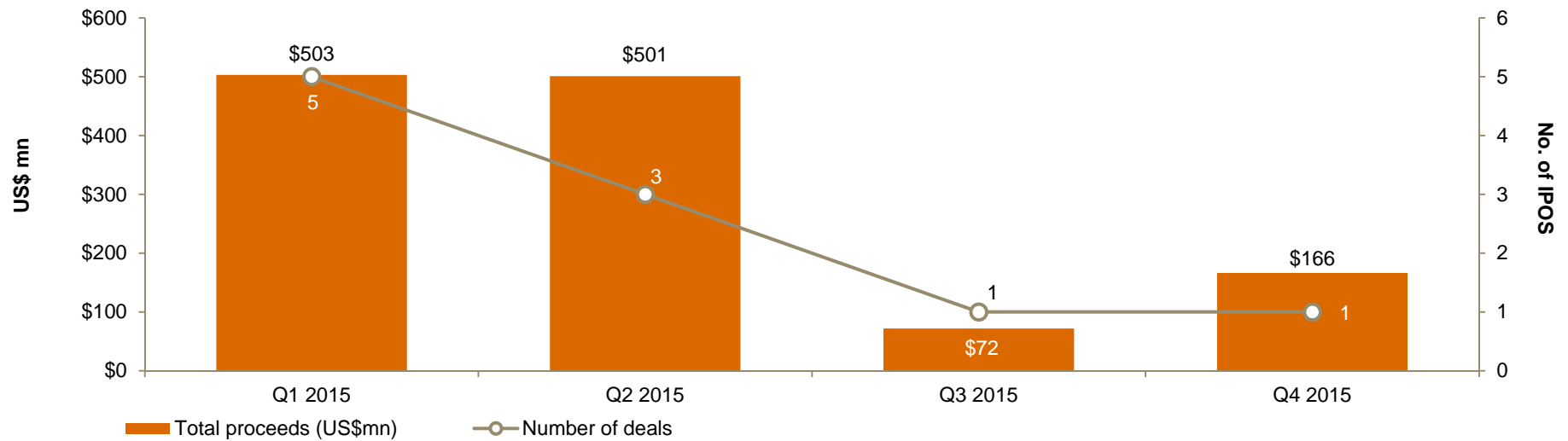
Source: S&P Capital IQ with analysis by PwC

**Figure 10: Full-year 2015 Computer Storage & Peripherals IPOs**



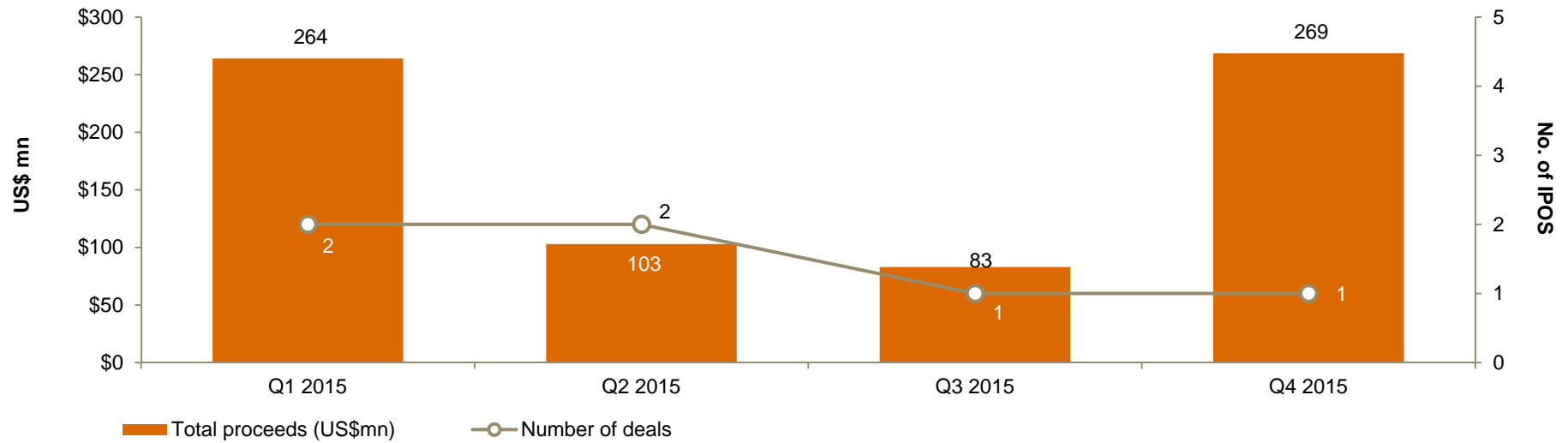
Source: S&P Capital IQ with analysis by PwC

**Figure 11: Full-year 2015 Semiconductors IPOs**



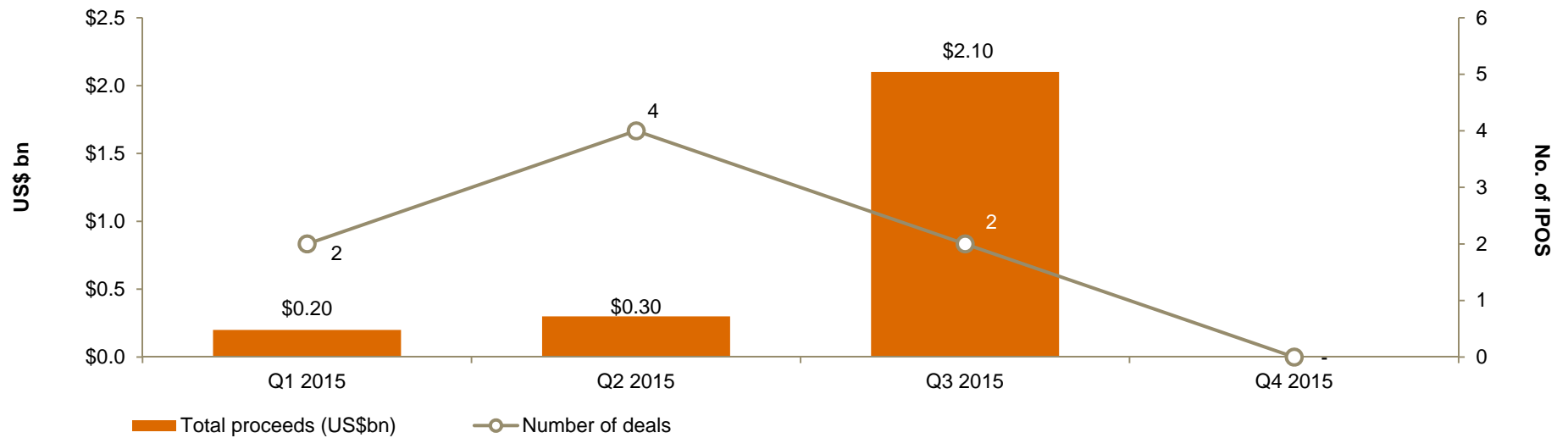
Source: S&P Capital IQ with analysis by PwC

**Figure 12: Full-year 2015 IT Consulting & Services IPOs**



Source: S&P Capital IQ with analysis by PwC

**Figure 13: Full-year 2015 Other subsectors IPOs**



Source: S&P Capital IQ with analysis by PwC

## Full-year 2015 tech IPOs – Stock exchange distribution

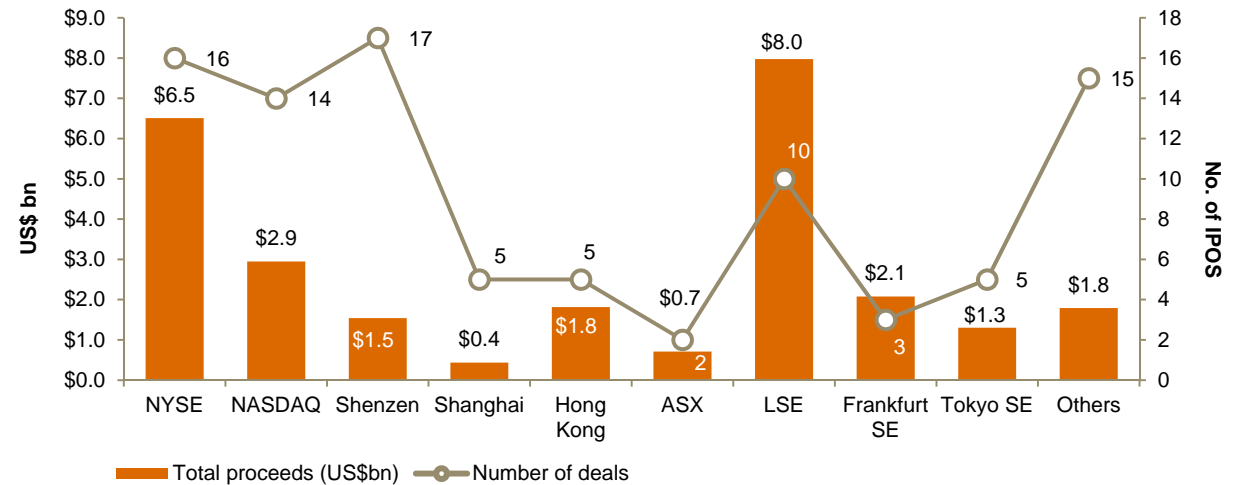
The London Stock Exchange raised the highest proceeds with US\$8.0 billion. It accounted for 29% of total proceeds raised and 11% of total IPOs.

The New York Stock Exchange (NYSE) came in second with US\$6.5 billion and 16 IPOs. Volatility in the US and Chinese markets subdued activity on the US and Mainland China exchanges. Further, two of the five, and the largest tech IPO of the year, listed on the London Stock Exchange. On a combined basis, the NYSE and NASDAQ garnered 35% of the proceeds and 33% of the total number of IPOs.

The amount raised by Mainland China exchanges in 2015 was lower than prior years, with Shenzhen raising US\$1.5 billion from 17 IPOs and Shanghai raising US\$437 million from five IPOs. Following high volatility in the A-share stock market, IPOs on Mainland China were suspended on 4 July. In December, Chinese regulators relaxed the restrictions, which led to a flurry of smaller IPOs in the fourth quarter.

Other major exchanges were Tokyo SE, Frankfurt SE, and Hong Kong SE with US\$1.3 billion, US\$2.1 billion, and US\$1.8 billion proceeds, respectively. Hong Kong and Tokyo issued five IPOs each and Frankfurt issued three IPOs.

Figure 14: Full-year 2015 stock exchange distributions

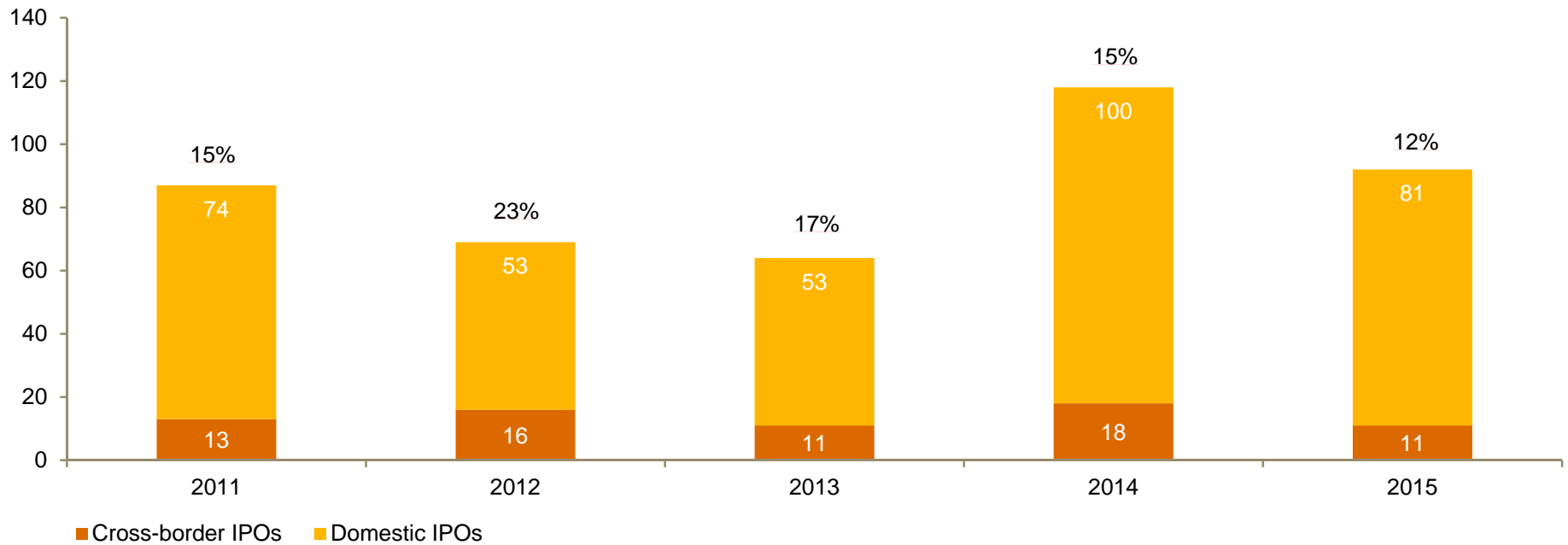


Source: S&P Capital IQ with analysis by PwC

### Full-year cross-border listings

The trend of cross-border listings started in 2010, with 17% of tech IPOs listing outside their domicile nation. It reached its peak in 2012 with 23% of the tech IPOs being cross-border. With a change in global environment—both at economic and at policy levels—cross-border IPOs in 2015 accounted for only 12%, with 11 of the 92 companies being listed outside their domicile. The shift in posture and regulatory changes in China have had the greatest impact on the decline in cross-border listings. The biggest cross-border IPO in 2015 was Altassian Corp Plc, an Australia domiciled company that listed on NASDAQ. We can expect a continued low level of cross-border activity as companies from secondary markets look to gain the visibility and reach afforded by the major exchanges in the US, China and the UK.

Figure 15: 2011-2015 Cross-border listings



Source: S&P Capital IQ with analysis by PwC

## Full-year 2015 tech IPOs – Offering details

Table 1: 2015 IPOs – By issue date

Issue date	Company	Sector	Proceeds (in US\$ mn)	Primary exchange	Domicile nation
<i>Q1</i>					
01/09/2015	Beijing Kunlun Tech Co, Ltd	Software	232	Shenzhen Stock Exchange	China
01/12/2015	Fujian Torch Electron Technology Co, Ltd	Semiconductors	71	Shanghai Stock Exchange	China
01/19/2015	Beijing InterAct Technology Co, Ltd	IT Consulting & Services	48	Shenzhen Stock Exchange	China
01/22/2015	Box Inc	Internet Software & Services	201	New York Stock Exchange	US
01/25/2015	ShunSin Technology Holdings Ltd	Semiconductors	46	Taiwan Stock Exchange	Taiwan
02/11/2015	Inovalon Holdings Inc	Computers & Peripherals	685	NASDAQ	US
02/11/2015	Shenzhen Gongjin Electronics Co Ltd	Communications Equipment	146	Shanghai Stock Exchange	China
02/12/2015	Dustin Group AB	Computers & Peripherals	236	Stockholm Stock Exchange	Sweden
02/12/2015	M.L.S Co Ltd	Semiconductors	156	Shenzhen Stock Exchange	China
02/12/2015	Ningbo Techmation Co, Ltd	Semiconductors	86	Shanghai Stock Exchange	China
02/12/2015	Suzhou TFC Optical Communication Co, Ltd	Communications Equipment	65	Shenzhen Stock Exchange	China
02/12/2015	Banzai SpA	Internet Software & Services	61	Borsa Italiana	Italy
03/06/2015	NNIT A/S	IT Consulting & Services	215	OMX Nordic Exchange Copenhagen	Denmark
03/06/2015	MaxPoint Interactive Inc	Internet Software & Services	75	NYSE	United States
03/12/2015	NS Home Shopping Co, Ltd	Internet Software & Services	184	Korea SE	South Korea
03/18/2015	Lens Technology Co, Ltd	Computers & Peripherals	252	Shenzhen Stock Exchange	China
03/19/2015	Auto Trader Group Plc	Internet Software & Services	2,358	London Stock Exchange	United Kingdom
03/20/2015	Evolution Gaming Group AB	Software	144	NASDAQ	Sweden
03/25/2015	Aiming Inc	Internet Software & Services	42	The Tokyo Stock Exchange	Japan

<b>Issue date</b>	<b>Company</b>	<b>Sector</b>	<b>Proceeds (in US\$ mn)</b>	<b>Primary exchange</b>	<b>Domicile nation</b>
03/26/2015	SolarEdge Technologies, Inc	Semiconductors	145	NASDAQ Global Select	Israel
03/30/2015	Touchcorp Ltd	Internet Software & Services	43	Australian Stock Exchange	Australia
03/31/2015	Cowell e Holdings Inc	Computer Storage & Peripherals	114	Hong Kong Stock Exchange	South Korea
03/31/2015	GoDaddy Inc	Internet Software & Services	460	NYSE	United States
<i>Q2</i>					
04/08/2015	Wowo Ltd	Internet Software & Services	40	NASDAQ	China
04/13/2015	Tobii AB (publ)	Computer Storage & Peripherals	59	OMX Nordic Exchange Stockholm	Sweden
04/15/2015	Etsy, Inc	Internet Software & Services	306	NASDAQ	United States
04/17/2015	Gunosy Inc	Internet Software & Services	87	Tokyo Stock Exchange (Mothers)	Japan
04/19/2015	Hunan Aihua Group Co, Ltd	Electronics	170	Shanghai Stock Exchange	China
4/23/2015	windeln.de AG	Internet Software & Services	205	Frankfurt Prime	Germany
04/23/2015	Apigee Corp	Internet Software & Services	87	NASDAQ	United States
04/25/2015	Beijing Hanbang Technology Corp	Electronics	51	Shenzhen Stock Exchange	China
04/28/2015	Wirtualna Polska Holding SA	Internet Software & Services	79	Warsaw	Poland
04/30/2015	GuangDong Failong Crystal Tech	Semiconductors	44	Shenzhen Stock Exchange	China
05/04/2015	MYOB Group Ltd	Software	668	Australia	Australia
05/08/2015	All Winner	Semiconductors	83	Shenzhen Stock Exchange	China
05/14/2015	Navtech Inc (China)	Electronics	48	Shenzhen Stock Exchange	China
05/14/2015	Shenzhen Forms Synttron Info	Software	77	Shenzhen Stock Exchange	China
05/15/2015	Sichuan Xun You Network Technology Co, Ltd	Software	55	Shenzhen Stock Exchange	China
05/18/2015	Global Infotech	IT Consulting & Services	62	Shenzhen Stock Exchange	China
05/19/2015	Black Knight Financial Services	Software	507	NYSE	United States



