Cisco Systems

Caught Between an EM Rock and an SDN Hard Place. Downgrading to Underweight.

Underweight
Previous: Neutral

CSCO, CSCO US

Price: $22.20

Price Target: $17.00
Previous: $21.00

Data Networking & Wireline Equipment/Telecom Equipment/Wireless

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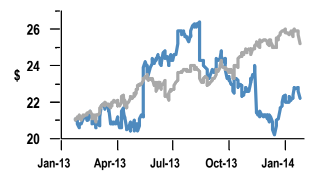
In conjunction with a larger 2014 Outlook report also published today we are downgrading our Cisco rating from Neutral to Underweight and lowering our December 2014 price target to $17. We believe that weakness in Emerging Markets Service Providers called out by CSCO in their QTR earnings report combined with delayed spending in the switching market driven by SDN are negatives. We also update our bare metal impact analysis in EPS and find that lower OS pricing has materially lowered our central case “SDN translated” EPS to $1.67. A detailed price comparison of bare metal solutions with Cisco shows a large pricing gap that we believe will have to close for Cisco to maintain share.

- **Switching price comparison.** We publish a new pricing comparison of Cisco products to bare metal solutions and find bare metal to be 47%-52% less expensive per server on an Apples-to-Apples basis. We calculate that much of Cisco’s premium is linked to support/license fees which may have to be reduced.
- **Emerging markets risk continuing.** Carrier revenue trends in major emerging markets look likely to weaken further in 2014. Specifically, Indian SPs revenue growth is forecast to decline to 5.3% (2013: 8.2%), Russian SPs to 3.4% (5.3%), Brazilian carriers to 3.8% (4.9%), Chinese carriers to 10.9% (14.6%) and Mexican SPs to remain at ~1%. We believe that these negative revenue trends combined with weak local currencies are likely to drive lower capital spending. We believe Cisco has outsize exposure to these markets.
- **Switching market pause negative.** We believe that the key US market is likely to pause for much of 2014 ahead of SDN product availability. Cisco’s own products do not ship until April/May and we expect customers to then engage in testing which pushes purchases toward the end of the year. We see potential downside risk to our current switching market growth expectation of 1.5%.
- **Longer term bare metal impacts increasing.** We update our EPS impact calculations first rolled out on July 1, 2013. Since then we have learned that switch OS prices are lower than we had anticipated. This causes our Central Case Cisco SDN EPS scenario to drop to $1.67 from $2.18 published in July.
- **Valuation rich vs. earning potential.** Given that our central case now points to EPS of just $1.67 when SDN has had its full impact we find it tough to support Cisco’s current share price. We apply a 10x PE to our central case EPS scenario and arrive at a $17 December 2014 price target for Cisco.

Price Performance



	YTD	1m	3m	12m
Abs	-1.0%	2.4%	-0.8%	5.6%
Rel	2.1%	4.7%	-3.0%	-14.2%

Cisco Systems Inc. (CSCO;CSCO US)

FYE Jul	2010A	2011A	2012A	2013A	2014E	2015E
EPS (pro forma) ($)						
Q1 (Oct)	0.36	0.42	0.43	0.48	0.53A	0.49
Q2 (Jan)	0.40	0.37	0.47	0.50	0.46	0.48
Q3 (Apr)	0.42	0.42	0.48	0.51	0.47	0.47
Q4 (Jul)	0.43	0.40	0.47	0.52	0.49	0.51
FY	1.61	1.62	1.85	2.01	1.94	1.94
Revenue FY ($ mn)	40,040	43,218	46,061	48,607	46,008	46,982

Source: Company data, Bloomberg, J.P. Morgan estimates.

Company Data	
Price ($)	22.20
Date Of Price	24 Jan 14
52-week Range ($)	26.49-19.98
Market Cap ($ bn)	120.55
Fiscal Year End	Jul
Shares O/S (mn)	5,430
Price Target ($)	17.00
Price Target End Date	31-Dec-14

See page 23 for analyst certification and important disclosures, including non-US analyst disclosures.

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Cisco EPS Estimates in Various Scenarios

We have taken our SDN analysis of Cisco another step forward by updating our forward market sizing scenario framework published in our "2014 Networking Outlook" and linking that back to Cisco EPS outcomes. This then allows us to think about Cisco's real earnings power in an SDN affected world as well as to objectively consider a fair valuation for the company. We consider EPS impacts for Cisco against both our current 2014 earnings model and a possible 2017 model. We also consider two main scenarios which both involve 85% data center conversion to "bare metal" hardware. In the worse of these two we add the assumption that 30% of campus switching also moves to bare metal. Across all of these methods calendar year EPS ranges from $1.41 to $1.82 in 2014 and from $1.66 to $1.90 in 2017. Our central case scenario outputs EPS of $1.67 near the bottom of this range. While our range is relatively wide we would point out that it implies negative EPS growth over the next few years for Cisco. More optimistic scenarios are certainly possible but even then earnings growth is challenged unless one assumes that "bare metal" hardware fails to take off. We believe this is unlikely.

Two potential approaches

We explore two different approaches to estimating EPS for Cisco in an SDN impacted world. The first of these is simply to take Cisco's current financial model and apply various SDN effects to it. This has the advantage of locking down the many moving parts in the model and only varying effects from SDN. However, the downside to this approach is that it fails to capture potential changes in unaffected parts of the model that we believe will occur by the time SDN impacts become acute.

Our second approach attempts to forecast our model to 2017 when we believe that SDN will be nearly fully impacting the model and then to apply various SDN scenarios. This approach tends to be more optimistic because it gives Cisco credit for growth in some parts of its business. However, due to the large time gap between now and 2017 this approach also probably includes large estimation errors inherent to forecasting a complex business like Cisco's.

In the end we have selected the 2017 approach as our central case because it is at least attempting to estimate realistic normalized earnings in a timeframe where we see bare metal switch adoption as realistic. We begin this section with that approach and then move on to adjust 2014 numbers. Also note that we are only presenting a limited number of scenarios here from a potentially wide range. Readers who would like to know how numbers flex for various levels of commoditization are welcome to get in touch with us.

2017 EPS based SDN scenarios

In this section we overview two different EPS impact scenarios. These are:

1. A scenario where 85% of Data Center switching has been converted to so-called "bare metal" switches based on third party (Broadcom, etc.) silicon.

2. A scenario with the same 85% of DC switching converted as in Scenario #1 but with 30% of campus switching also based on "bare metal" equipment.

In this approach we assume some growth for parts of the business that are not impacted by SDN and then apply impacts from our two main scenarios to Cisco's Ethernet switching segments to arrive at a range of 2017 EPS scenarios. This approach tends to yield more positive results for Cisco since it gives the company credit for growing other areas of its business while SDN is taking time to develop. We again believe that both this and our 2014 approach have positives and negatives that should be considered when thinking about what EPS number to use to value CSCO.

Our primary assumption for this model is that revenues outside of DC and Campus switching grow at an aggregate CAGR of 3.1% from 2014 to 2017. We are able to flex this growth rate upon request though we believe that 3% CAGR is more than fair given these other revenues are expected to decline in 2013 and 2014 and also considering global economic growth seems likely to be well below that to 2017.

In Table 1 below our 85% bare metal scenario yields a central case EPS of $1.80 for calendar 2017 with the same 45% revenue share and 20% EBIT margin assumptions we make for the 2014 approach. Here EPS outcomes range from $1.74 to $1.90 for the range of margin and share inputs we consider. Note that we do not currently publish a calendar 2017 EPS estimate for Cisco. However, we would point out that most scenarios here are *below* our $1.88 EPS estimate for calendar 2014 and therefore imply a *negative EPS growth rate*.

Table 1: Cisco CY17 EPS: 85% DC Bare Metal

		Cisco CY'17 EPS Sensitivity Table				
		DC Switching Market Share				
		30.1%	**40.0%**	**50.0%**	**60.0%**	**70.0%**
DC Switching EBIT Margin	**10.0%**	$1.74	$1.75	$1.76	$1.77	$1.78
	15.0%	$1.75	$1.76	$1.78	$1.80	$1.81
	20.0%	$1.76	$1.78	**$1.80**	$1.82	$1.84
	25.0%	$1.77	$1.79	$1.82	$1.85	$1.87
	30.0%	$1.77	$1.81	$1.84	$1.87	$1.90

Source: J.P. Morgan estimates.

Table 2 goes on to consider the case where DC switching moves to 85% bare metal and 30% of campus switching does the same. In this case our central EPS ends up at $1.67 with numbers ranging from $1.66 to $1.69.

Table 2: Cisco CY17 EPS: 85% DC and 30% Campus Bare Metal

		Cisco CY'17 EPS Sensitivity Table				
		Campus Switching Market Share				
		54.2%	**56.9%**	**59.6%**	**62.4%**	**65.1%**
Campus Switching EBIT Margin	**5.0%**	$1.66	$1.66	$1.66	$1.66	$1.66
	10.0%	$1.66	$1.66	$1.66	$1.67	$1.67
	15.0%	$1.66	$1.66	**$1.67**	$1.67	$1.68
	20.0%	$1.66	$1.67	$1.67	$1.68	$1.68
	25.0%	$1.66	$1.67	$1.67	$1.68	$1.69

Source: J.P. Morgan estimates.

2014 based EPS Scenarios

In this section we consider the same two "bare metal" scenarios used in the prior section but we apply the impacts of these to our 2014 estimates for Cisco. This has the advantage of avoiding estimate risk all the way out to 2017 but, in our opinion, underestimates Cisco's ability to grow the rest of its business to compensate for SDM impacts in the future.

85% Data Center switching "bare metal"

In this scenario we have applied the impact of conversion of 85% of data center switching to "bare metal" hardware running an OS from a third party supplier. Keep in mind that the EPS impacts we show here are derived from our 2014 estimates.

Table 3: Cisco CY14 EPS: 85% DC Commoditized

		Cisco CY'14 EPS Sensitivity Table *Data Center Switching Market Share*				
		30.0%	**40.0%**	**50.0%**	**60.0%**	**70.0%**
Data Center Switching EBIT Margin	**10.0%**	$1.63	$1.64	$1.65	$1.66	$1.67
	15.0%	$1.64	$1.66	$1.67	$1.69	$1.71
	20.0%	$1.66	$1.68	**$1.70**	$1.72	$1.74
	25.0%	$1.67	$1.70	$1.73	$1.75	$1.78
	30.0%	$1.69	$1.72	$1.75	$1.79	$1.82

Source: J.P. Morgan estimates.

Note that we believe that 50% revenue share roughly equates to little or no actual port share loss for Cisco. This is because we believe that Cisco equipment currently sells at a substantial premium to others and we expect this premium to be eliminated as bare metal hardware becomes more prominent. In a central case where Cisco ends up with 50% revenue share and 20% EBIT margins the company would generate $1.70 of 2014 equivalent EPS (calendar year). In the scenarios we show here this EPS ranges from $1.63 up to $1.82. Keep in mind that we are not saying that this EPS is likely in 2014 as we believe SDN impacts outlined in the scenarios presented will take longer to develop. However, investors should be able to incorporate these scenarios into their own thinking on the possible impacts to future EPS for Cisco.

Table 4: Cisco EPS Impact; 85% Commoditized Data Center

		Cisco CY'14 EPS Sensitivity Table *Data Center Switching Market Share*				
		30.0%	40.0%	50.0%	60.0%	70.0%
Data Center Switching EBIT Margin	**10.0%**	-15.3%	-14.7%	-14.2%	-13.6%	-13.0%
	15.0%	-14.4%	-13.6%	-12.8%	-11.9%	-11.1%
	20.0%	-13.6%	-12.5%	**-11.4%**	-10.3%	-9.2%
	25.0%	-12.8%	-11.4%	-10.0%	-8.6%	-7.2%
	30.0%	-11.9%	-10.3%	-8.6%	-7.0%	-5.3%

Source: J.P. Morgan estimates.

Table 4 above simply shows the percentage change to our current EPS forecasts for 2014 from different scenarios, all of which assume that 85% of switching in the Data Center has been converted to "bare metal" equipment. The central case of $1.70 is 11.4% below our current EPS estimate of $1.92 for calendar 2014.

85% DC Commoditized + 30% Campus Commoditized

A more pessimistic view of the effects of bare metal switching involves assuming that, in addition to the data center, campus switching also moves toward bare metal. We believe this is actually a likely outcome that is largely ignored in favor of discussion of potential impacts to data center switching. However, we believe it is important for investors to realize that the move to bare metal is not initially about capital cost but rather simplicity of operation and reduction of operating expense. As a result, we believe this trend is likely to take off on campuses of large organizations at about the same time they begin adopting in their private cloud data centers. We believe that medium sized organizations will take longer but wonder whether these companies end up on public cloud infrastructure over time anyway.

Table 5 below summarizes a similar range of scenarios for EPS when we add an assumption that 30% of campus switching moves to bare metal. Here our central case is that margins would end up 5pp lower than in the data center but that, again, Cisco would maintain port share while ASPs drop. Our central case is for 2014 equivalent EPS of $1.50 with EPS ranging from $1.41 to $1.59 for various margin and share assumptions.

Table 5: Cisco CY14 EPS: 85% DC + 30% Campus on Bare Metal

		Cisco CY'14 EPS Sensitivity Table *Campus Switching Market Share*				
		60.0%	62.5%	65.0%	67.5%	70.0%
Campus Switching EBIT Margin	**5.0%**	$1.41	$1.41	$1.42	$1.42	$1.42
	10.0%	$1.45	$1.45	$1.46	$1.46	$1.46
	15.0%	$1.49	$1.49	**$1.50**	$1.50	$1.50
	20.0%	$1.52	$1.53	$1.54	$1.54	$1.55
	25.0%	$1.56	$1.57	$1.58	$1.58	$1.59

Source: J.P. Morgan estimates.

In Table 6 below we again provide the deviation from our existing calendar 2014 EPS forecast of $1.92 with a central deviation of 22.1%.

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Table 6: Cisco EPS Impact; 85% DC Commoditized + 30% Campus Commoditized

	Cisco CY'14 EPS Sensitivity Table *Campus Switching Market Share*					
		60.0%	**62.5%**	**65.0%**	**67.5%**	**70.0%**
Campus Switching EBIT Margin	**5.0%**	-26.4%	-26.3%	-26.3%	-26.2%	-26.1%
	10.0%	-24.5%	-24.3%	-24.2%	-24.0%	-23.9%
	15.0%	-22.6%	-22.3%	**-22.1%**	-21.9%	-21.6%
	20.0%	-20.7%	-20.3%	-20.0%	-19.7%	-19.4%
	25.0%	-18.7%	-18.3%	-17.9%	-17.5%	-17.1%

Source: J.P. Morgan estimates.