<b>Issue date</b>	<b>Company</b>	<b>Sector</b>	<b>Proceeds (in US\$ mn)</b>	<b>Primary exchange</b>	<b>Domicile nation</b>
05/20/2015	Shopify Inc	Internet Software & Services	151	NYSE	Canada
05/21/2015	Baozun Inc	Internet Software & Services	110	NASDAQ	China
05/21/2015	Press Ganey Holdings Inc	Software	256	NYSE	United States
05/26/2015	Stingray Digital Group Inc	Internet Software & Services	114	Toronto Stock Exchange	Canada
05/29/2015	Victory Giant Tech (Huizhou)	Computer Storage & Peripherals	94	Shenzhen Stock Exchange	China
06/01/2015	Shenzhen Soling Industrial Co	Electronics	56	Shenzhen Stock Exchange	China
06/04/2015	Evolent Health	Software	225	NYSE	United States
06/05/2015	Adgorithms Ltd	Internet Software & Services	41	London Stock Exchange AIM Market	Israel
06/05/2015	General Interface Solutions	Computer Storage & Peripherals	64	Taiwan	Taiwan
06/10/2015	Siltronic AG	Semiconductors	374	Frankfurt	Germany
06/15/2015	Vital Mobile Holdings Ltd	Computer Storage & Peripherals	68	Stock Exchange of Hong Kong	China
06/16/2015	Beijing Transtrue Technology	IT Consulting & Services	42	Shenzhen Stock Exchange	China
06/17/2015	Fitbit Inc	Computers & Peripherals	841	NYSE	United States
06/18/2015	MINDBODY Inc	Internet Software & Services	100	NASDAQ	United States
06/25/2015	Alarm.com Holdings Inc	Internet Software & Services	113	NASDAQ	United States
06/25/2015	AppFolio Inc	Internet Software & Services	86	NASDAQ	United States
06/25/2015	Xactly Corp	Internet Software & Services	65	NYSE	United States
06/26/2015	Sophos Group Plc	Internet Software & Services	554	London	United Kingdom
06/30/2015	Teladoc Inc	Internet Software & Services	180	NYSE	United States
<i>Q3</i>					
07/07/2015	China Railway Signal & Communication Corp Ltd	Communications Equipment	1,422	Stock Exchange of Hong Kong Ltd	China
07/07/2015	China Parenting Network Holdings Limited	Internet Software & Services	45	Stock Exchange of Hong Kong Ltd	China

<b>Issue date</b>	<b>Company</b>	<b>Sector</b>	<b>Proceeds (in US\$ mn)</b>	<b>Primary exchange</b>	<b>Domicile nation</b>
07/09/2015	Kainos Group Plc	IT Consulting & Services	83	London Stock Exchange	United Kingdom
07/15/2015	Dexerials Corporation	Electronic Components	639	Tokyo Stock Exchange	Japan
07/16/2015	Rapid7, Inc	Software	103	NASDAQ Global Market	United States
07/16/2015	Ooma, Inc	Software	65	NYSE	United States
07/21/2015	Gloo Networks Plc	Software	47	London Stock Exchange	United Kingdom
07/29/2015	Itokuro Inc	Internet Software & Services	45	Tokyo Stock Exchange	Japan
08/17/2015	I Controls Inc	Semiconductor	72	Korea Stock Exchange	South Korea
08/27/2015	Metaps Inc	Software	75	The Tokyo Stock Exchange	Japan
09/30/2015	Scout24 AG	Internet Software & Services	1,497	Frankfurt Stock Exchange	Germany
<i>Q4</i>					
10/06/2015	Pure Storage, Inc	Computer Storage & Peripherals	489	NYSE	United States
10/07/2015	CLX Communications AB (publ)	Internet Software & Services	103	OMX Nordic Exchange Stockholm	Sweden
10/08/2015	CPI Card Group, Inc	Internet Software & Services	173	NASDAQ Global Select	United States
10/14/2015	First Data Corporation	Internet Software & Services	2,560	NYSE	United States
10/15/2015	Worldpay Group Plc	Internet Software & Services	3,842	London Stock Exchange	United Kingdom
10/27/2015	Equiniti Group Plc	Software	492	London Stock Exchange	United Kingdom
10/28/2015	Hostelworld Group Plc	Internet Software & Services	203	London Stock Exchange	Ireland
11/02/2015	DOUBLEUGAMES Co, Ltd	Internet Software & Services	244	KOSDAQ	South Korea
11/12/2015	Instructure, Inc	Internet Software & Services	81	NYSE	United States
11/17/2015	Softcat Plc	IT Consulting & Services	269	London Stock Exchange	United Kingdom
11/18/2015	Match Group, Inc	Internet Software & Services	460	NASDAQ Global Select	United States
11/18/2015	Mimecast Ltd	Internet Software & Services	78	NASDAQ Global Select	United Kingdom

<b>Issue date</b>	<b>Company</b>	<b>Sector</b>	<b>Proceeds (in US\$ mn)</b>	<b>Primary exchange</b>	<b>Domicile nation</b>
11/19/2015	BELLSYSTEM24 Holdings Inc	Internet Software & Services	412	Tokyo Stock Exchange	Japan
11/19/2015	Square Inc	Internet Software & Services	279	NYSE	United States
12/02/2015	Bomin Electronics Co, Ltd	Computer Storage & Peripherals	53	Shanghai Stock Exchange	China
12/03/2015	Thunder Software Tech Co Ltd	Software	91	Shenzhen Stock Exchange	China
12/03/2015	Purplebricks.com	Internet Software & Services	88	London Stock Exchange (AIM)	United Kingdom
12/09/2015	Atlassian Corp Plc	Software	462	NASDAQ Global Select	Australia
12/10/2015	Chunghsin Tech Grp Co, Ltd	Computer Storage & Peripherals	82	Shanghai Stock Exchange	China
12/18/2015	Yirendai Ltd	Internet Software & Services	75	NYSE	China
12/24/2015	Hubei Century Network Technology Co, Ltd	Software	84	Shenzhen Stock Exchange	China
12/29/2015	Xinte Energy Co., Ltd	Semiconductors	166	Stock Exchange of Hong Kong Ltd	China

Source: S&P Capital IQ with analysis by PwC



## 2011-2015 Tech IPO summary

During 2011-2015, tech IPOs raised total proceeds of US\$128.8 billion with 430 IPOs, compared to US\$119.6 billion from 447 listings over 2010-2014. In the last five years, 2014 has been the best year for tech IPOs contributing 40% of the proceeds and 27% of the offerings. 2015 contributed 21% proceeds and 21% of listings. The biggest IPO in the last five years was Alibaba.

While China and the US continue to dominate the number of offerings, Europe, and the UK in particular, have emerged as major players, with the surge in 2015 of US\$1-billion-dollar-plus offerings.

Internet Software & Services' growth has been driven by the emergence of social networking and e-commerce. Investors also focused on improved connectivity across the world to target a bigger market through these companies. It posted its best performance of the past five years in 2015, with 47 IPOs and US\$33.5 billion in proceeds, and included Worldpay Group Plc, the biggest IPO of the year at US\$3.8 billion.

The Software subsector experienced a significant drop in 2015. Against 35 IPOs with US\$7.1 billion proceeds in 2014, it recorded 16 IPOs with US\$3.6 billion proceeds in 2015. The biggest IPO was MYOB Group Ltd, with proceeds of US\$668.0 million. Ease of doing business, whether through automation or analytics or accessibility, should provide momentum in 2016 and beyond.

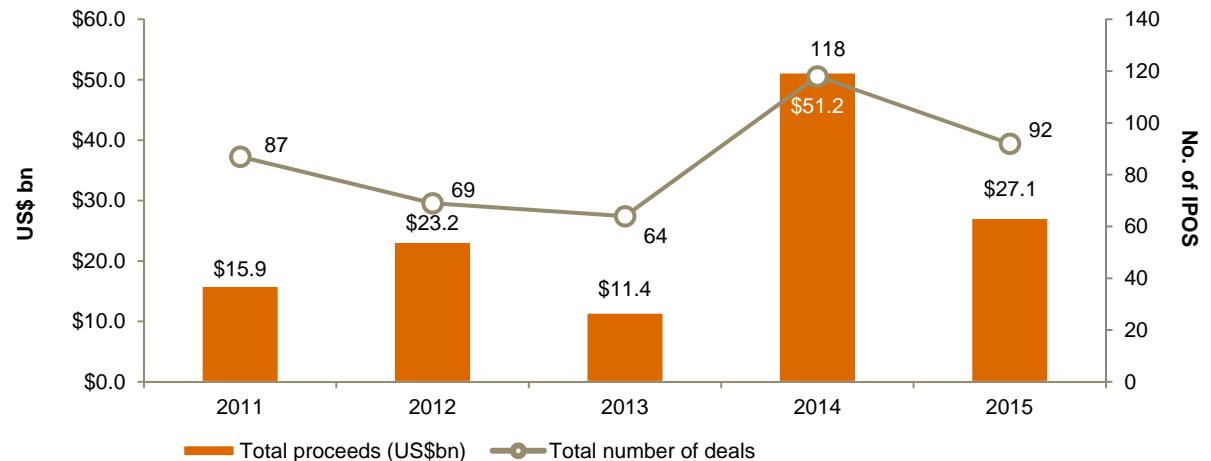
Only the Communications Equipment subsector reported higher proceeds (59%) in 2015 compared to 2014. And Computer Storage & Peripherals was the only subsector to report more IPOs with 12 offerings in 2015 compared to five in 2014.

Computer Storage & Peripherals reported the strongest compound annual growth rate (CAGR) of 32% in terms of proceeds from 2011-2015, followed by the Software subsector with CAGR of 28% in 2011-2015.

The Semiconductors subsector reported 10 IPOs this year with proceeds of US\$1.2 billion. For this subsector, 2011 was the best year with 16 listings and US\$2.7 billion proceeds. In 2015, the semiconductors subsector had subdued performance due to concerns of oversupply and inventory glut in the supply chain leading to deferment of expansion plans.

IT Consulting & Services recorded the sharpest decline in proceeds, 68%, compared to 2014. In the last five years, 2014 was the best year for this subsector with proceeds of US\$2.2 billion. IMS Health Holding, the biggest IPO in 2014 with proceeds of US\$1.5 billion, led this growth.

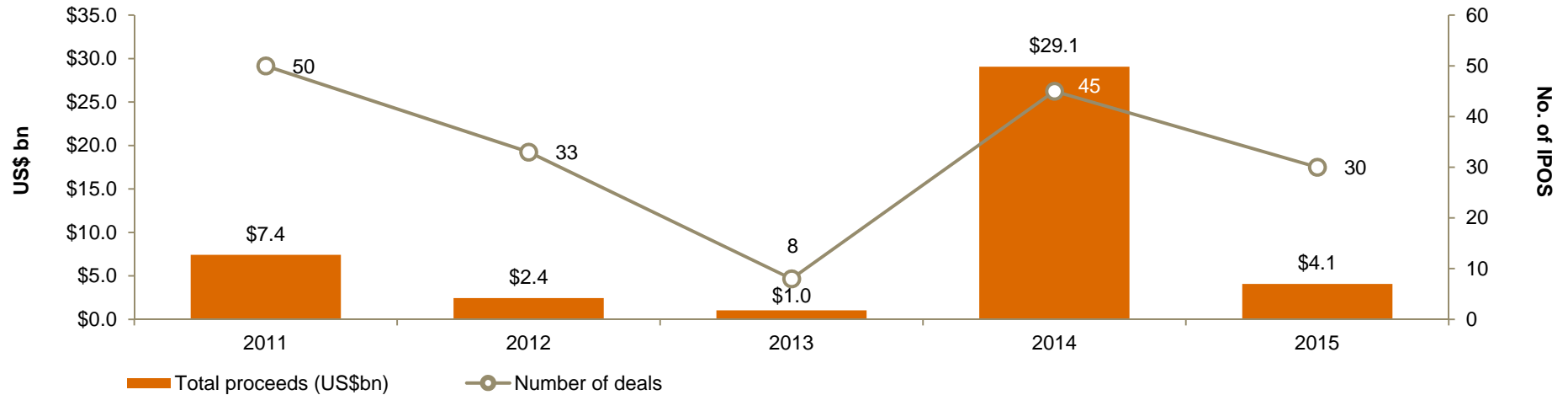
Figure 16: 2011-2015 Tech IPOs



Source: S&P Capital IQ with analysis by PwC

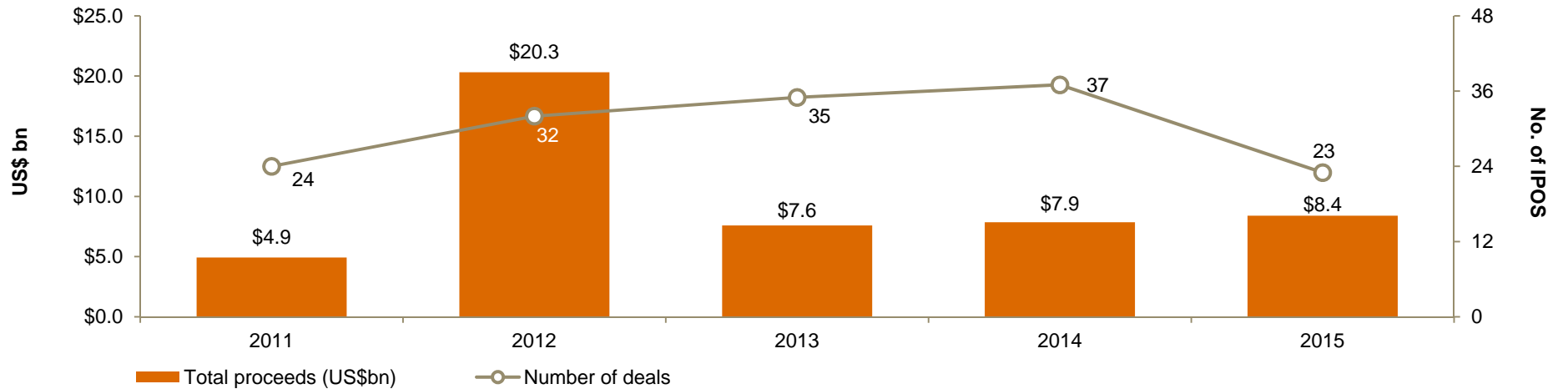
## 2011-2015 Tech IPO summaries by geography

Figure 17: 2011-2015 Chinese tech IPOs



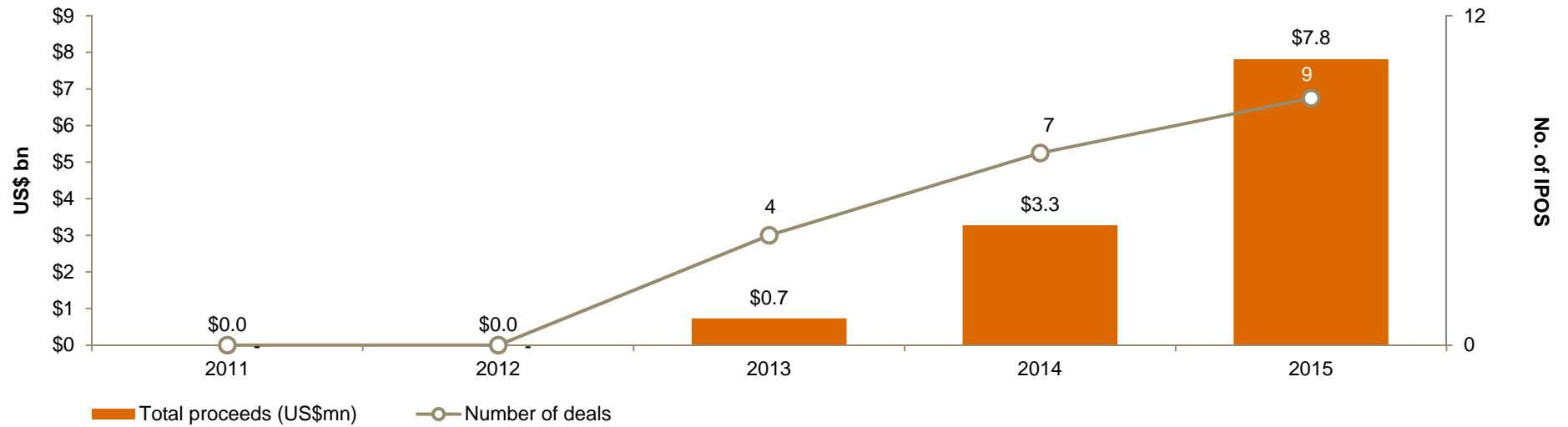
Source: S&P Capital IQ with analysis by PwC

Figure 18: 2011-2015 United States tech IPOs



Source: S&P Capital IQ with analysis by PwC

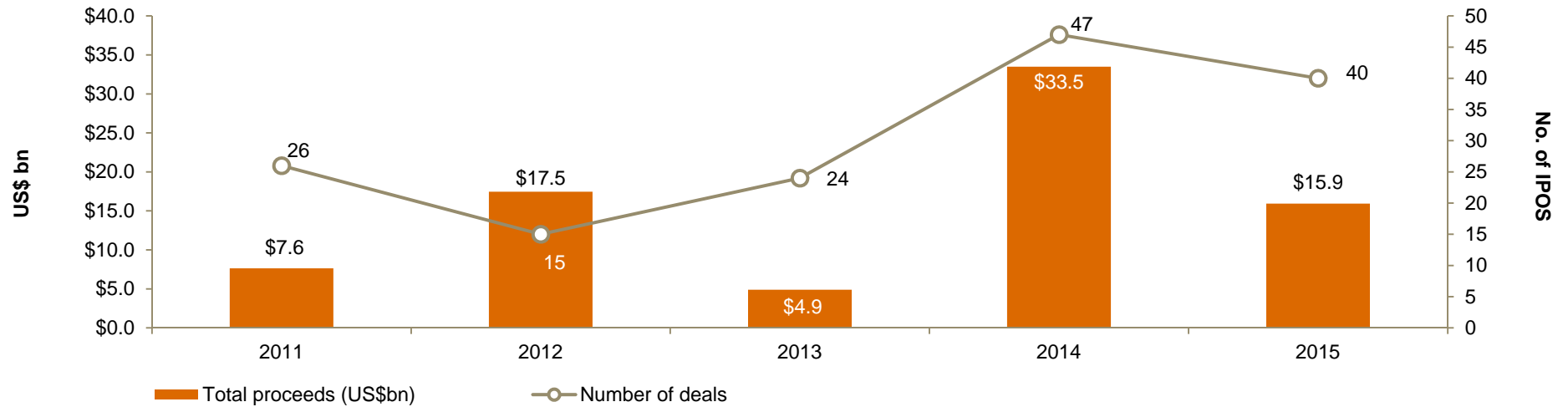
Figure 19: 2011-2015 United Kingdom IPOs



Source: S&P Capital IQ with analysis by PwC

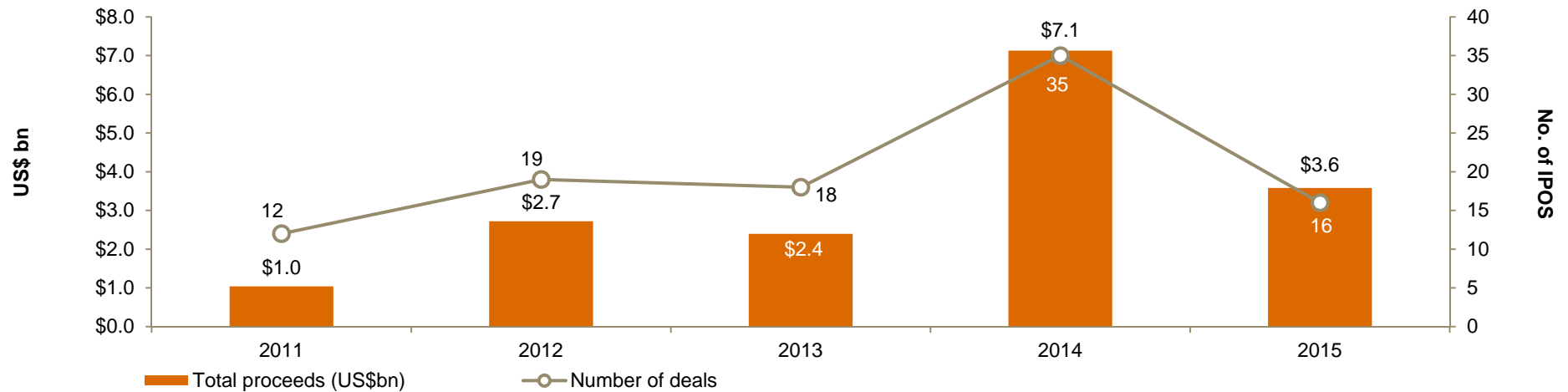
## 2011-2015 Tech IPO summaries by subsector

Figure 20: 2011-2015 Internet Software & Services IPOs



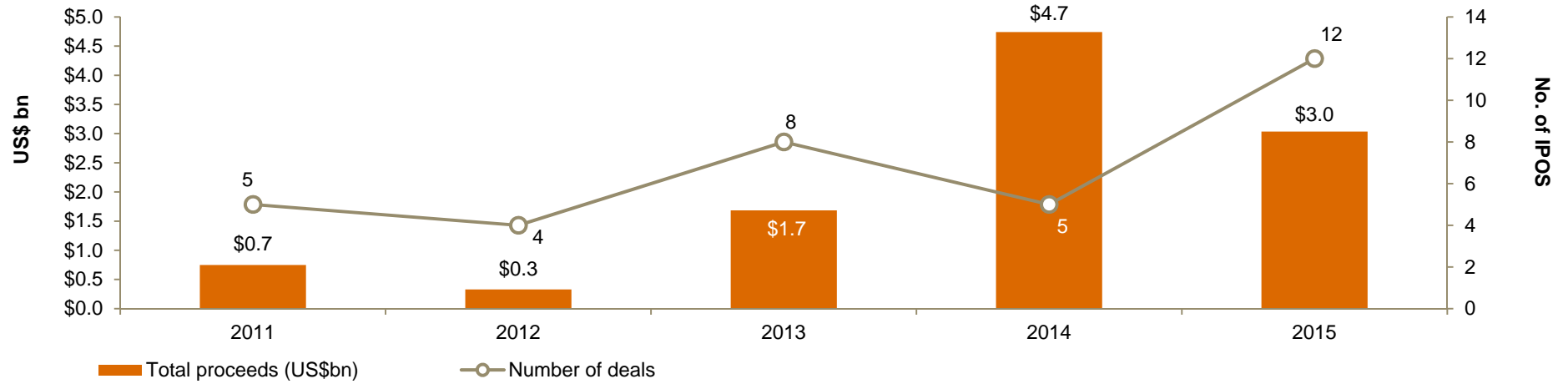
Source: S&P Capital IQ with analysis by PwC

Figure 21: 2011-2015 Software IPOs



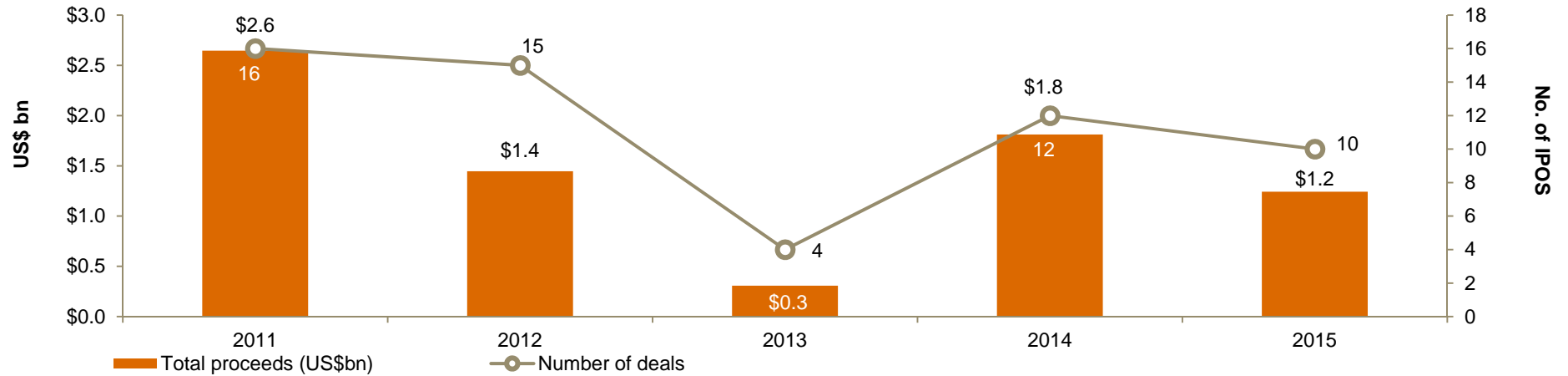
Source: S&P Capital IQ with analysis by PwC

**Figure 22: 2011-2015 Computer Storage & Peripherals IPOs**



Source: S&P Capital IQ with analysis by PwC

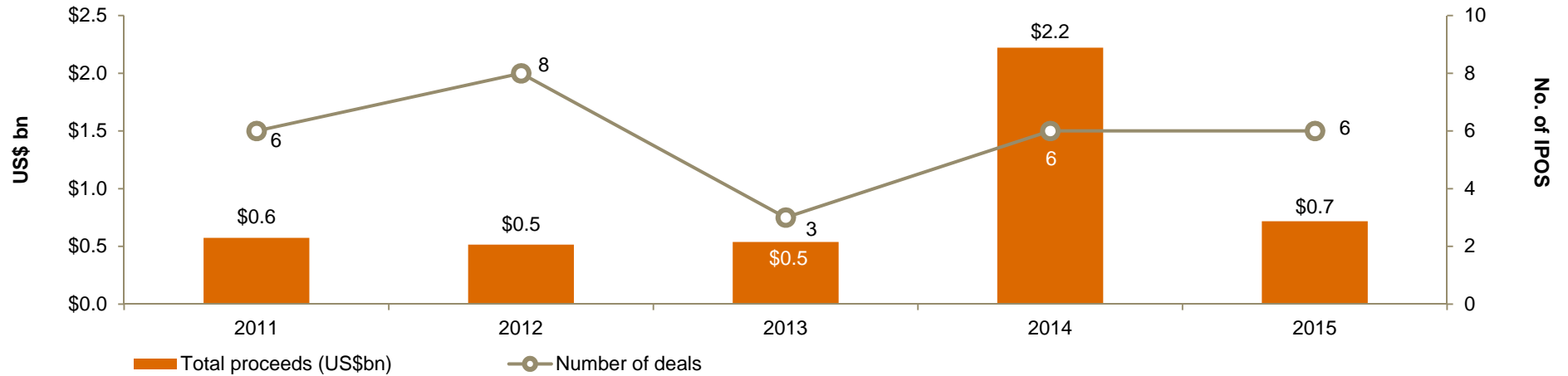
**Figure 23: 2011-2015 Semiconductors IPOs**



Source: S&P Capital IQ with analysis by PwC

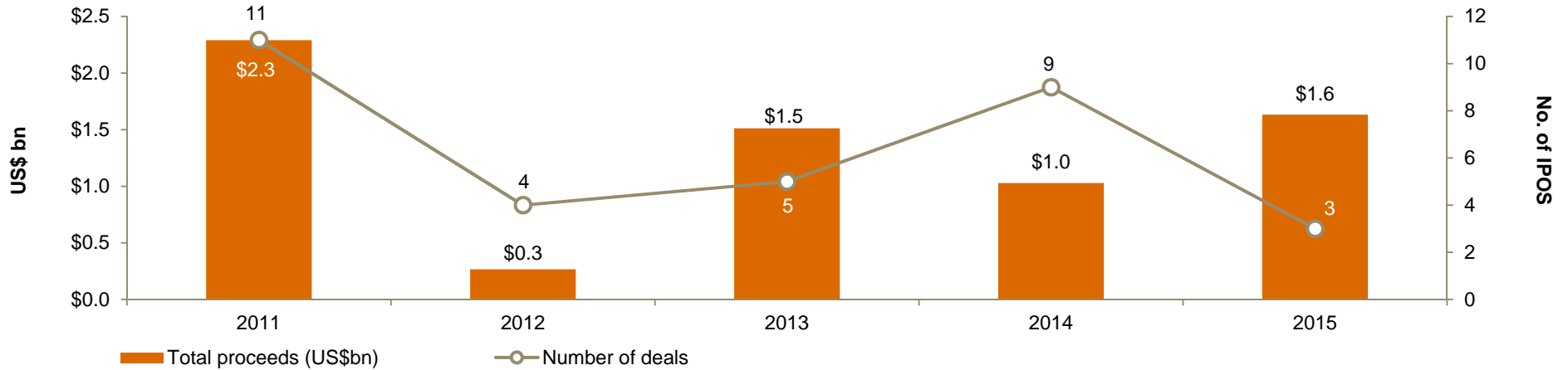


**Figure 24: 2011-2015 IT Consulting & Services IPOs**



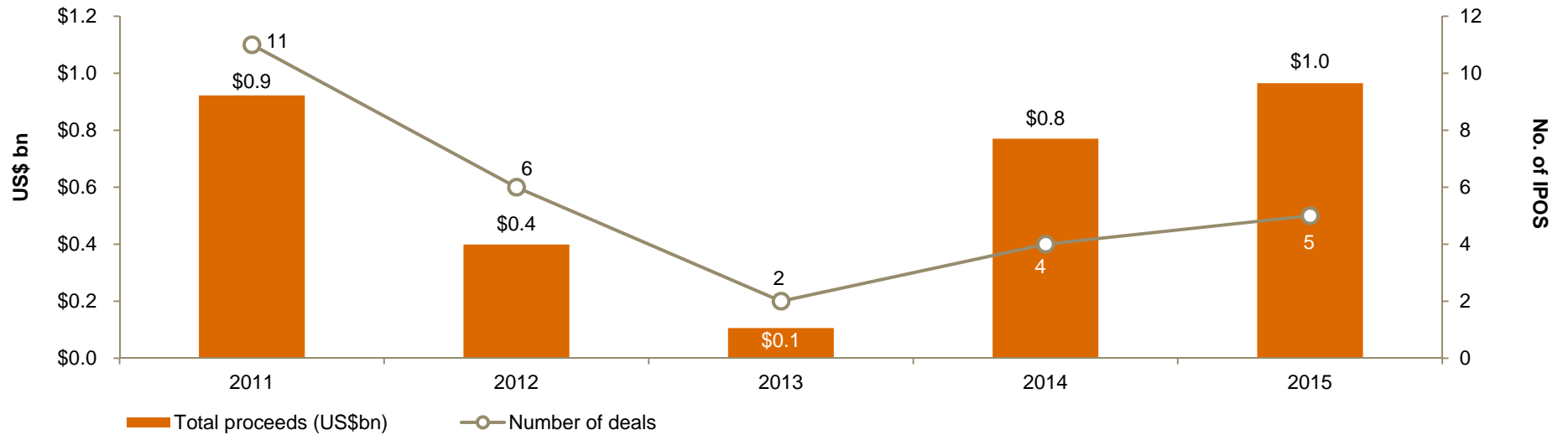
Source: S&P Capital IQ with analysis by PwC

**Figure 25: 2011-2015 Communications Equipment IPOs**



Source: S&P Capital IQ with analysis by PwC

**Figure 26: 2011-2015 Other subsector IPOs**



Source: S&P Capital IQ with analysis by PwC



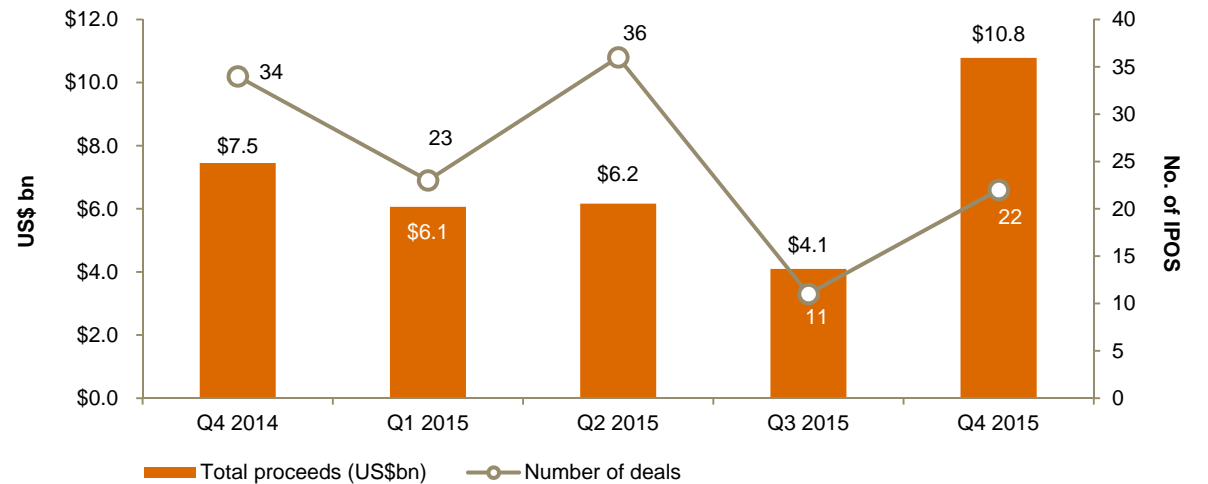
## Q4 2015 Global tech IPO summary

Q4 2015 was the best quarter for the technology sector in terms of amount raised compared to the previous three quarters of 2015 and Q4 2014. The quarter reported 22 IPOs and proceeds of US\$10.8 billion.

Though the number of listings in the fourth quarter declined by 34% year on year, total proceeds increased by 45%. On a sequential basis, total proceeds increased by 163%, while the number of listings doubled. The highest proceed was US\$3.8bn raised by Worldplay Group Plc, followed by First Data Corporation's US\$2.5bn, both from the Internet Software & Services subsector.

While the last quarter of 2015 ended on a strong note in terms of the total proceeds raised, it has yet to be seen if this leads to a strong 2016. Increased volatility, lower crude oil prices and continued geopolitical unrest will likely mean tech companies remain on the sideline.

Figure 27: Q4 2014-Q4 2015 Global technology IPO trends



Source: S&P Capital IQ with analysis by PwC

## Q4 2015 Top 10 technology listings

Similar to Q4 2014, the Internet Software & Services subsector again dominated the top ten listings in this quarter with 60% of the offerings. The top two IPOs were from this subsector, which were billion-dollar listings. Of the top three IPOs, two were from the UK. UK-domiciled companies came in the top three listings in all quarters in 2015, except Q3. In 2015, the geographical spread of top three companies is as follows: 42% of the companies are domiciled in Europe, of which 33% of the companies were from the UK. The US and China posted 25% and 17%, respectively, a definite shift. This indicates a shift of big-ticket IPOs from the US and China to Europe.

In aggregate, the top 10 tech IPOs raised \$US9.5 billion, which constituted 88% of the total proceeds raised during this quarter. In total, five exchanges participated in the top 10 IPOs, with the London Stock Exchange topping the chart.

Of the ten listings, four were from the US and three from the UK. The rest were from Australia, Japan, and South Korea.

**Table 2: Q4 2015 IPO summary – Top 10 listings**

Issue date	Company	Sector	Proceeds (in US\$ mn)	Primary exchange	Domicile nation
10/15/2015	Worldpay Group Plc	Internet Software & Services	3,842	London Stock Exchange	United Kingdom
10/14/2015	First Data Corporation	Internet Software & Services	2,560	NYSE	United States
10/27/2015	Equiniti Group Plc	Software	492	London Stock Exchange	United Kingdom
10/06/2015	Pure Storage, Inc	Computer Storage & Peripherals	489	NYSE	United States
12/09/2015	Atlassian Corp Plc	Software	462	NASDAQ Global Select	Australia
11/18/2015	Match Group, Inc	Internet Software & Services	460	NASDAQ Global Select	United States
11/19/2015	BELLSYSTEM24 Holdings, Inc	Internet Software & Services	412	Tokyo Stock Exchange	Japan
11/19/2015	Square, Inc	Internet Software & Services	279	NYSE	United States
11/17/2015	Softcat Plc	IT Consulting & Services	269	London Stock Exchange	United Kingdom
11/02/2015	DOUBLEUGAMES Co. Ltd	Internet Software & Services	244	KOSDAQ	South Korea

Source: S&P Capital IQ with analysis by PwC

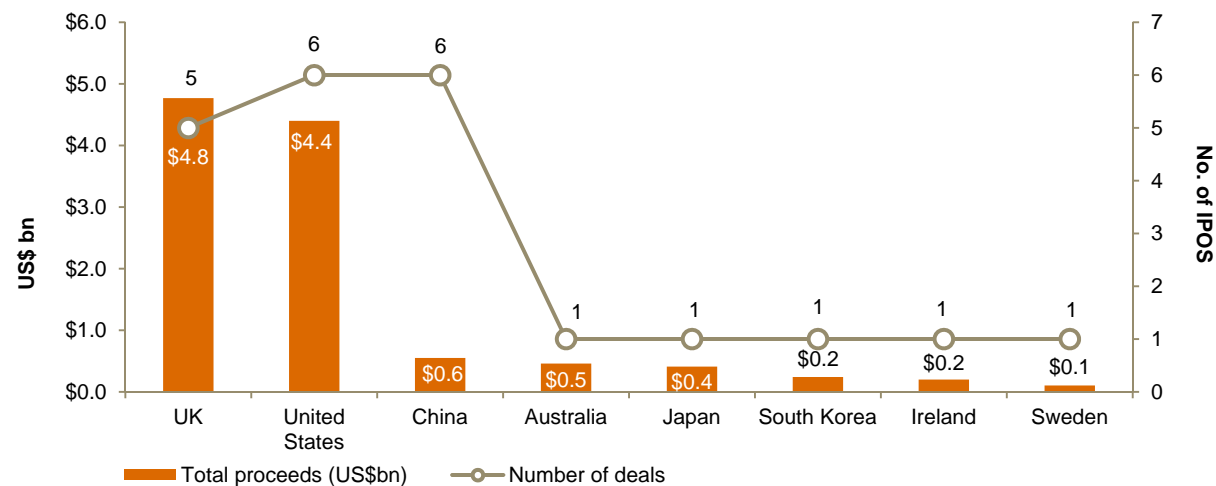
### Q4 2015 Geographic IPO trends

In terms of the number of listings, the US and China led the way with six IPOs each and the UK came second with five listings. However, in terms of proceeds raised, the UK topped with proceeds of US\$4.8 billion, followed by the US at US\$4.4 billion. Despite six listings, China raised just US\$551 million due to weak macroeconomic factors and regulatory restrictions in the last two quarters.