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White Box vs. Cisco Pricing

On January 17 of 2013 we published a switching market analysis where we argued that SDN would pull through the adoption of bare metal switching which, in turn, would likely result in a large shrinkage of the overall switching market. Since then Cisco has announced its own line of controllable switches and argued that bare metal does not offer cost advantages over their own solutions. In this section we present the results of our own detailed pricing analysis which show that bare metal likely offers large cost benefits over various Cisco solutions. We also highlight what we believe are significant errors in Cisco's own claims.

Our Approach

Bottom up pricing comparisons are difficult without a specific networking problem definition. For our purposes we have defined two scenarios – one higher density server configuration and a lower density server configuration. We have not built overlay control costs into any of the solutions since pricing for those products remains in flux and Cisco has yet to release its own APIC controller.

In our high density configuration we price a networking solution to support 10 racks with 36 servers per rack. This higher density scenario also includes two DMZ/services racks with 160Gbps of total capacity support each. In our lower density configuration we assume 24 servers per rack across the same 10 racks. We include the same DMZ/Services rack requirement as in the high density scenario. For both scenarios we assume a 5-year depreciation period for the calculation of TCO for recurring license fees (we add 5x each annual fee).

For most of Cisco's list pricing we assume a typical 55% discount though we believe these discounts may be higher in the case of large, high density deployments. For cabling we assume a higher Cisco discount of 65%. In the case of Cisco optics we are also assuming use of the company's new BiDi optics at roughly 1/3 the list price of existing Cisco 40G QSFP optical modules. This is admittedly an artificial construct designed to reflect future Cisco pricing given some of the Cisco boxes we use do not yet work with BiDi. Cisco gets another advantage here as we are also assuming that cheaper MMF LC optical cabling is used for connection of Cisco 40G uplinks whereas we have used more expensive quad-core optical ribbon cabling for our Bare Metal case. Our cases are highly detailed and, we believe, as close to accurate as current information allows. In the case of newer Cisco equipment we have had to triangulate our discounted pricing estimates between industry sources and prior pricing structures. We also fully expect that Cisco's pricing for these products will rapidly adapt to market realities should bare metal momentum begin spreading beyond large Webscale data center operators.

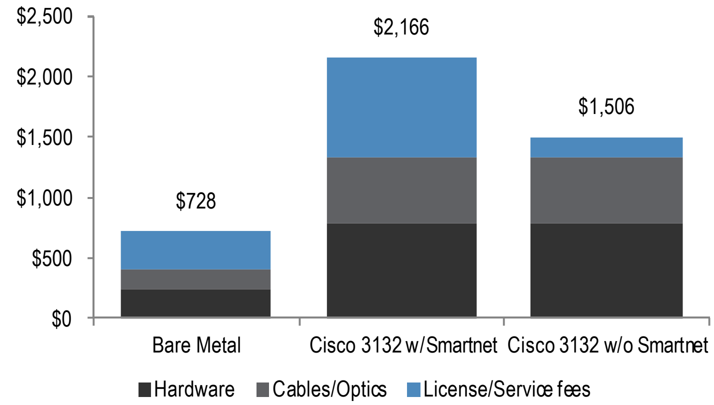
Please feel free to call us to discuss our specific assumptions in more detail.

Bare metal clearly trumps Cisco on price

Using an Apples-to-Apples comparison it becomes relatively obvious that current bare metal solutions price much less expensively than Cisco solutions. However, one of the insights we come away with is that Cisco's services fees and licenses significantly inflate their pricing. Over time we would expect these fees to come under the most pressure as Cisco is forced to compete with lower cost solutions that offer, in many ways, superior operational efficiency.

In the following chart we compare the total cost of high density solutions on a per server basis.

Figure 1: Bare Metal 52% Below Cisco per Server in Dense Server Scenario



Source: J.P. Morgan

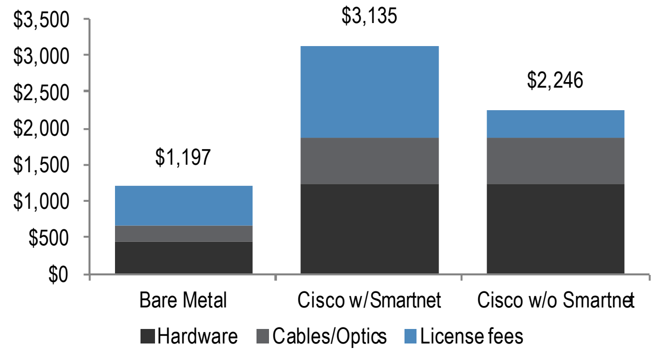
In both our high and low density scenarios we show our estimated Cisco prices both with and without Smartnet support service contracts. Remaining license fees in our non-Smartnet numbers relate to layer 3 licenses required on each Cisco switch.

With this analysis two points become pretty clear to us. First, Cisco solutions priced as they have been historically are significantly more expensive than bare metal even when we eliminate Cisco Smartnet. We note that elimination of L3 license fees would bring our 3132Q based solution down to just $1,326/server, which makes bare metal just 45% less expensive. However, we doubt that Cisco is going to be waiving L3 license fees anytime soon though discounts could increase.

Second, a large chunk of Cisco's price premium is related to Smartnet which could easily be reduced. In fact, we expect Cisco to waive Smartnet fees for large enterprise customers as a way to maintain share at those customers. However, our analysis shows that, even without this fee, the price difference is material.

Figure 1 below illustrates the outcome of our Low Density case. As expected, lower server density results in a higher price per server. However, bare metal prices still end up well below Cisco.

Figure 2: Bare Metal 47% Below Cisco in Low Density Case



Source: J.P. Morgan

Interestingly, Cisco hardware plus cable and optics are a touch below total bare metal pricing though the addition of L3 licenses and Smartnet pushes prices rapidly up. What we find interesting here is that our analysis is yielding materially higher prices, even without L3 and Smartnet, than the $260/port that Cisco indicated at its Insieme launch for a 288 port solution would seem to imply. Unfortunately, it is tough to compare that $260/port number to a fully loaded price per server like the one we have constructed. However, we suspect that that price was intended to reassure Cisco's bread and butter medium sized customers that new Cisco solutions will be priced competitively.

Services could suffer

Given the large contribution from Smartnet that jumps out from our analysis we believe that these contracts could be the main place where Cisco adjusts its pricing to compete with a growing bare metal threat. We also believe that the operating ease of Linux-based bare metal is a large issue for Cisco. Linux based server administration tools and processes are, in our opinion, much more efficient than comparable processes and tools for legacy data center switching networks. The simplification of operation of these networks that Linux based OSs combined with very inexpensive bare metal hardware challenge the ease of operation of Cisco solutions in our opinion. All of this added up to the potential for more pressure on Cisco's lucrative services contracts as SDN and bare metal play out.

…but Cisco says…

Some readers may at this point be scratching their heads trying make sense of our conclusions in light of Cisco's messaging around pricing. We are mainly going to reference the chart on the right hand of the slide shown in Figure 3 below.