Europe (excluding the UK) had two IPOs, with Ireland and Sweden raising US\$203 million and US\$103 million, respectively.

The rest of the geographies had one listing each and raised proceeds in the following order—Japan (US\$412 million), Australia (US\$462 million), and South Korea (US\$103 million).

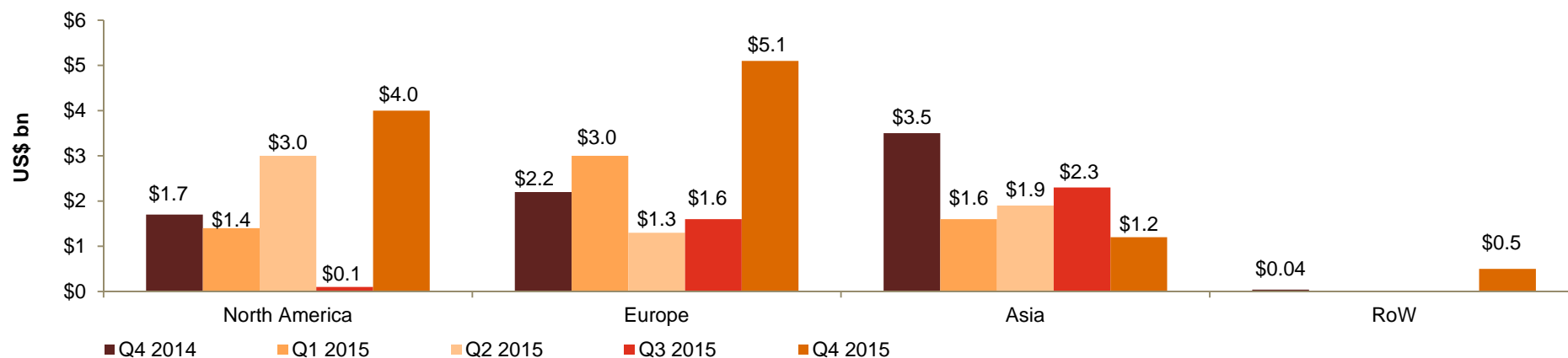
Figure 28: Q4 2015 Geographic distribution



Source: S&P Capital IQ with analysis by PwC

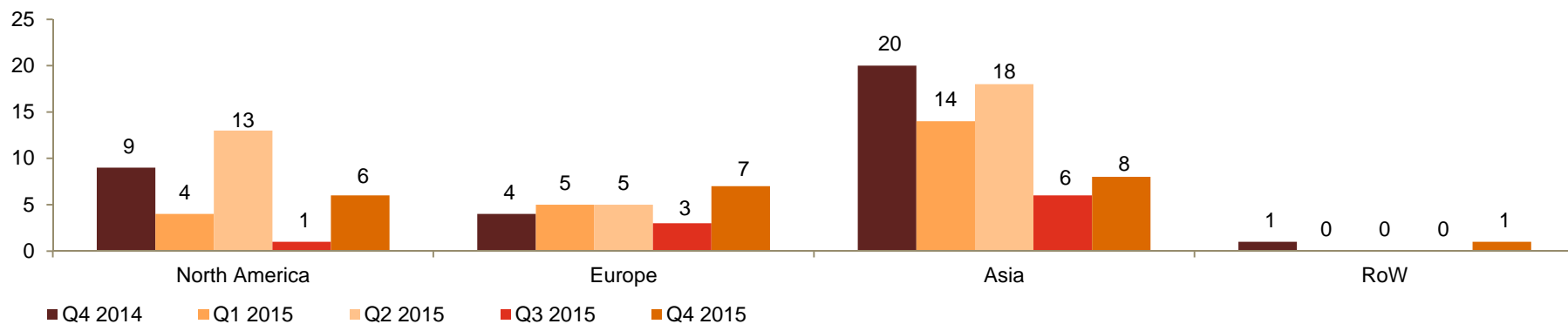
Europe led the technology IPO market in the fourth quarter. On a regional basis, Europe led with US\$5.1 billion and seven listings, followed by North America with US\$4.0 billion and six IPOs. Asia came third with total proceeds of US\$1.2 billion from eight listings.

**Figure 29: Q4 2015 Regional analysis of proceeds**



Source: S&P Capital IQ with analysis by PwC

**Figure 30: Q4 2015 Regional analysis of number of listings**

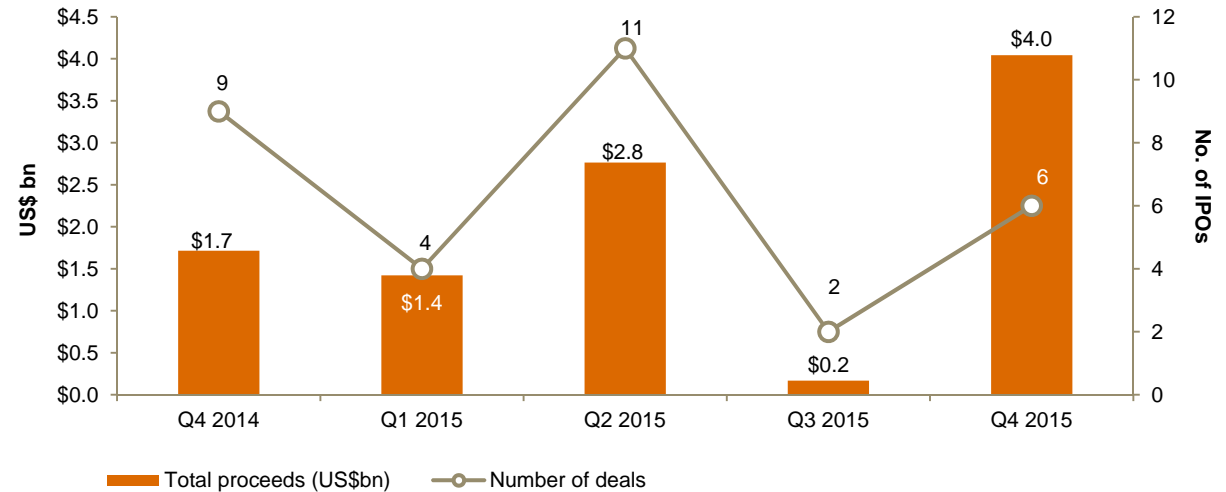


Source: S&P Capital IQ with analysis by PwC

## United States

The US market turned around in the fourth quarter following a significant pullback in Q3. The US raised total proceeds of US\$4.0 billion from six IPOs. On a year-on-year basis, the number of listings declined by 33%, but proceeds raised grew by 136%. Sequentially, the number of listings tripled, while proceeds jumped from US\$168 million in Q3 2015 to US\$4.0 billion in Q4.

Figure 31: Q4 2014-Q4 2015 US technology IPOs

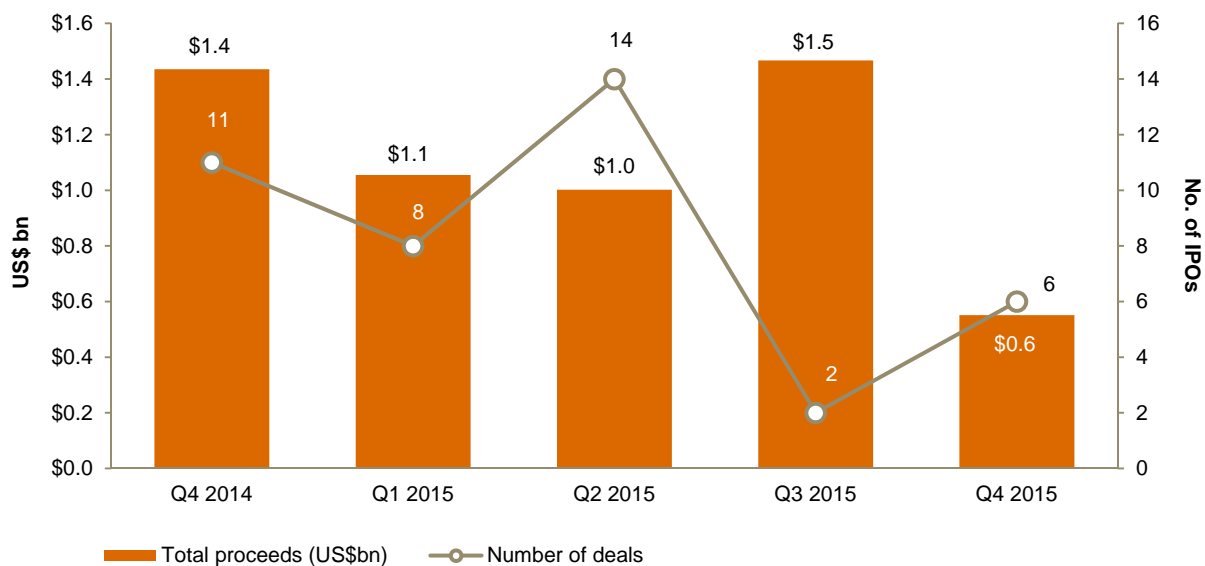


Source: S&P Capital IQ with analysis by PwC

## China

China's overall performance in this quarter was subdued, with a total of six tech IPOs and US\$551 million in proceeds. On a year-on-year basis, the number of listings decreased by 45% and proceeds by 61%. Sequentially, the listings increased by 200%, but proceeds decreased by 62%. Following strong volatility in the A-share stock market, IPOs on the Mainland were suspended on July 4th. Weak macroeconomic factors as well as regulatory restrictions that were lifted in November contributed to the underperformance of the tech IPO market in China in Q4 2015.

Figure 32: Q4 2014-Q4 2015 Chinese technology IPOs



Source: S&P Capital IQ with analysis by PwC

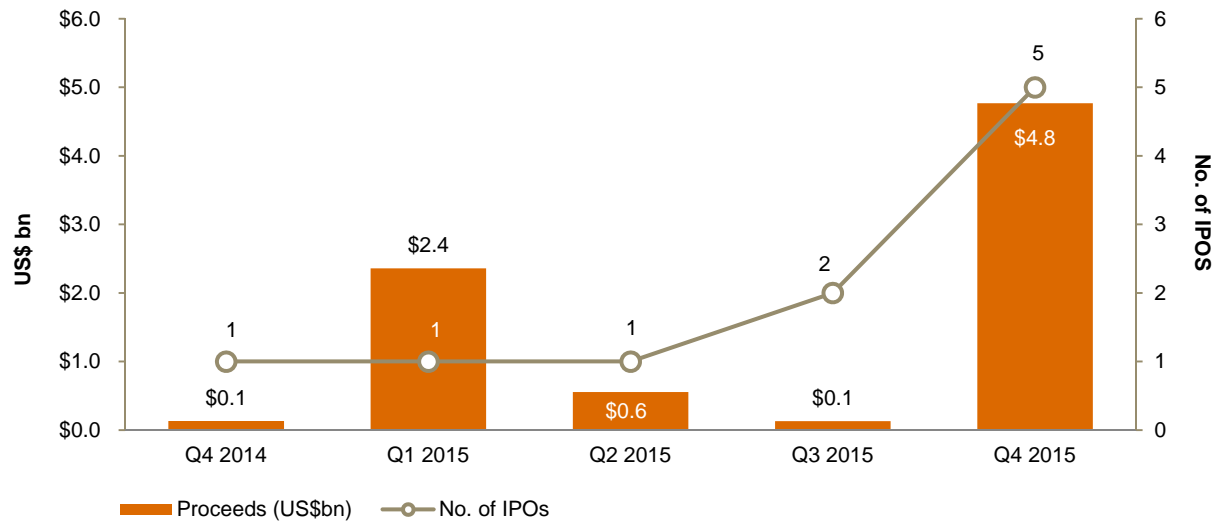


## United Kingdom

The UK had a great start to this year with the US\$2.4 billion IPO of Auto Trader Group Plc. However, the second and third quarters of 2015 were slow, with one and two IPOs each. The year ended with a flurry of IPOs in the UK with five IPOs raising close to US\$4.8 billion. This corroborated the theory of a shift in preferred destination from the US to the UK.

Stability and maturity in the UK market and the strong long-term financial and operational records of the UK companies led to the year closing with a total of nine tech IPOs.

Figure 33: Q4 2014-Q4 2015 UK technology IPOs

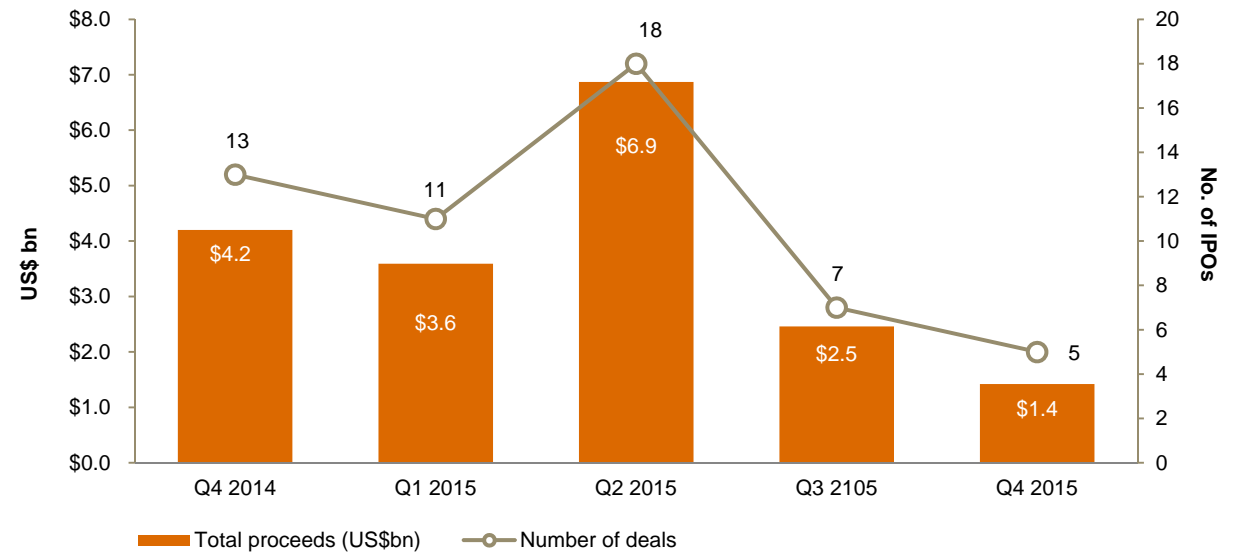


Source: S&P Capital IQ with analysis by PwC

### All other geographies

The global participation of tech IPOs significantly improved in the last few years. In this quarter, there were five IPOs from five countries. The trend of scalable, well-funded technology companies is no longer restricted to the US, China, and the UK. Even smaller countries and developing economies are issuing tech IPOs. This quarter, Sweden, Australia, Ireland, South Korea, and Japan formed the other geographies.

Figure 34: Q4 2014-Q4 2015 All other geographies technology IPOs



Source: S&P Capital IQ with analysis by PwC

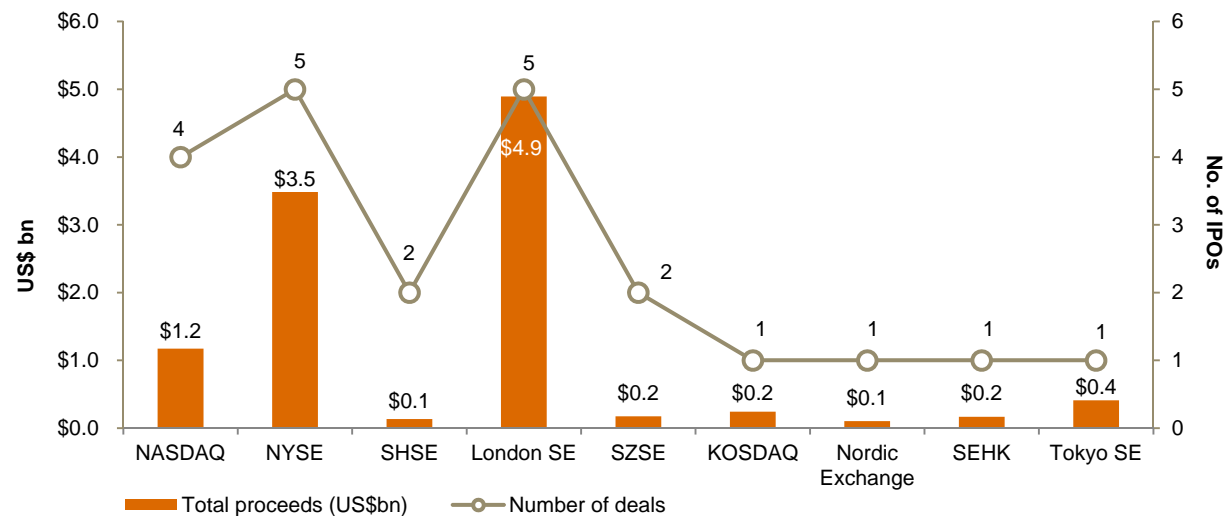
### Q4 2015 Stock exchange distribution

Q4 2015 saw a change in trend, with the London Stock Exchange (LSE) leading in proceeds at US\$4.9 billion from five IPOs. This represented 45% of the total technology IPO proceeds during the quarter.

The NYSE followed the LSE with US\$3.5 billion and five IPOs. Another US\$1.2 billion was raised on NASDAQ from four listings. Shanghai and Shenzhen had two IPOs each with proceeds of US\$135 million and US\$175 million, respectively. Overall, nine stock exchanges had technology listings in the fourth quarter.

The LSE reported the biggest IPO of the quarter—Worldpay Group Plc’s US\$3.4 billion issue. The second largest was First Data Corp listing at US\$2.6 billion on the NYSE.

Figure 35: Q4 2015 Stock exchange distribution



Source: S&P Capital IQ with analysis by PwC

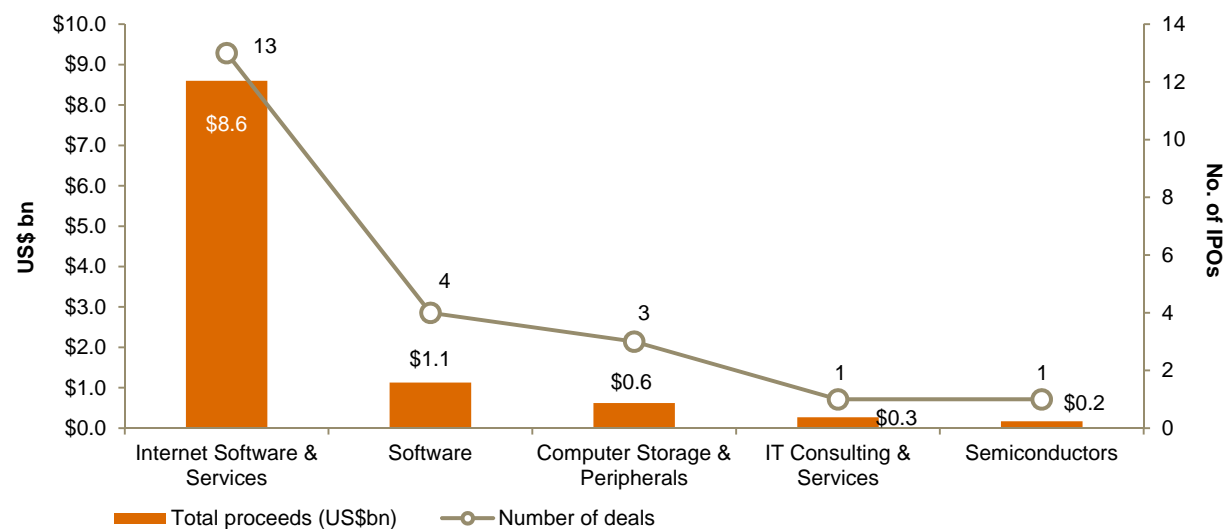
### Q4 2015 Subsector distribution

The Q4 2015 subsector distribution in the IPO market was more in line with the past trends. Internet Software & Services led the way with US\$8.6 billion raised (80% of the total proceeds) and 13 IPOs (59% of the total number of IPOs). Six out of the top 10 IPOs, including the 2 biggest, were from this subsector. Worldpay Group Plc and First Data Corp raised US\$3.8 billion and US\$2.6 billion, respectively.

The Software subsector came second with 10% of the total proceeds and 18% IPOs listed.

The Computer Storage & Peripherals subsector was in the third position with 3 IPOs raising US\$623 million. Semiconductor and IT Consulting & Services had one IPO each with proceeds of US\$166 million and US\$269 million, respectively.

Figure 36: Q4 2015 Subsector distribution

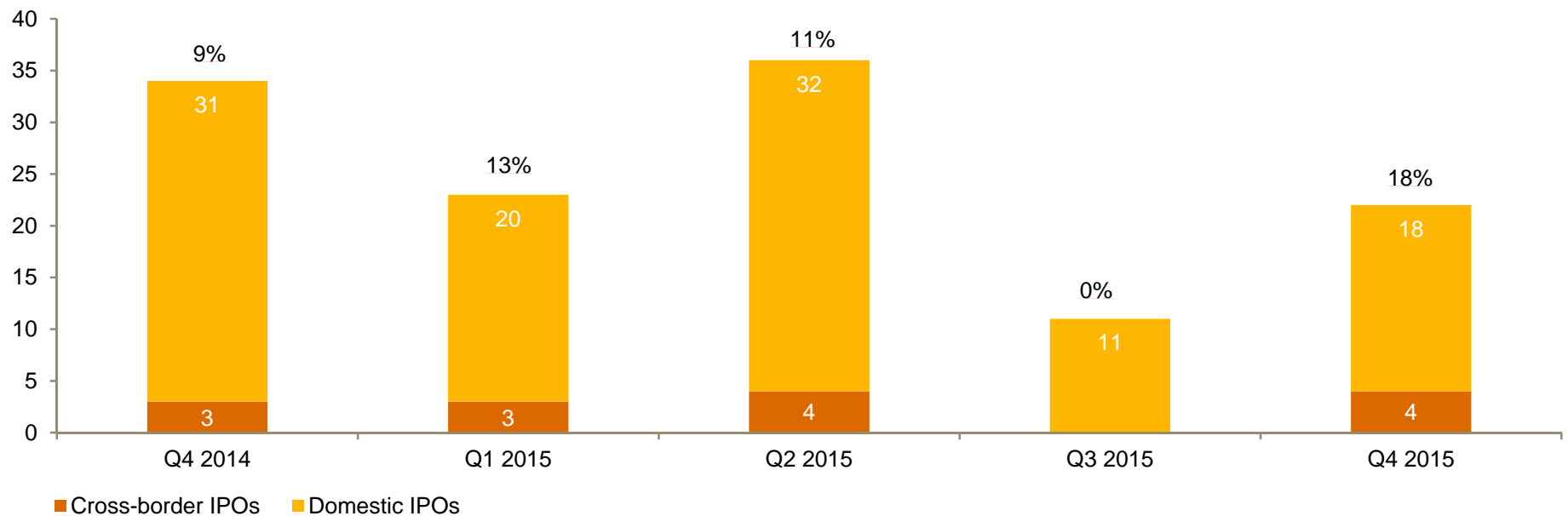


Source: S&P Capital IQ with analysis by PwC

### Q4 2015 Cross-border listings

Cross-border listings were reduced in Q4 2015 compared to the previous years. In this quarter, 4 out of total of 22 IPOs (18%) were cross-border listings. This was primarily due to relaxation of the China regulatory environment in December and increased volatility in the US. As a result, many companies chose to list in their domicile exchange.

Figure 37: Q4 2015 Cross-border listings



Source: S&P Capital IQ with analysis by PwC

## Q4 2015 Tech IPOs by stock exchange – Offering details

Table 3: Q4 2015 – North America (NASDAQ, NYSE)<sup>2</sup>

Issue date	Company	Sector	Proceeds (in US\$ mn)	Primary exchange	Domicile nation
11/18/2015	Match Group Inc	Internet Software & Services	460	NASDAQ Global Select	United States
10/08/2015	CPI Card Group Inc	Internet Software & Services	173	NASDAQ Global Select	United States
11/18/2015	Mimecast Ltd	Internet Software & Services	78	NASDAQ Global Select	United Kingdom
12/09/2015	Atlassian Corp Plc	Software	462	NASDAQ Global Select	Australia
10/14/2015	First Data Corporation	Internet Software & Services	2,560	NYSE	United States
10/06/2015	Pure Storage Inc	Computer Storage & Peripherals	489	NYSE	United States
11/19/2015	Square Inc	Internet Software & Services	279	NYSE	United States
11/12/2015	Instructure Inc	Internet Software & Services	81	NYSE	United States
12/18/2015	Yirendai Ltd	Internet Software & Services	75	NYSE	China

Source: S&P Capital IQ with analysis by PwC

<sup>2</sup>Deals have been classified based on the exchange where capital was raised.

**Table 4: Q4 2015 – Asia**  
**(Shanghai, Shenzhen, Tokyo Stock Exchange, Hong Kong Stock Exchange)<sup>3</sup>**

<b>Issue date</b>	<b>Company</b>	<b>Sector</b>	<b>Proceeds (in US\$ mn)</b>	<b>Primary exchange</b>	<b>Domicile nation</b>
11/02/2015	DOUBLEUGAMES Co, Ltd	Internet Software & Services	244	KOSDAQ	South Korea
12/10/2015	Chunghsin Tech Grp Co, Ltd	Computer Storage & Peripherals	82	Shanghai Stock Exchange	China
12/02/2015	Bomin Electronics Co, Ltd	Computer Storage & Peripherals	53	Shanghai Stock Exchange	China
12/03/2015	Thunder Software Tech Co, Ltd	Software	91	Shenzhen Stock Exchange	China
12/24/2015	Hubei Century Network Technology Co, Ltd	Software	84	Shenzhen Stock Exchange	China
12/29/2015	Xinte Energy Co, Ltd	Semiconductors	166	Stock Exchange of Hong Kong Ltd	China
11/19/2015	BELLSYSTEM24 Holdings Inc	Internet Software & Services	412	Tokyo Stock Exchange	Japan

Source: S&P Capital IQ with analysis by PwC

**Table 5: Q4 2015 – Europe (LSE, Nordic Exchange)<sup>2</sup>**

<b>Issue date</b>	<b>Company</b>	<b>Sector</b>	<b>Proceeds (in US\$ mn)</b>	<b>Primary exchange</b>	<b>Domicile nation</b>
12/03/2015	Purplebricks.com	Internet Software & Services	88	London Stock Exchange (AIM)	United Kingdom
10/15/2015	Worldpay Group Plc	Internet Software & Services	3,842	London Stock Exchange	United Kingdom
10/27/2015	Equiniti Group Plc	Software	492	London Stock Exchange	United Kingdom
11/17/2015	Softcat Plc	IT Consulting & Services	269	London Stock Exchange	United Kingdom
10/28/2015	Hostelworld Group Plc	Internet Software & Services	203	London Stock Exchange	Ireland
10/07/2015	CLX Communications AB (publ)	Internet Software & Services	103	OMX Nordic Exchange Stockholm	Sweden

Source: S&P Capital IQ with analysis by PwC

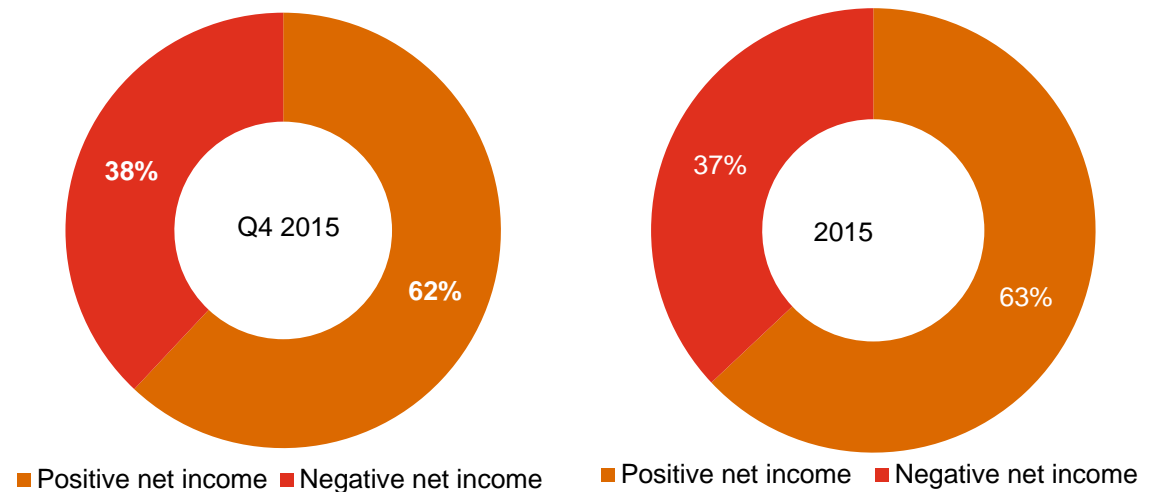
<sup>3</sup> Deals have been classified based on the exchange where capital was raised.



## Key financials – Q4 2015



Figure 38: Q4 2015 and Full-year 2015 Technology IPOs – Net income



Source: S&P Capital IQ with analysis by PwC

The average last twelve months' (LTM) net income for Q4 2015 was US\$(19) million, with 62% of the companies reporting positive net income. Though the share of companies reporting positive net income (62%) was higher than companies reporting a net loss (38%) in the fourth quarter, the average tilted towards the negative due to high net losses reported by a few companies. Match Group Inc in the Internet Software & Services subsector reported the highest net income of US\$133 million, followed by Xinte Energy Co Ltd in the Semiconductors subsector with US\$90 million. First Data Corporation in the Internet Software & Services subsector reported the highest net loss at US\$252 million, followed by Pure Storage Inc, a Computer Storage & Peripherals company, at US\$217 million.



On a full-year basis, the percentage of companies with positive net income was marginally higher, at 63%, compared to Q4 2015. China Railway Signal & Communication Corporation Limited, a Communications Equipment company, recorded the highest LTM net income at US\$366 million, followed by Lens Technology Co Ltd, a Computer Storage & Peripherals company, at US\$191.9 million. First Data Corporation and Pure Storage Inc posted the highest net losses.

The Internet Software & Services subsector drove down the Q4 2015 LTM net income average with six out of 13 companies reporting a net loss. The share of companies reporting a net loss was marginally lower, compared to Q4 2014 (47%) and full year (39%), as 38% of the newly listed companies in Q4 2015 reported net losses versus 37% for the whole year.

In terms of average revenue for the quarter, the Semiconductor subsector reported the highest average revenue of US\$1,287 million, though only one company was listed. Internet Software & Services came second with US\$1,082 million from 13 listings. IT Consulting & Services reported average revenue of US\$858 million from one listing, while the Computer Storage & Peripherals subsector posted average revenue of US\$316 million from three listings. The Software subsector reported the lowest average revenue of US\$223 million from four listings in Q4 2015.

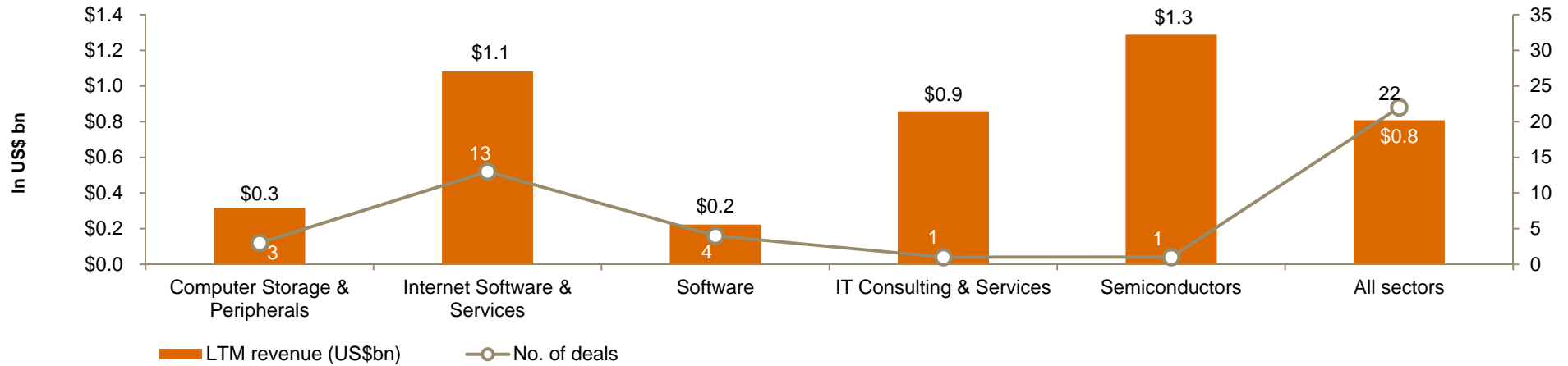
Internet Software and Services reported the highest average LTM EBITDA of US\$309 million in Q4 2015, followed by Semiconductor (US\$240.5 million), IT Consulting & Services (US\$59.6 million), and Software (US\$31 million). Computer Storage & Peripherals was the only subsector to

report a negative LTM EBITDA average of US\$43mn during the quarter.

Internet Software & Services led in terms of highest average enterprise value (EV) of US\$5.2 billion in Q4 2015, followed by Software at US\$2.6 billion. Semiconductors recorded an EV of US\$2.1bn. Computer Storage & Peripherals recorded an average EV of US\$1.5 billion followed by IT Consulting & Services at US\$850 million.

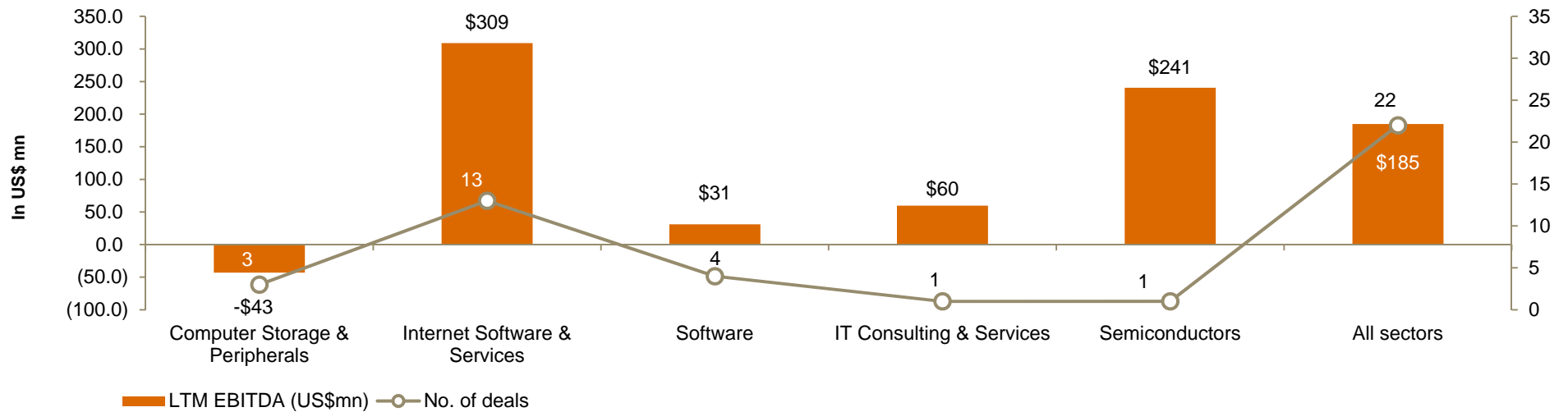


**Figure 39: Q4 2015 – Average LTM revenue**



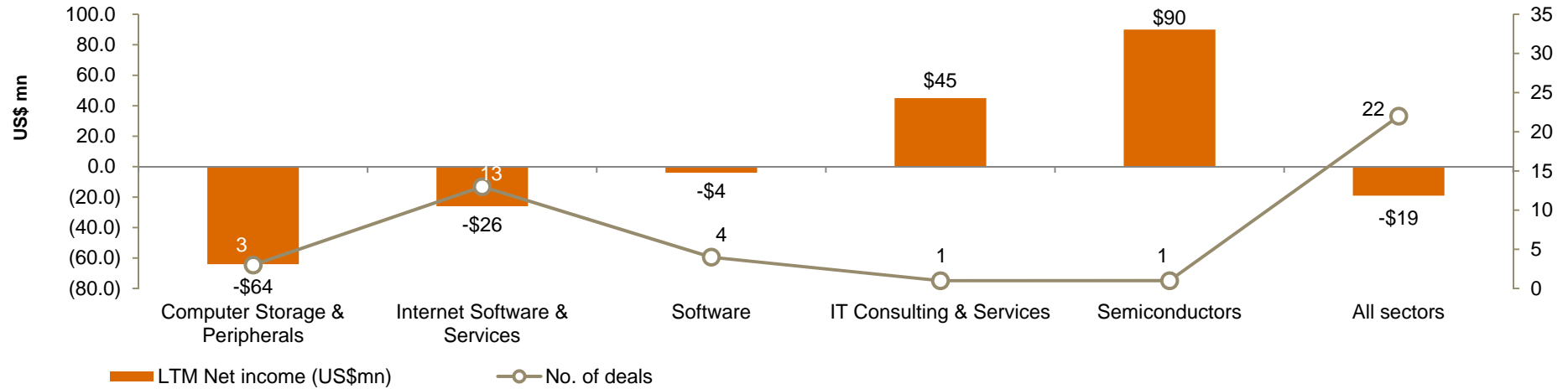
Source: S&P Capital IQ with analysis by PwC