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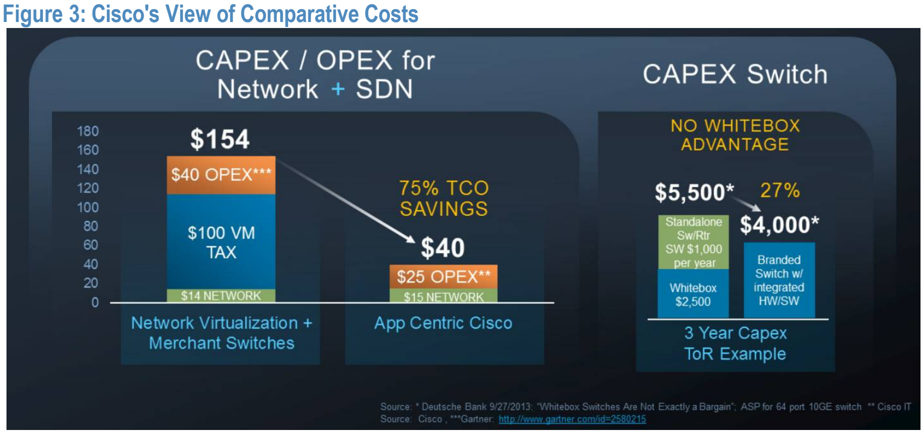
Figure 3: Cisco's View of Comparative Costs



Source: Cisco

Cisco here compares, as far as we can tell, an extreme outlier price for hardware ex both L3 and Smartnet licenses to an outlier hardware price for bare metal combined with a mainstream OS license fee.

There is a lot wrong with this analysis in our opinion. First, we believe the $4,000 price shown above is Cisco's absolute rock bottom provided only to hyperscale web customers. Should this sort of price end up becoming the norm for Cisco then our negative earnings calculations will end up looking incredibly optimistic. Second, the price does not appear to include Smartnet or L3 license fees. We agree that Smartnet is likely to be tossed in with larger deals but don't expect that to be the case with L3 licenses. Finally, we believe that the $1,000/yr for the Whitebox OS is inaccurate in this scenario. All other prices being used here would apply to a very high density, high volume customer only. What this analysis fails to take account of is what we believe are standard license fee caps that a large customer like this would likely hit. We believe that the real license fee in that case could drop to something closer to $200/switch/year.

We also want to address the so-called "VM Tax" shown in the left hand side of the slide above. While we believe this accurately reflects current pricing we note that the marginal cost to provide the software products in question is very low. Given this we would fully expect vendors to adjust pricing to market realities and do not see this "VM Tax" as a real impediment to the adoption of bare metal solutions.

Valuation

As explained in the above section, we have selected our 2017 approach to calculate EPS because it is at least attempting to estimate normalized earnings in a timeframe where we see bare metal switch adoption as realistic. We estimate Cisco's EPS in 2017 to be ~$1.67. We discount this EPS to 2015 using a discount rate of 9.8% and apply one year forward PE of 12.3x to arrive at our $17 price target. Also, our $17 PT reflects ~10x PE based on our 2017 EPS of $1.67.

At 12.3x, our multiple is still generous when compared to Cisco's average 1-year forward multiple of 11.6x since 2008. As shown in the Table 7 below, we can easily end up with worse price targets.

Table 7: Cisco Price Target Cases

			Discount rate				
			7.8%	8.8%	9.8%	10.8%	11.8%
Average Multiple since	2006	13.0x	18.61	18.27	17.94	17.61	17.30
	2008	**11.6x**	**16.66**	**16.36**	**16.06**	**15.77**	**15.49**
	2010	10.5x	15.14	14.86	14.59	14.33	14.08

Source: Bloomberg, J.P. Morgan estimates.

If we discount our 2017 EPS to 2014, our PT would imply a multiple of 13.5x. This is at a significant premium to peers such as HP (7.0x , covered by JPM Analyst Mark Moskowitz) and IBM (10.3x, covered by Mark Moskowitz). At 13.5x, Cisco would trade at a premium to Apple (11.2x, covered by Mark Moskowitz) and only at a slight discount to Qualcomm (13.8x) – both of which we believe are in much better position technologically than Cisco is in their sectors. In all cases, we see Cisco as significantly overpriced at these levels as the street continues to ignore the possible impact from commoditized switching. In the Data Networking and Communications equipment segment, we see better investment opportunity and better risk/reward with Ciena and Juniper.

Table 8: Cisco: Peer Multiples

	JPM Rating	Target price	Price 1/24/2014	Market Cap (Local mn)	Net Debt (Cash) (Local mn)	Sales CY13E	Sales CY14E	EPS (Local) CY13E	EPS (Local) CY14E	P/E CY13E	P/E CY14E
HPQ	OW	$35.00	$28.49	54,381	10,424	111,067	109,952	3.91	4.12	7.3x	6.9x
IBM	N	$175.00	$179.64	195,063	2,656	99,752	99,778	16.28	17.45	11.0x	10.3x
Apple	OW	$615.00	$546.07	487,397	(23,586)	172,277	192,931	41.77	48.82	13.1x	11.2x
Qualcomm	N	$65.00	$74.08	125,032	(29,406)	25,747	27,974	4.56	5.38	16.2x	13.8x
Cisco	UW	$21.00	$22.20	118,695	(31,975)	47,700	46,412	2.02	1.92	11.0x	11.6x
Average										**11.7x**	**10.7x**
Median										**11.0x**	**11.2x**

Source: Company reports and J.P. Morgan estimates. HPQ, IBM and Apple are covered by Mark Moskowitz.

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EM SPs Outlook Still Shaky

Cisco reported its first product order decline of 4% Y/Y in FQ1'14 (to Oct) since the Great Financial Crisis. The last time we saw an order decline from the company was the -8% contraction posted in FQ1'10. Cisco flagged weak demand from Emerging Markets (EMs) Service Providers (SPs) as the main driver for this as slowing revenue growth, depreciating EM currencies and generally declining GDP growth estimates capped results. In this section we analyze current trends in key EMs and conclude that things are likely to remain tough in H1'14 with the potential for recovery later in 2014 if developed market economies remain on track.

Table 9: Cisco: EM Product Order Trend in FQ1'14

	FQ1'14A
Emerging Markets	-12%
Brazil	-25%
Russia	-30%
Mexico	-18%
China	-18%
India	-18%

Source: Company reports.

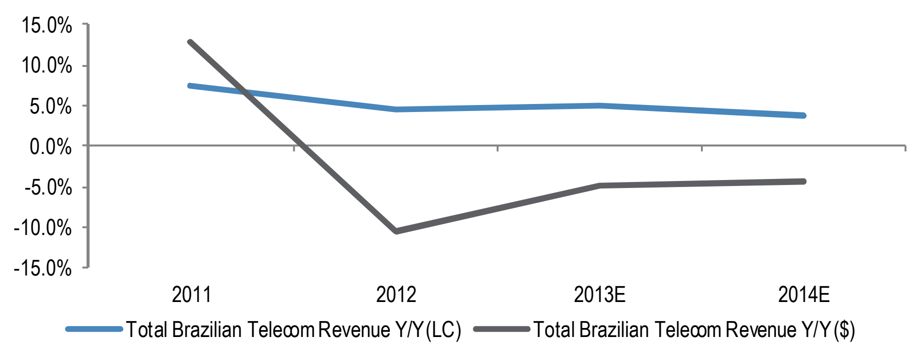
Brazil

We believe Brazil will continue to remain challenging for Cisco due to a depreciating BRL and slowing operator revenue growth. Telecom revenue for key operators in Brazil is expected to grow by only 3.8% Y/Y to BRL98.8bn (~$42.2bn) in 2014 down from 4.9% Y/Y in 2013. Importantly, the USD strengthened by a significant 12.8% Y/Y and 10.6% Q/Q in Q3'13 vs the Brazilian Real, making it very difficult for orders to grow on a USD denominated basis. In addition, our economists' forecast for Brazilian GDP growth has declined to an anemic 2.1% Y/Y from the 4.0% projected at the beginning of 2013.