**Figure 40: Q4 2015 – Average LTM EBITDA**



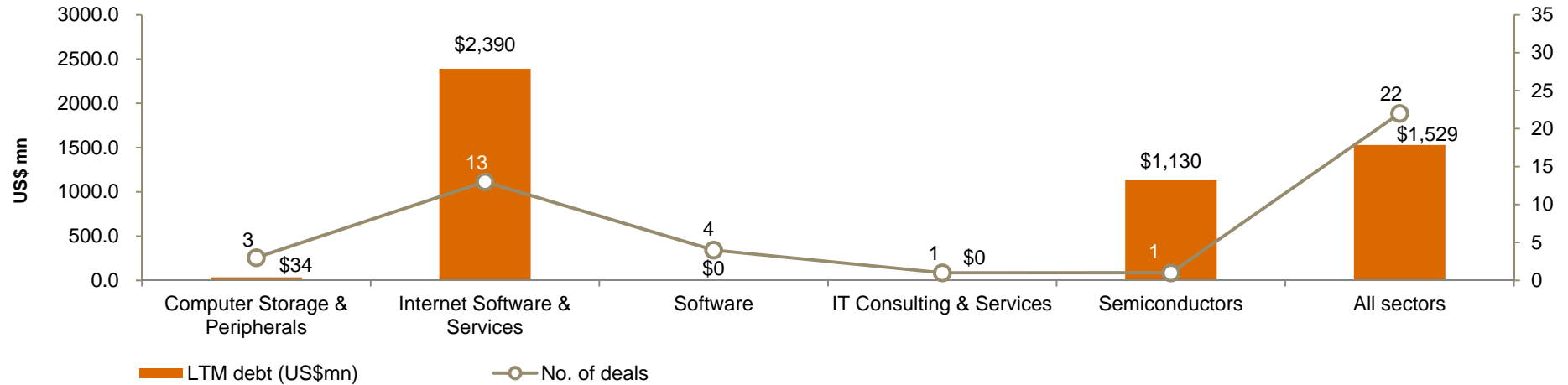
Source: S&P Capital IQ with analysis by PwC

**Figure 41: Q4 2015 – Average LTM net income**



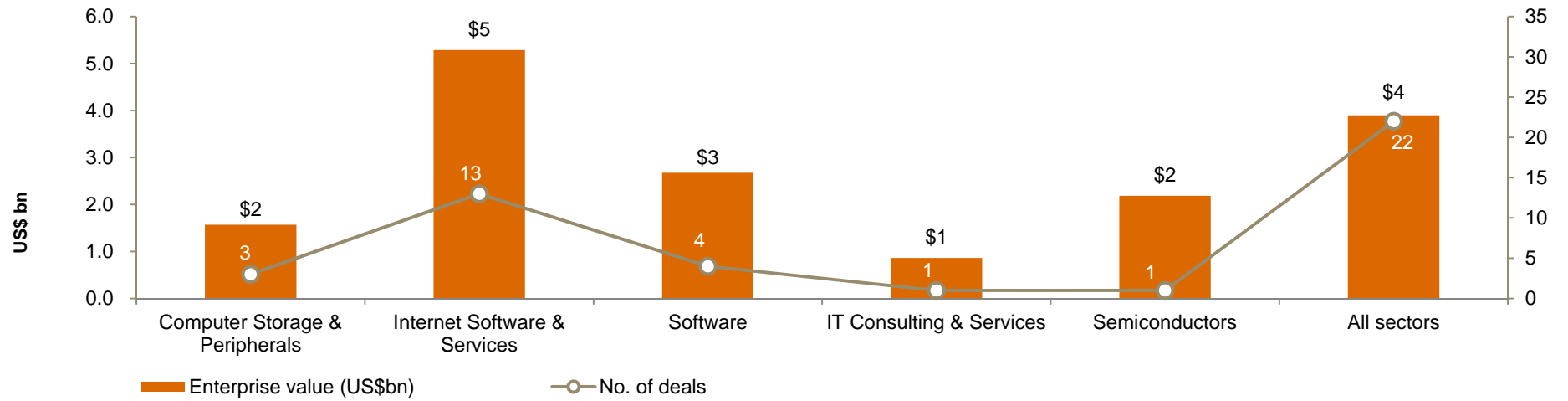
Source: S&P Capital IQ with analysis by PwC

**Figure 42: Q4 2015 – Average total debt**



Source: S&P Capital IQ with analysis by PwC

Figure 43: Q4 2015 – Average enterprise value



Source: S&P Capital IQ with analysis by PwC

### Q4 2015 Technology IPO listings: Valuation metrics

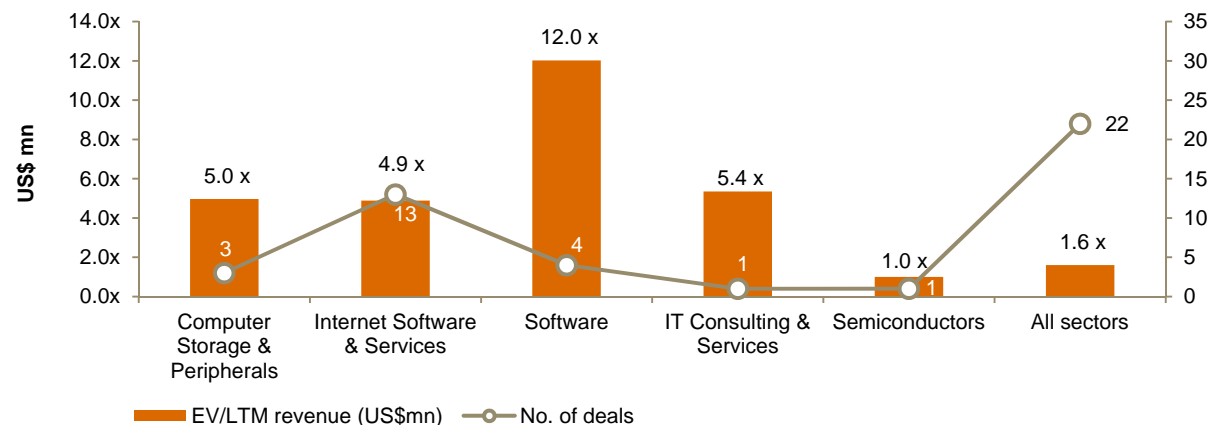
The overall valuation of technology IPOs increased in Q4 2015 compared to Q4 2014. Internet Software & Services and Software led the valuation metrics. The trend of rising valuations in pre-IPO funding continued in Q4 though total US funding from venture capital and private equity firms decreased 32% from the prior quarter.<sup>4</sup> Nonetheless, 12 companies joined the “Unicorn” club in Q4 with an aggregate valuation of US\$36bn.<sup>5</sup>

The average EV/LTM revenue for listed IPOs in Q4 2015 was 4.8x, higher than 3.7x in Q4 2014. The Software subsector reported the highest revenue multiple of 12x, followed by Computer Storage & Peripherals at 5x. The Internet Software & Services companies posted an average revenue multiple of 4.9x, followed by Semiconductors at 1.6x. IT Consulting & Services came last at 1.0x.

Overall, the average EV/EBITDA multiple was 21.1x in Q4 2015 compared to 43.1x in Q4 2014. The Software subsector led with the highest average EBITDA multiple of 85.3x, followed by the Internet Software and Services subsector at 17.1x. IT Consulting & Services had an average EBITDA multiple of 14.5x, followed by Semiconductors at 8.6x.

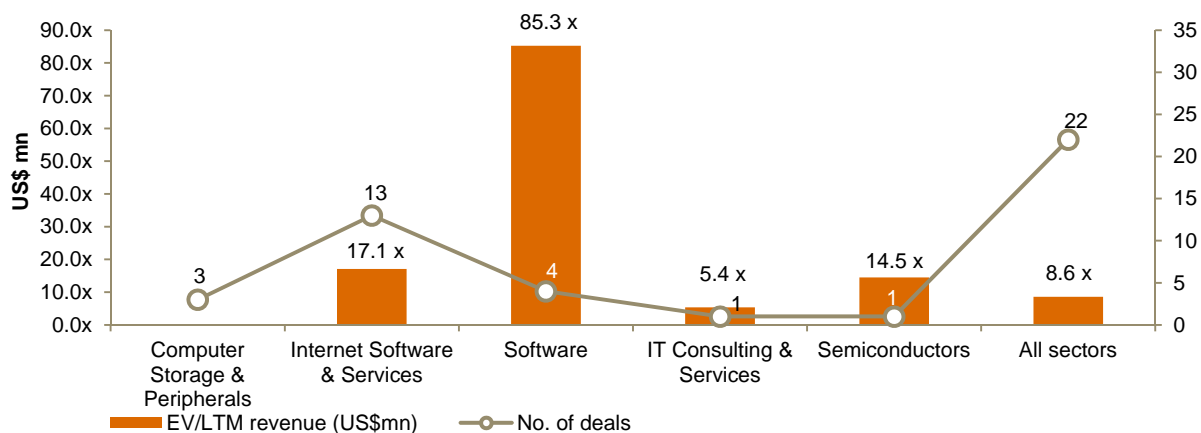
<sup>4</sup> PwC/NVCA MoneyTree Report, January 2016

Figure 44: Q4 2015 EV/LTM revenue



Source: S&P Capital IQ with analysis by PwC

Figure 45: Q4 2015 EV/LTM EBITDA



Source: S&P Capital IQ with analysis by PwC

<sup>5</sup> CB Insights, January 2016



## Top three subsectors in Q4 2015

### Internet Software & Services

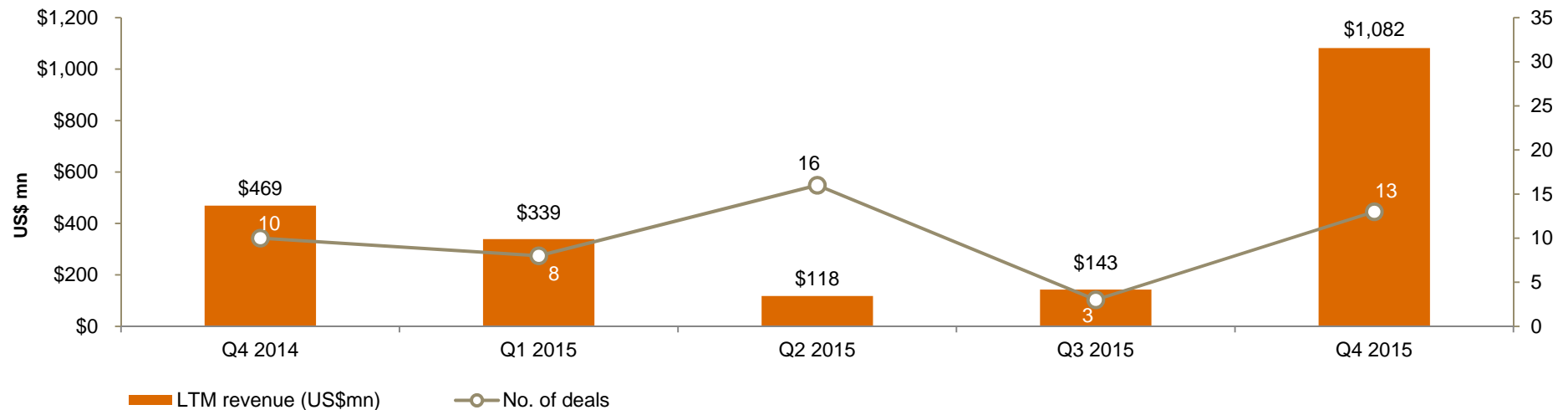
In terms of average revenue, the Internet Software & Services subsector recorded significant growth in Q4 2015, both year on year (658%) and quarter on quarter (130%). First Data Corporation's high revenue drove this growth.

Average LTM EBITDA for Q4 2015 was positive at US\$309mn, a 599% increase from Q3 2015, which had average LTM EBITDA of US\$44.3mn. Average net income was negative at US\$26mn, which is an ongoing trend from the previous quarter as well as Q4 2014.

Average debt witnessed a sharp 915% increase compared to Q4 2014 and was up 468% from the third quarter of 2015.

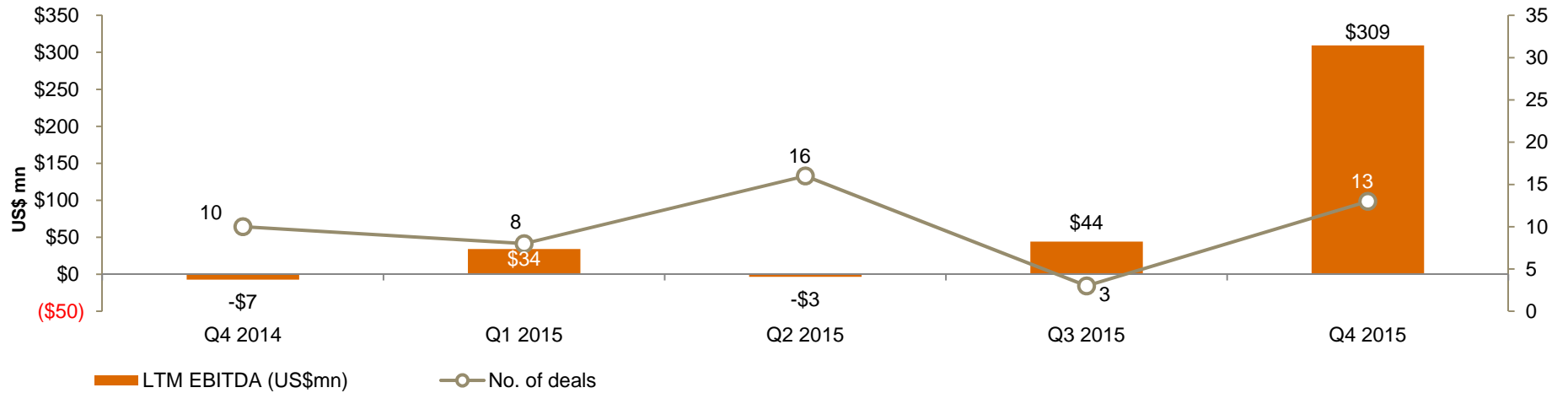
EV/LTM revenue (4.9x) declined by 55% compared to Q4 2014 and increased marginally by 11% on a quarter-on-quarter basis. EV/LTM EBITDA declined by 51% on a quarter-on-quarter basis.

Figure 46: Internet Software & Services – LTM revenue



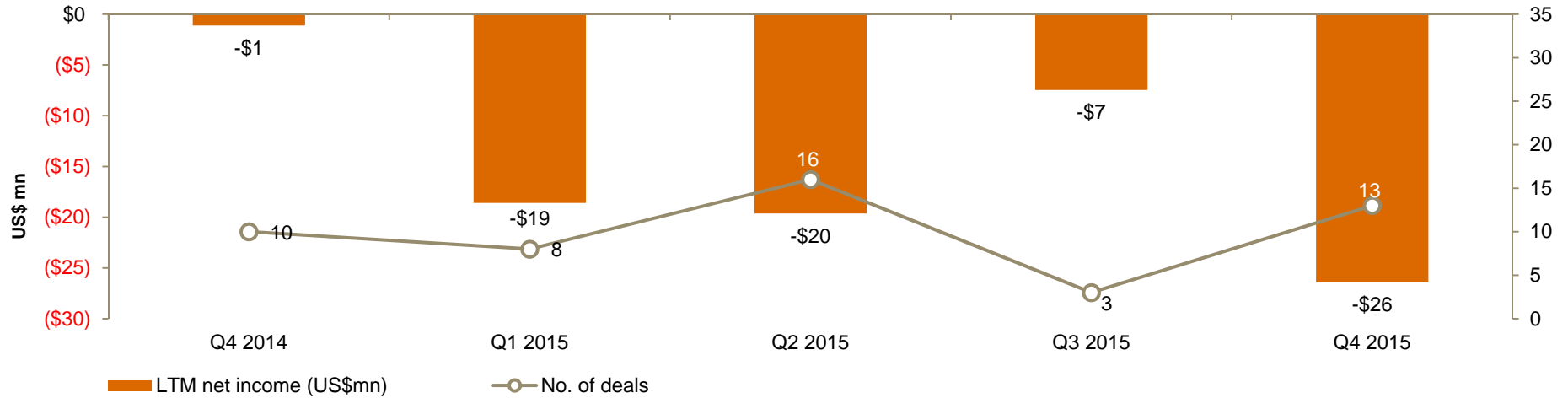
Source: S&P Capital IQ with analysis by PwC

**Figure 47: Internet Software & Services – LTM EBITDA**



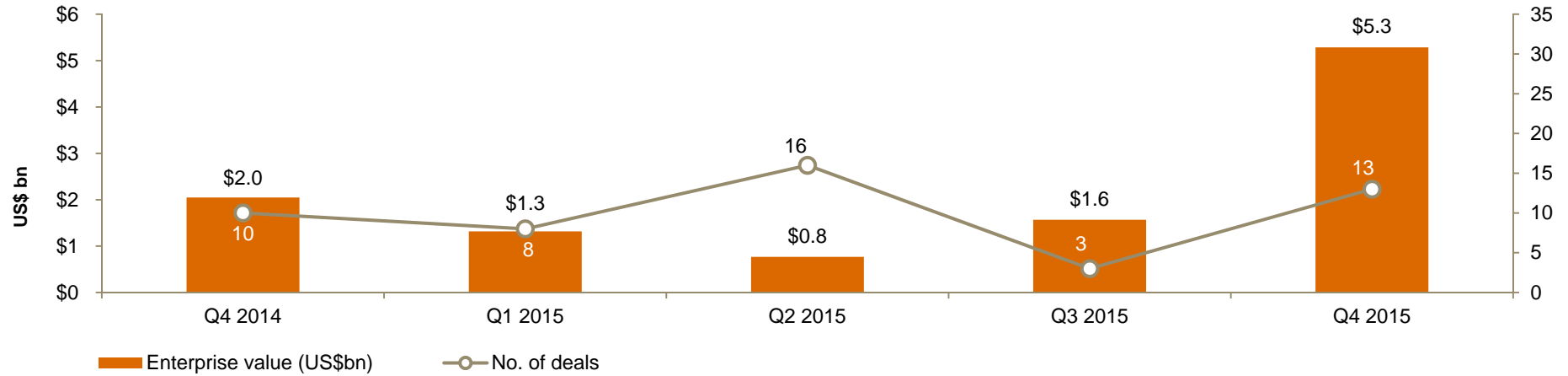
Source: S&P Capital IQ with analysis by PwC

**Figure 48: Internet Software & Services – LTM net income**



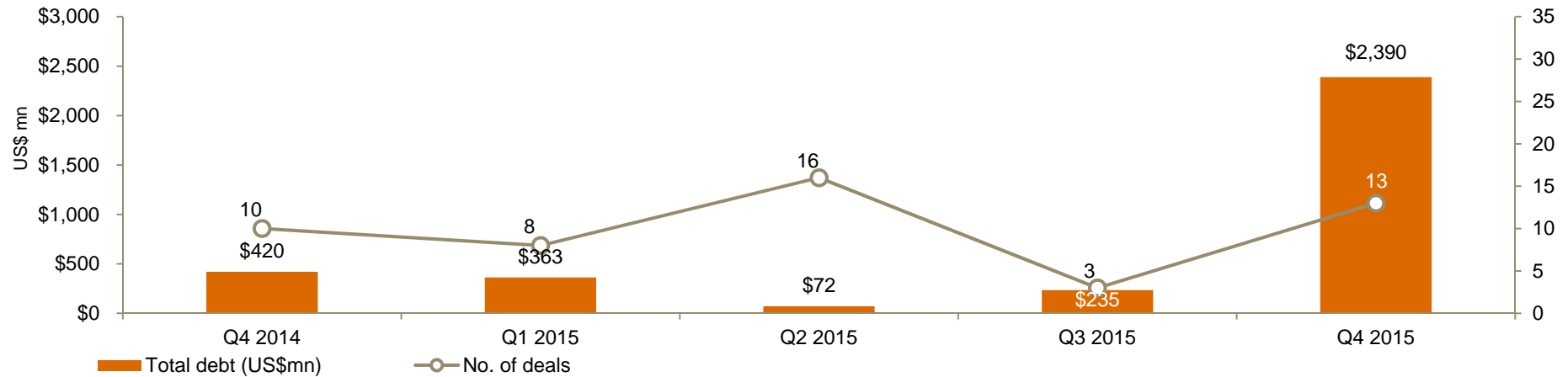
Source: S&P Capital IQ with analysis by PwC

**Figure 49: Internet Software & Services – Enterprise value**



Source: S&P Capital IQ with analysis by PwC

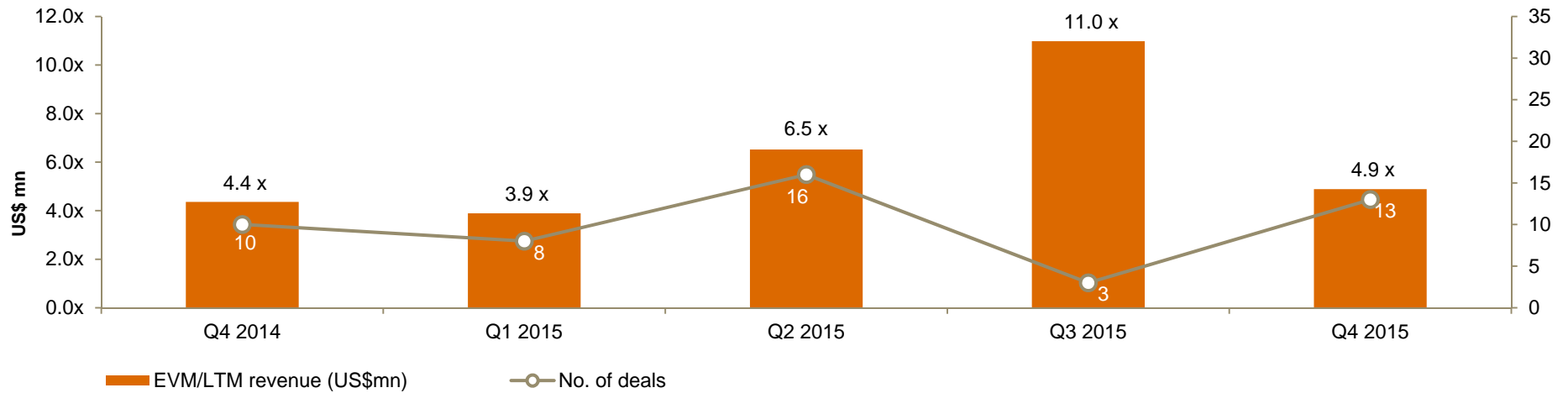
**Figure 50: Internet Software & Services – Total debt**



Source: S&P Capital IQ with analysis by PwC

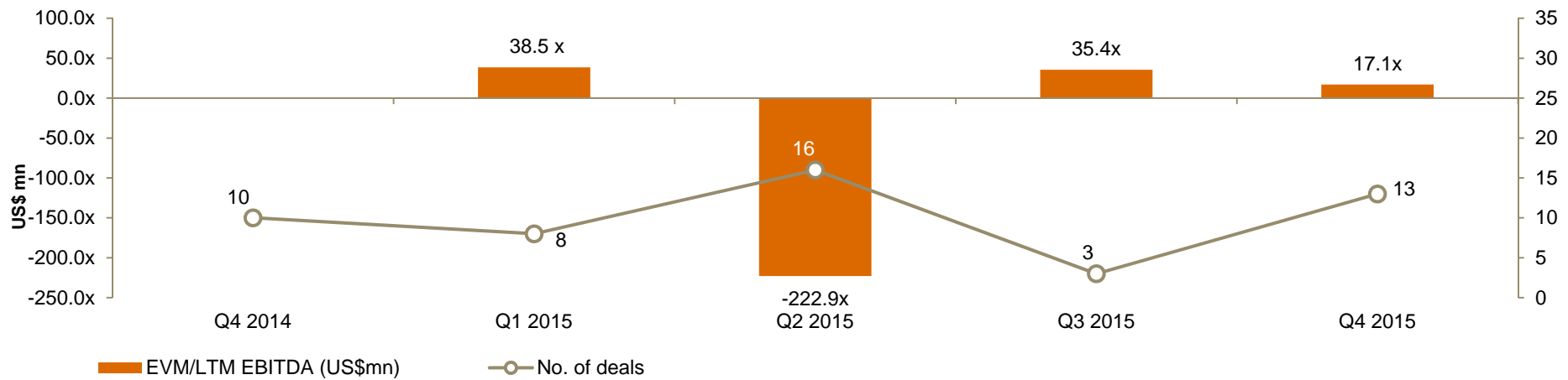


**Figure 51: Internet Software & Services – EV/LTM revenue**



Source: S&P Capital IQ with analysis by PwC

**Figure 52: Internet Software & Services – EV/LTM EBITDA**



Source: S&P Capital IQ with analysis by PwC

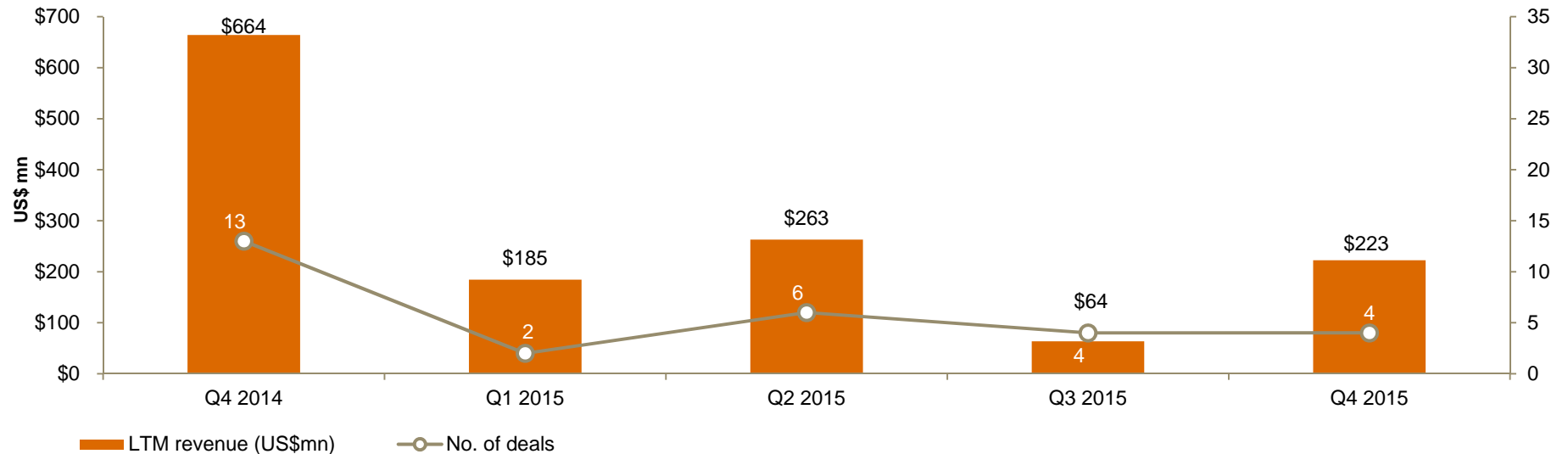
## Software

The average revenue for Software companies was at US\$223 million in Q4 2015, an increase of 250% on a quarter-on-quarter basis; while compared to Q4 2014, it declined by 67%.

Average LTM EBITDA declined by 51% year on year from US\$63.7 million to US\$31 million in Q4 2015. Software EV increased more than six times on a quarter-on-quarter basis from US\$350.8 million in Q3 2015 to US\$2.6 billion in Q4 2015. Compared to Q4 2014, average EV grew by 17% from US\$2.2 billion in Q4 2014.

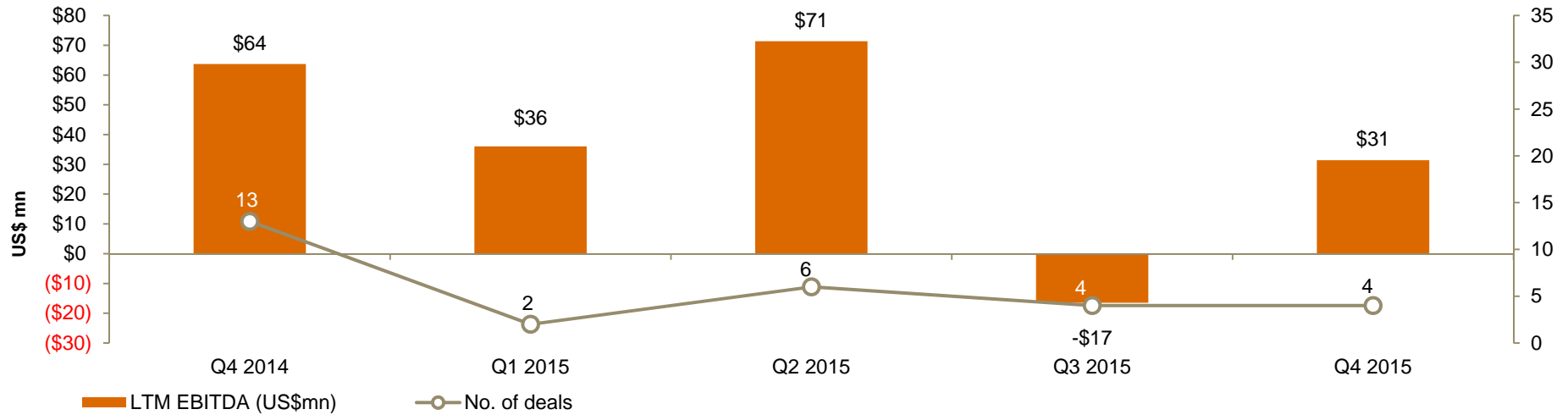
In the current quarter, the subsector had no debt when compared to Q3 2015 and Q4 2014. The valuation multiple of EV/LTM revenue (12x) increased by 251% and 118% compared to last year and sequentially, respectively. EV/LTM EBITDA (85.3x) sequentially declined by around five times and grew by 138% compared to last year

Figure 53: Software – LTM revenue



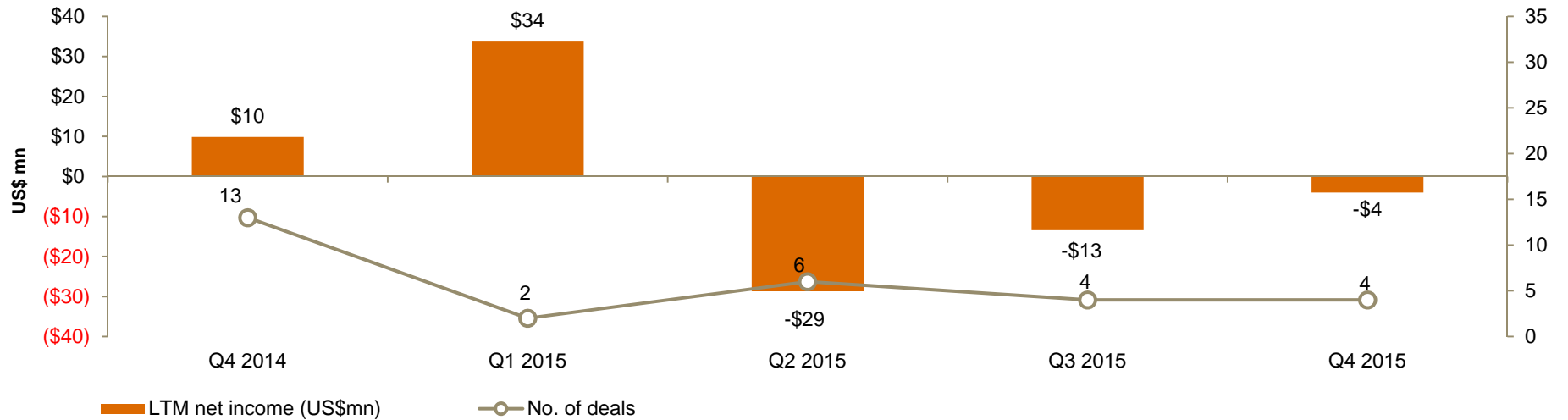
Source: S&P Capital IQ with analysis by PwC

**Figure 54: Software – LTM EBITDA**



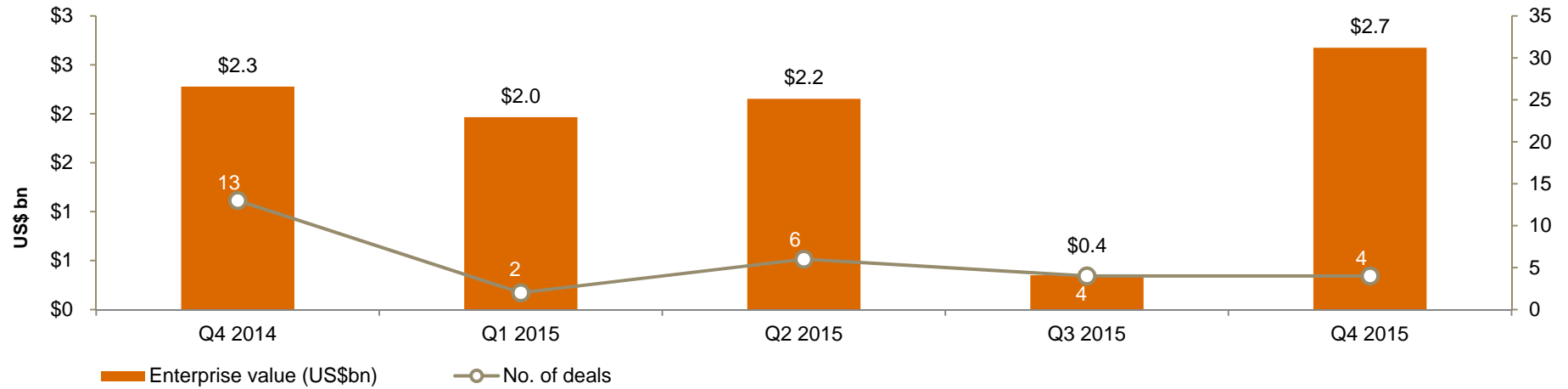
Source: S&P Capital IQ with analysis by PwC

**Figure 55: Software – LTM net income**



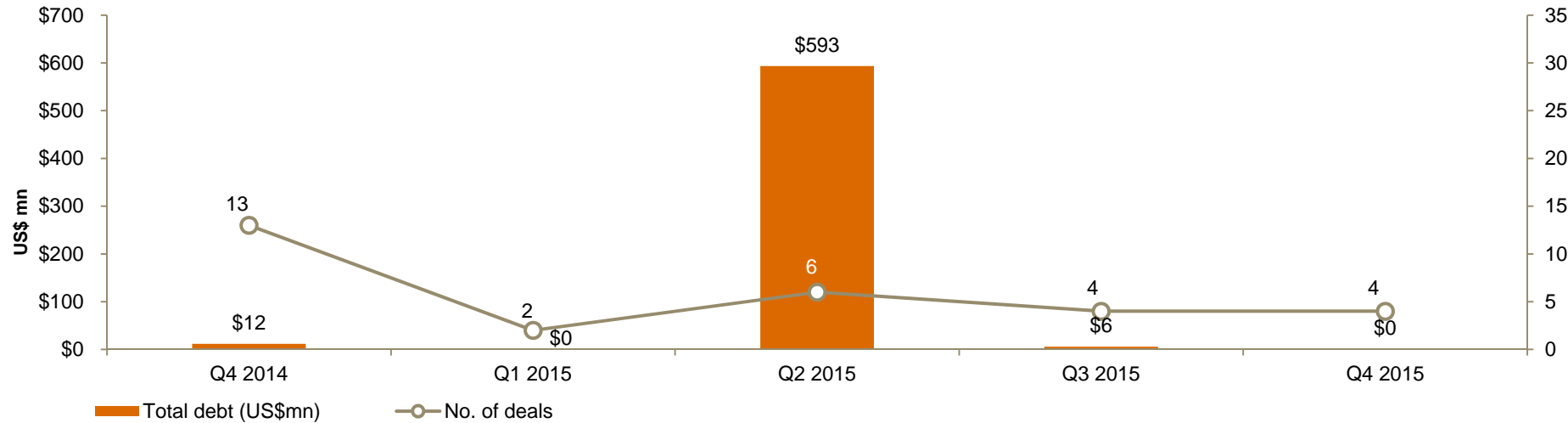
Source: S&P Capital IQ with analysis by PwC

**Figure 56: Software – Enterprise value**



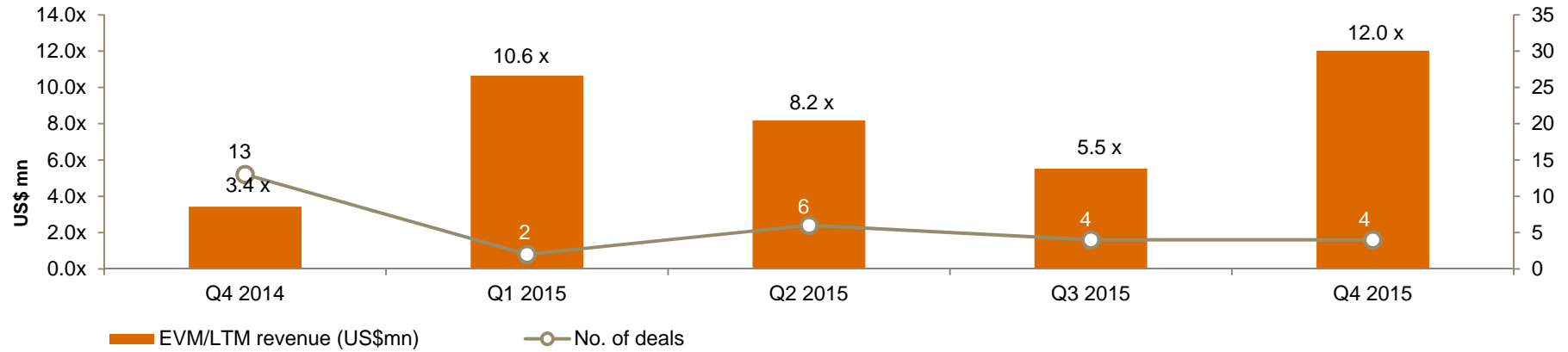
Source: S&P Capital IQ with analysis by PwC