Operators and Cisco

Service Providers' revenue growth in local currency in Brazil improved a bit in 2013 to 4.9% growth from 4.4% Y/Y. For 2014, however, consensus growth is expected to slow to 3.8% Y/Y. Also, revenues for MTR in Brazil are expected to decline by 25% Y/Y in 2014 vs. 10% in 2013. We believe that total order volume for Cisco will return to strong growth when operators get more comfortable with their own revenue prospects but this looks like it will take until at least the second half of 2014 to us.

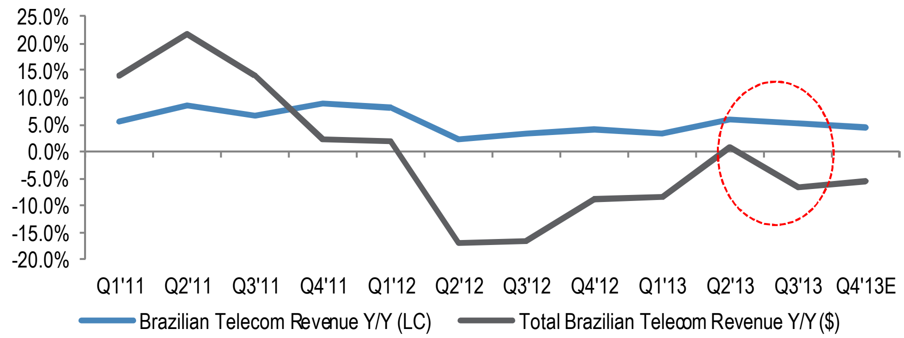
Figure 4: Brazilian Operators* Revenue (LC) Growth Is Expected to Decline



Source: Company reports and J.P. Morgan estimates. * - Operators considered are TIM Brasil, Oi, Telefonica Vivo and America Movil Brazil.

In Figure 5 below, we show Y/Y revenue trends for Brazilian carriers both in local currency and USD. Cisco's product orders in FQ1'14 (to Oct) declined by 25% Y/Y. For Q4'13, however, operators revenue denominated in USD looks stable on the weak level seen in Q3.

Figure 5: Brazilian Telecom Revenue (LC) Y/Y Has Been Declining



Source: Company reports and J.P. Morgan estimates.

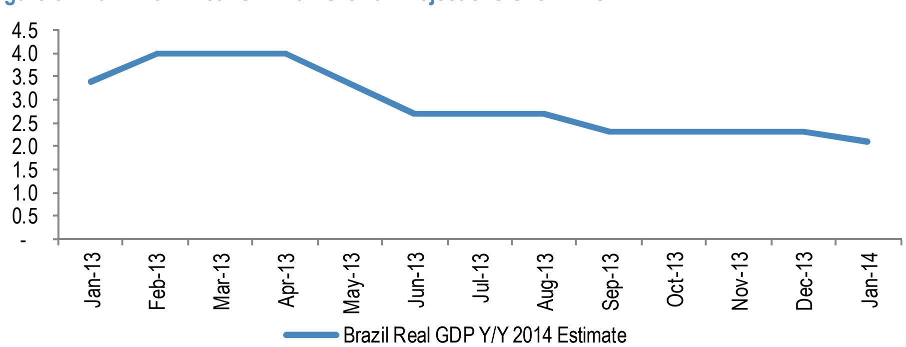
FX Swings

USD strengthened by 12.8% Y/Y and 10.6% Q/Q in Q3'13 vs. the BRL to 2.29. Our FX strategy analysts are forecasting that the USD should continue to strengthen to 2.50 BRL/USD by the end of 2014. We believe that Y/Y comps will get even tougher for Cisco assuming our strategists are correct in their view of ongoing BRL depreciation.

Uncertain Macro in an Election Year

Our economists' forecast for 2014 real GDP growth in Brazil has declined steadily since Feb 2013. Brazil, which in Feb 2013 was forecasted to grow by 4.0% Y/Y in 2014, is now expected to grow by only 2.1% Y/Y (2013E Growth: 2.3%). GDP forecasts declined throughout Q2'13 and again at the end of Q3'13. Our regional economist reduced his Brazil GDP Y/Y growth expectation to 2.1% from 2.3% in Jan 2014 due to potential impact from worsening private sentiment driven by challenges related to Fed tapering in the US, China growth moderation, and increasing concerns over fiscal and quasi-fiscal policy amid Brazilian presidential elections in October.

Figure 6: Brazil: 2014 Real GDP Y/Y Growth Projections Over Time



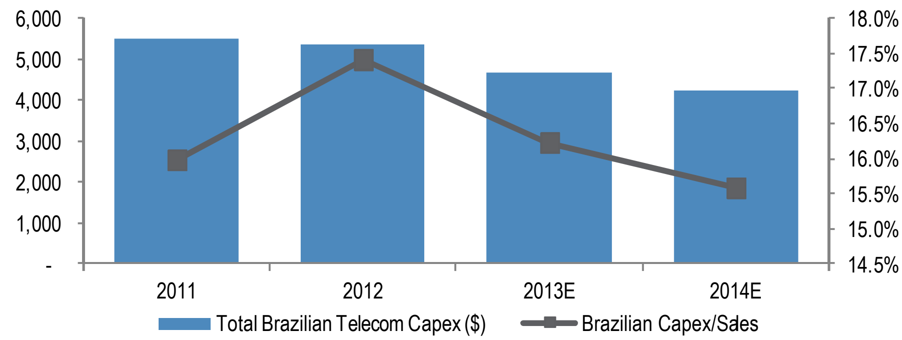
Source: J.P. Morgan.

Capex

Total Capex/sales in Brazil is expected to decline from 2012 levels in 2013 and 2014. Based on our local analysts' forecasts, Capex/sales in Brazil is expected to decline to 15.6% in 2014 from 16.2% in 2013 and 17.4% in 2012. This also doesn't bode well for Cisco and other companies supplying equipment to Brazilian carriers in our opinion.

Figure 7: Brazil*: Capex/Sales Declining

$ in millions



Source: Company reports and J.P. Morgan estimates. * - Operators considered here are TIM Brasil, Oi and Telefonica Vivo.