**Figure 57: Software – Total debt**



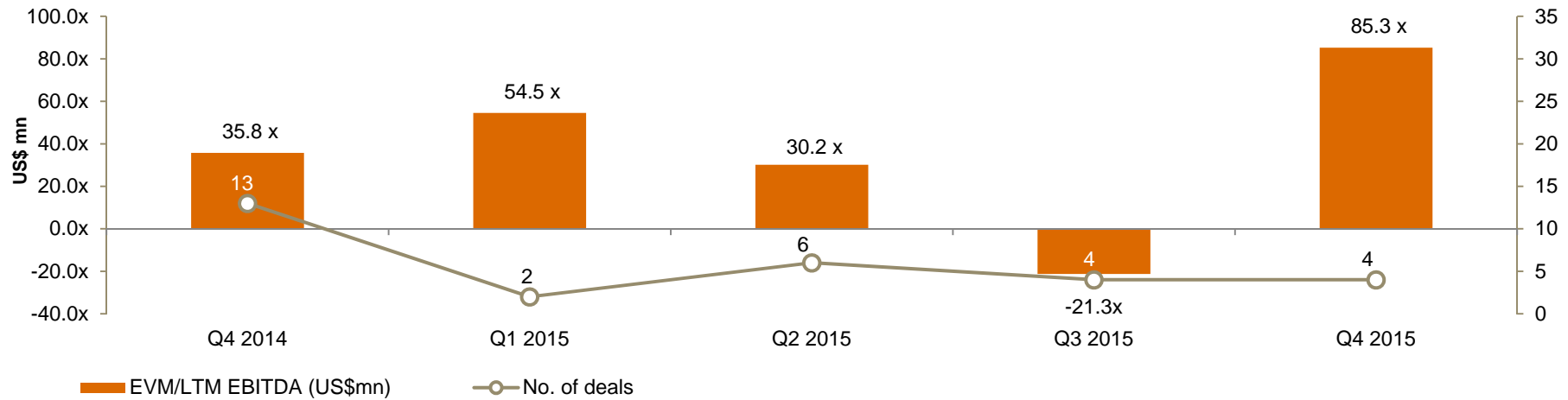
Source: S&P Capital IQ with analysis by PwC

**Figure 58: Software – EV/LTM revenue**



Source: S&P Capital IQ with analysis by PwC

**Figure 59: Software – EV/LTM EBITDA**



Source: S&P Capital IQ with analysis by PwC

## Computer Storage & Peripherals

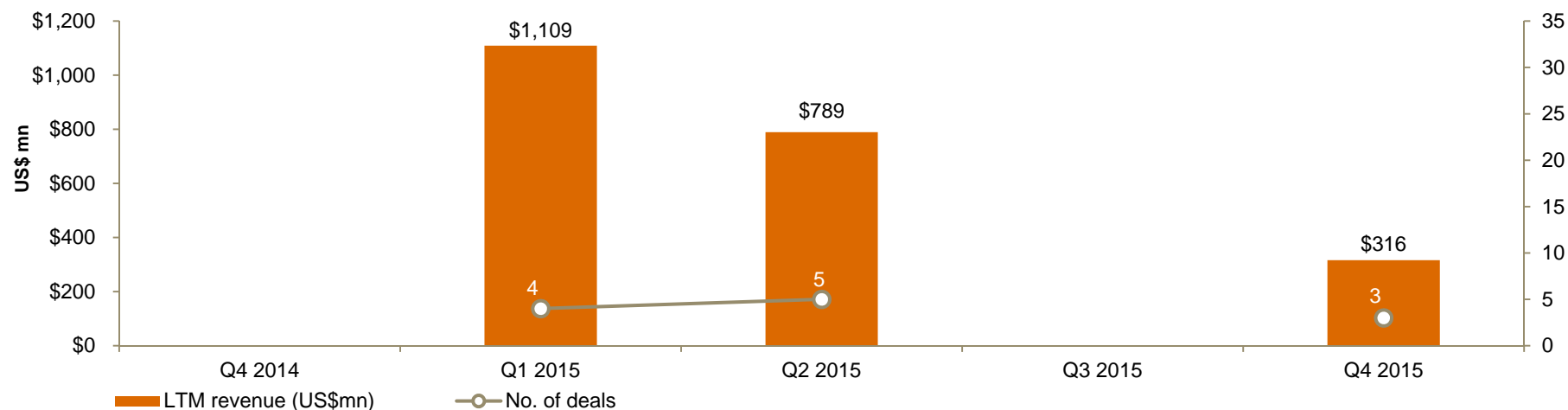
The Computer Storage & Peripherals subsector made a comeback in Q4 2015 with three IPOs, whereas in Q3 2015 and Q4 2014, there were no IPOs.

Average LTM revenue in Q4 2015 was US\$316 million, which declined by 60% compared to Q2 2015 (US\$789.5 million). LTM revenues fell by 72% in the current quarter compared to Q1 2015. Average LTM EBITDA was negative US\$43 million for Q4 2015, while in Q1 and Q2 2015, LTM EBITDA was US\$172.2 million and US\$102.2 million, respectively. Average LTM net income was also negative at US\$64 million, compared to US\$49.8 million and US\$82.5 million in Q2 and Q1 2015, respectively.

Enterprise value for the subsector dropped sharply in Q4 2015 by 33% to US\$1.5 billion from US\$2.3 billion in Q2 2015. Also, compared to Q1 2015 (US\$3.8 billion), there was a drop of 59%.

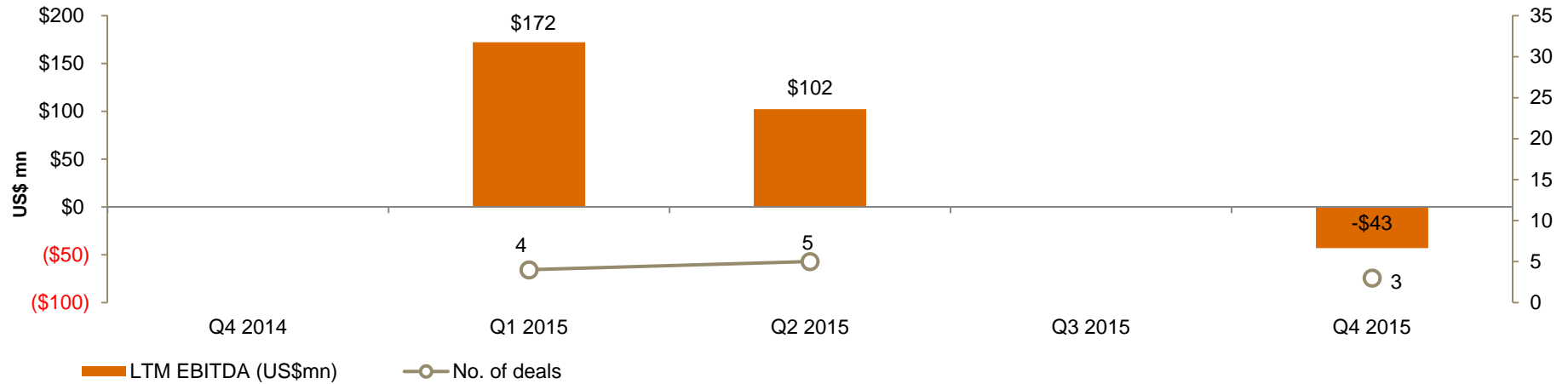
The EV/LTM revenue multiple for the subsector grew by 67% from 3.0x in Q2 2015 to 5.0x in the current quarter. Compared to Q1 2015, the growth was 44% for the revenue multiple.

**Figure 60: Computer Storage & Peripherals – LTM revenue**



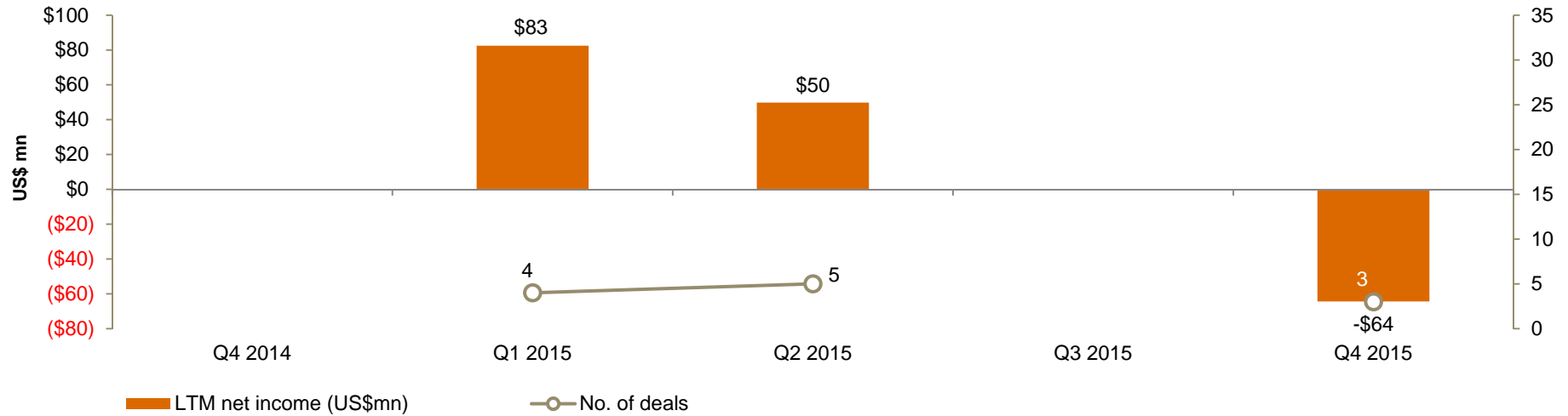
Source: S&P Capital IQ with analysis by PwC

**Figure 61: Computer Storage & Peripherals – LTM EBITDA**



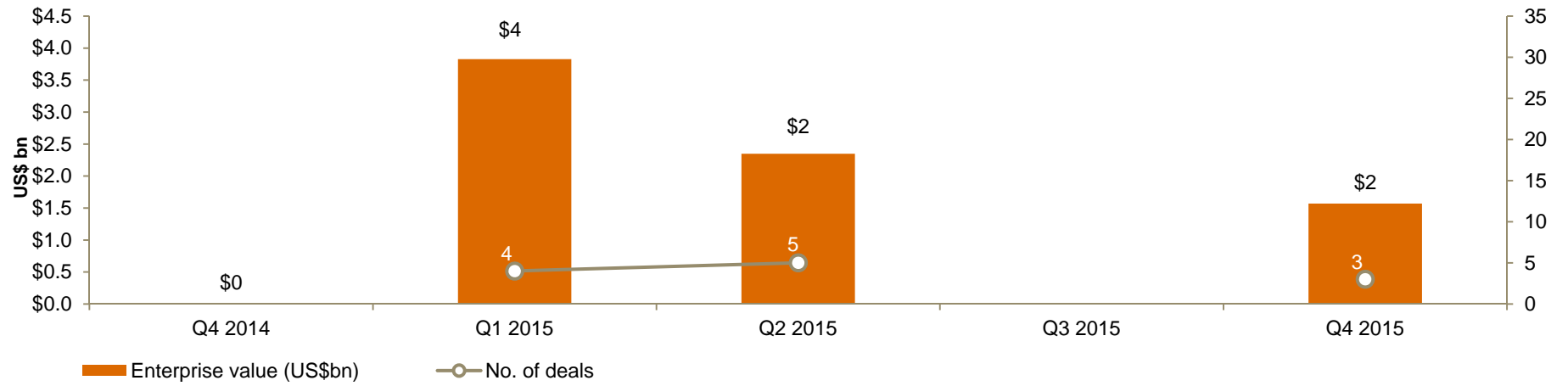
Source: S&P Capital IQ with analysis by PwC

**Figure 62: Computer Storage & Peripherals – LTM net income**



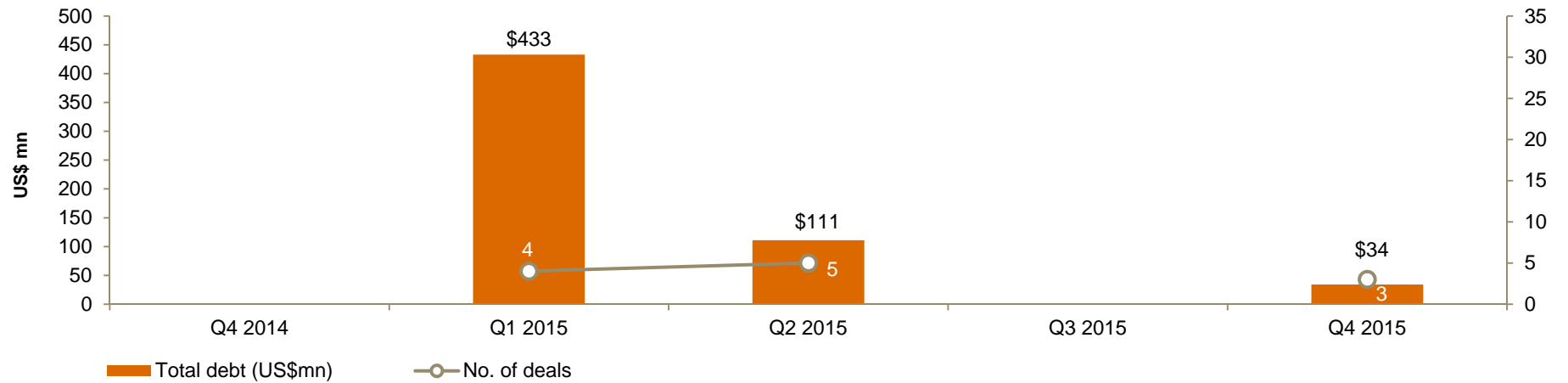
Source: S&P Capital IQ with analysis by PwC

**Figure 63: Computer Storage & Peripherals – Enterprise value**



Source: S&P Capital IQ with analysis by PwC

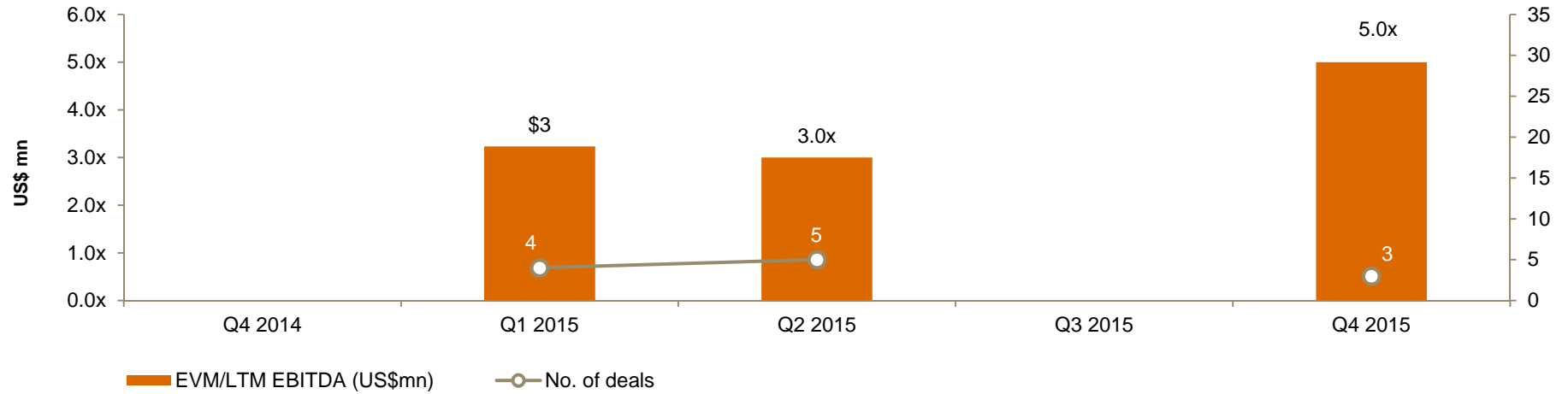
**Figure 64: Computer Storage & Peripherals – Total debt**



Source: S&P Capital IQ with analysis by PwC

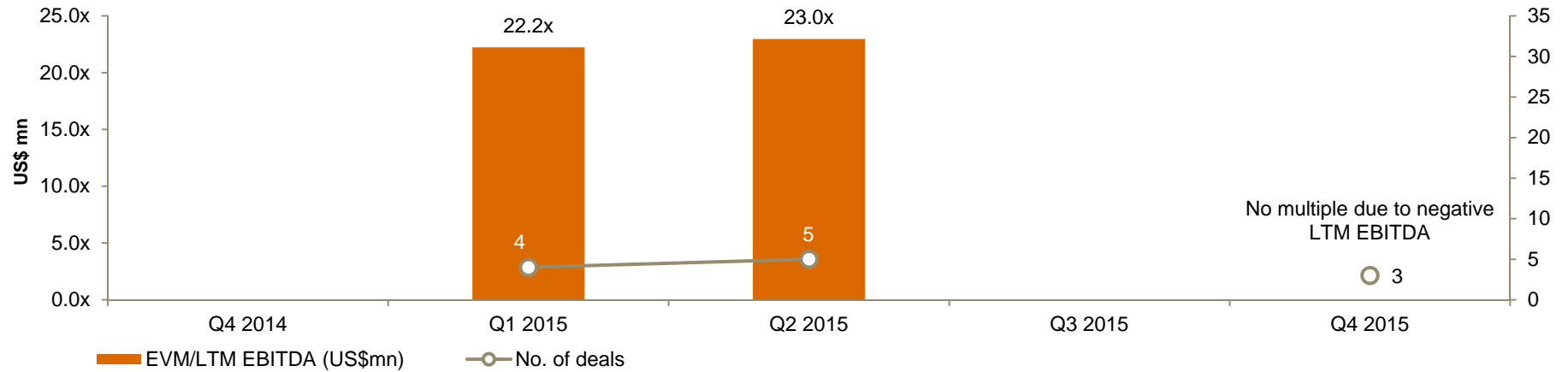


**Figure 65: Computer Storage & Peripherals – EV/LTM revenue**



Source: S&P Capital IQ with analysis by PwC

**Figure 66: Computer Storage & Peripherals – EV/LTM EBITDA**



Source: S&P Capital IQ with analysis by PwC

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# *Methodology*

The Global Technology IPO Review for Q4 and full-year 2015 is based on PwC's analysis of transaction data extracted from S&P Capital IQ. The analysis considers IPOs across all countries worldwide during the period 1 October 2015 to 31 December 2015 (Q4), 1 January 2015 to 31 December 2015 (full-year) and from 2011-2015. Financial data was also obtained from S&P Capital IQ.

The definition of the Technology sector is based on the S&P Capital IQ 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.

LTM – Last twelve months



## ***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

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