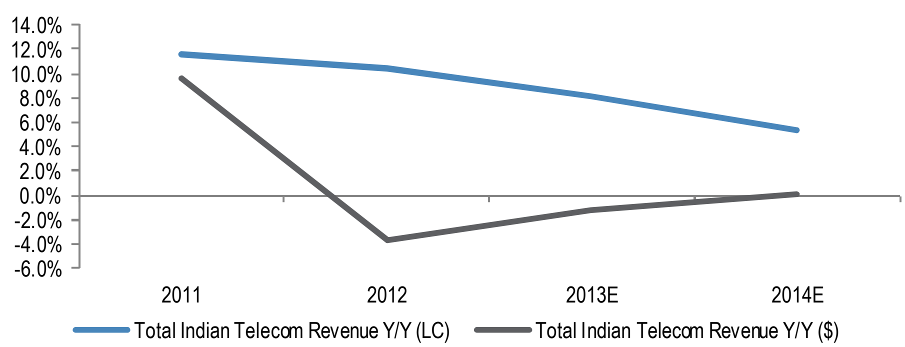
India

Telecom regulatory issues, slowing GDP growth, depreciating currency and declining SP revenue all hurt the telecom equipment market in India for most of 2012 and 2013. For 2014, however, a stabilizing telecom regulatory environment and improving GDP outlook should provide some respite in our opinion. However, we expect slowing carrier revenue growth to remain a drag even as some other headwinds diminish.

Operators and Cisco

Indian Service Providers' revenue growth in local currency in 2013 declined to 8.2% from 10.4% Y/Y in 2012. For 2014, the growth rate is expected to further slow to 5.3% Y/Y. We believe that this slowing operator revenue trend will remain a headwind for equipment vendors in 2014.

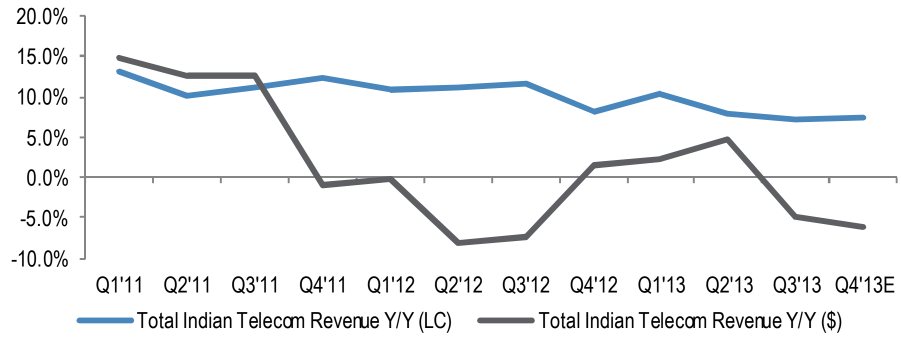
Figure 8: Indian Operators* Revenue (LC) Growth Is Expected to Decline



Source: Company reports and J.P. Morgan estimates. * - Operators considered are Bharti Airtel India and South Asia, Reliance Communciations and Idea Cellular. Bharti estimates are from consensus.

In Figure 9 below, we show Y/Y revenue trends for Indian carriers both in local currency and USD. Note that the sharp Q3'13 decline in Y/Y revenue growth in USD was due primarily due to the depreciation of INR as opposed to fundamentally slower demand in local currency terms.

Figure 9: Indian Telecom Revenue (LC) Y/Y Has Been Declining



Source: Company reports and J.P. Morgan estimates. Operators considered are Bharti Airtel India and South Asia, Reliance Communciations and Idea Cellular. Bharti estimates are from consensus.

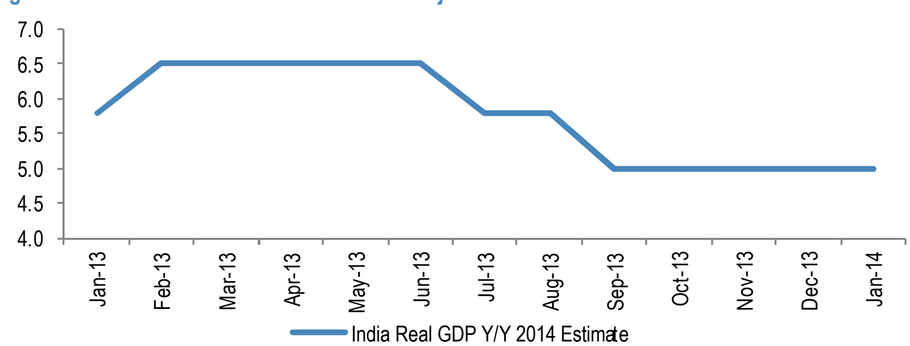
FX Swings

The USD strengthened by 12.7% Y/Y and 11.2% Q/Q in Q3'13 vs. the INR to 62.1. Our FX strategy analysts are forecasting that the USD should remain stable at 62.0 through the end of 2014. However, recent depreciation of the INR is likely to make H1'14 equipment comps tough in our opinion.

GDP Forecasts Have Stabilized

Our economists' forecasts for 2014 real GDP growth in India have declined since Feb 2013. J.P. Morgan's 2014 GDP growth forecast is now 5.0%, down from 6.5% in Feb 2013. However, GDP growth estimates have been stable since the last reduction made in September.

Figure 10: India: 2014 Real GDP Y/Y Growth Projections Over Time



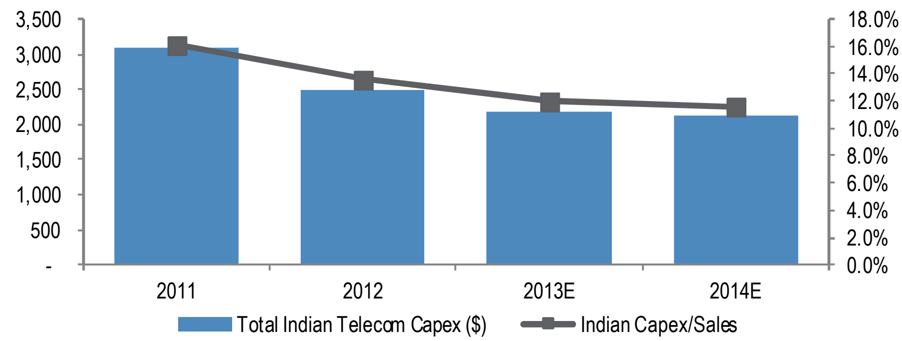
Source: J.P. Morgan.

Stable Capex/Sales for 2014

Based on our local analysts' forecasts, Capex/sales in India is expected to remain almost stable at 11.6% in 2014 vs. 12.0% in 2013, but down materially from 13.5% in 2012.

Figure 11: India: Capex/Sales declining

$ in millions



Source: Company reports and J.P. Morgan estimates.

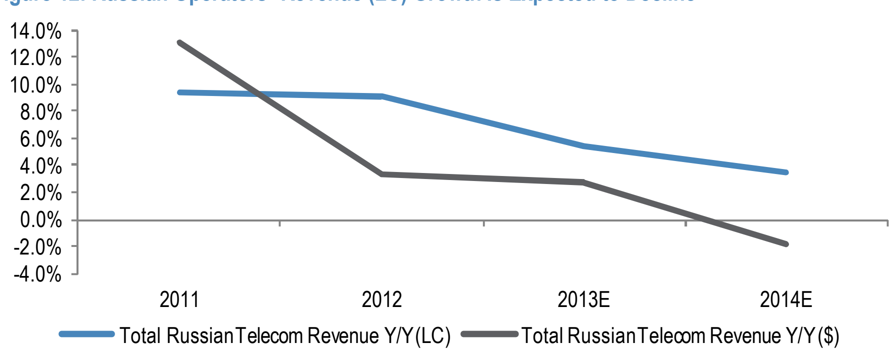
Russia

We suspect that Russia also played a part in Cisco's weaker FQ1 order volumes. Russian telecom revenue is expected to improve slightly in Q4'13 to 5.4% Y/Y from 4.5% Y/Y in Q3'13. Russian Capex in 2014 is also expected to grow by a slight 1.8% Y/Y to $5.4bn and capex intensity (capex/sales) is forecast to improve to 18.6% from 17.9%. However, 2014 GDP forecasts for Russia have declined to just 1.8% in Jan 2014 from 2.2% in September. The downward bias to GDP forecasts causes us to approach 2014 with caution for equipment vendors like Cisco selling into the country.

Operators and Cisco

Russian Service Providers' revenue in local currency in 2013 grew by 5.3%, down from 9.1% in 2012. In 2014, the growth rate is expected to be down to 3.4%.

Figure 12: Russian Operators* Revenue (LC) Growth Is Expected to Decline



Source: Company reports and J.P. Morgan estimates. * - Operators considered are Vimpelcom, MTS and MegaFon.

In Figure 13 below, we show Y/Y revenue trends for Russian carriers both in local currency and USD. Unlike Brazil and India, revenue in USD declined on a more predictable trendline in late 2014.

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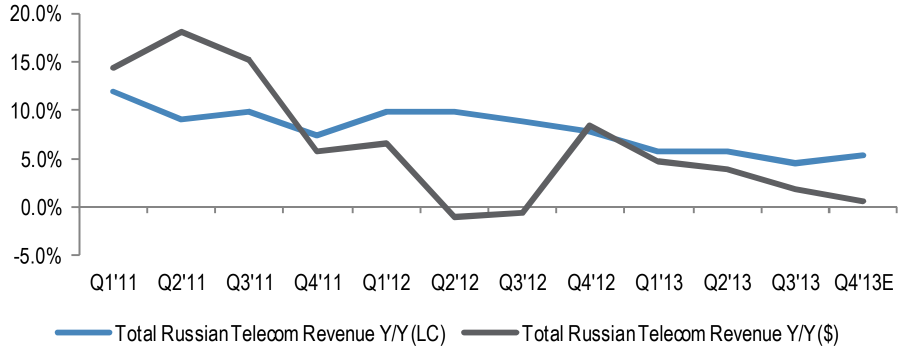
Figure 13: Russian Telecom Revenue (LC) Y/Y Has Been Declining



Source: Company reports and J.P. Morgan estimates.

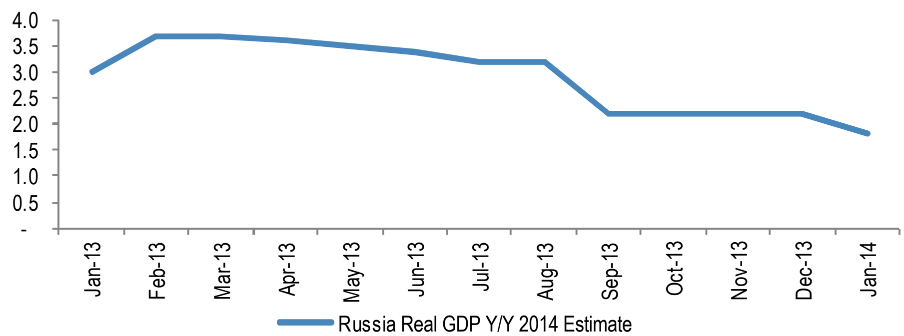
FX Swings

We don't believe that RUB/USD FX swings were significant enough for operators to get concerned about placing additional orders with Cisco. USD strengthened by only 2.6% Y/Y and 3.6% Q/Q in Q3'13 vs. the RUB to 32.8 on our calculations.

Macro Forecasts Stable

2014 GDP growth forecast for Russia is now 1.8%, down from 3.7% in Feb 2013 and 2.2% in Sep 2013.

Figure 14: Russia: 2014 Real GDP Y/Y Growth Projections Over Time



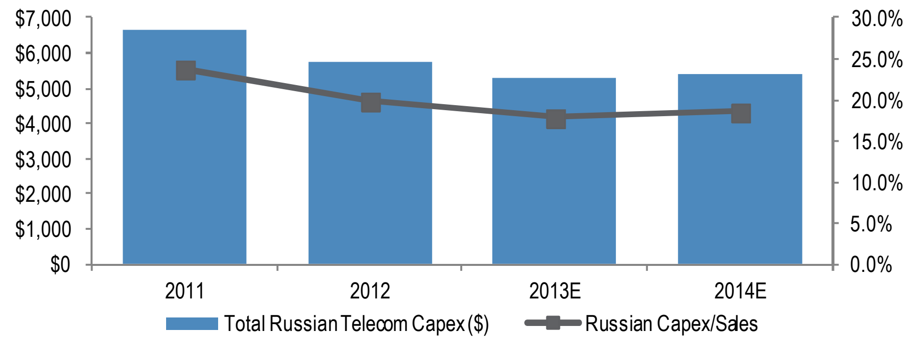
Source: J.P. Morgan.

Improving Capex/Sales for 2014

Based on our local analysts' forecasts, Capex/sales in Russia is expected to improve to 18.6% in 2014 from 17.9% in 2013.

Figure 15: Russia: Capex/Sales Forecast to Improve

$ in millions

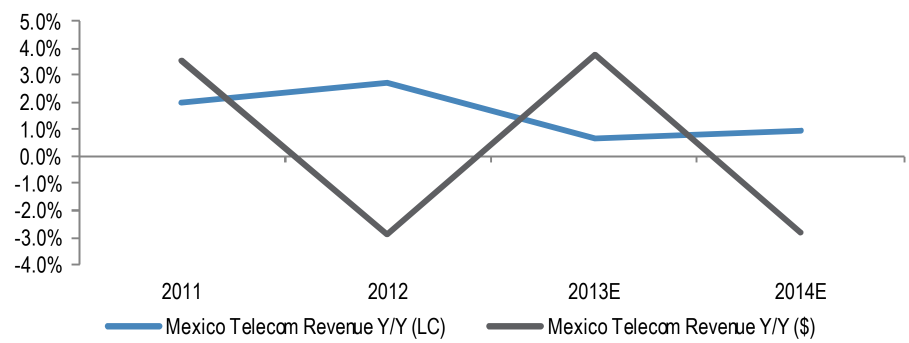


Source: Company reports and J.P. Morgan estimates.

Mexico

Mexican telecom revenue growth in MXN is expected to improve slightly in 2014 to 1.0% Y/Y from 0.7% Y/Y in 2013. We believe weak product orders for Cisco could be linked to the significant decline in 2014 GDP estimates for the country in October. 2014 GDP growth estimates in October were revised down to 3.4% from 4.0% in September.

Figure 16: Mexico Operators* Revenue Growth Is Expected to Decline



Source: Company reports and J.P. Morgan estimates. * - Operator considered is America Movil Mexico.

In Figure 17 below, we show Y/Y revenue trends for Mexican carriers both in local currency and USD.

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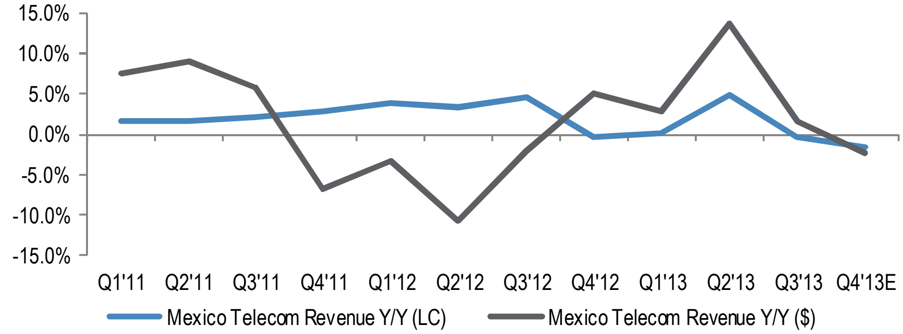
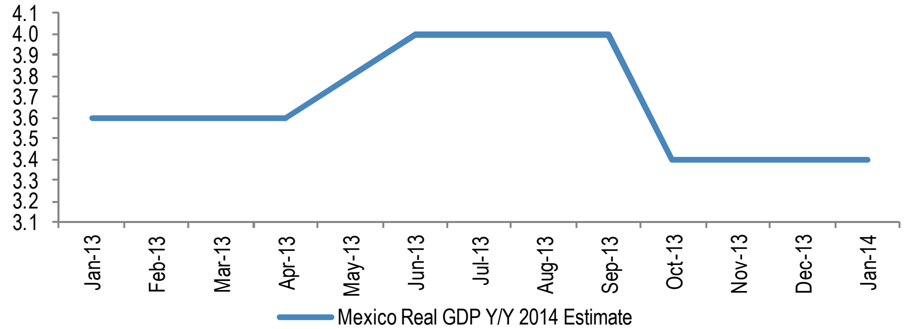
Figure 17: Mexico Telecom Revenue Y/Y



Source: Company reports and J.P. Morgan estimates.

The USD strengthened by only 3.4% Q/Q but deteriorated by 2.0% Y/Y in Q3’13 vs. the MXN to 12.9. 2014 GDP growth forecast for Russia is now 3.4%, down from 4.0% in Sep 2013.

Figure 18: Mexico: 2014 Real GDP Y/Y Growth Projections Over Time



Source: J.P. Morgan.

China

Cisco’s product order decline in China is primarily due to political trade issues that have persisted for a number of quarters in our opinion. Excluding this we see no reason that Chinese orders shouldn’t grow materially in 2014. Chinese telecom revenue in CNY is expected to grow by a strong 10.9% Y/Y this year following 14.6% Y/Y growth in 2013.

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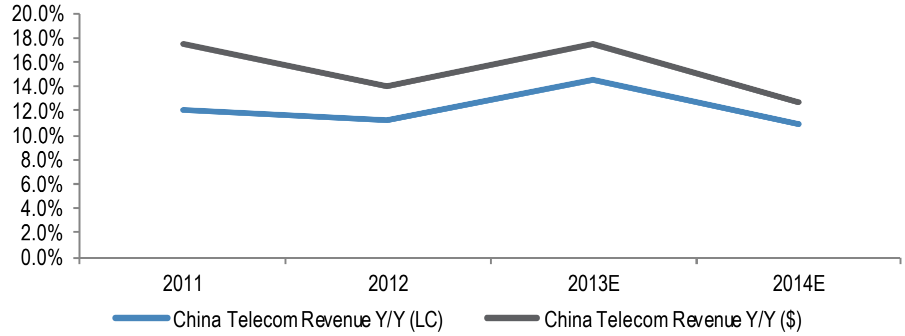
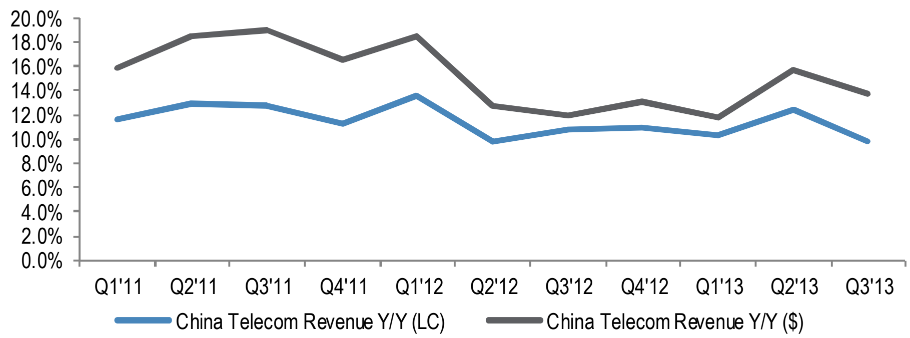
Figure 19: Chinese Operators* Revenue Growth Is Expected to Decline



Source: Company reports and J.P. Morgan estimates.. * - Operators considered are China Mobile, China Telecom and China Unicom.

In Figure 20 below, we show Y/Y revenue trends for Chinese carriers both in local currency and USD.

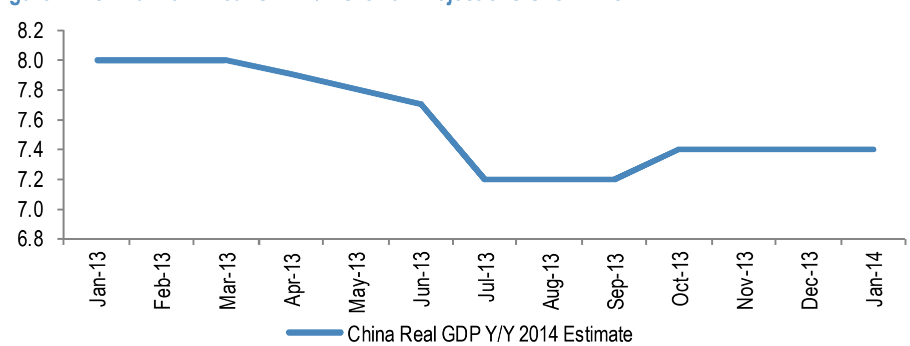
Figure 20: Chinese Telecom Revenue Y/Y



Source: Company reports and J.P. Morgan estimates.

Unlike other EMs, J.P. Morgan's 2014 GDP growth forecast for China moved up slightly to 7.4% in Jan 2014 from 7.2% in Sep 2013.

Figure 21: China: 2014 Real GDP Y/Y Growth Projections Over Time



Source: J.P. Morgan.

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Investment Thesis, Valuation and Risks

Cisco Systems *(Underweight; Price Target: $17.00)*

Investment Thesis

Cisco's very weak FQ2 guidance suggest that macro is coming back to the forefront in the form of EM weakness. This combined with expected sluggishness in switching increases risks for Cisco into the early part of F2014. We continue to see SDN as a risk factor for Cisco and believe that our concerns will be supported by pricing pressure in pricing as well as the entrance of key bare metal players in 2014. We believe investors can find better returns elsewhere until the stock fully prices in both SDN and EM risk.

Valuation

We are reducing our December 2014 price target on Cisco to $17 from $21. Our price target is based on ~10x our 2017 "SDN Translated" EPS scenario of $1.67 which is ~8.9x our 2014 EPS forecast. 8.9x represents a significant discount to peers trading on an average PE of 15.7x for 2014. However, we believe this is justified given our view that earnings are likely to materially decline over the next few years.

Risks to Rating and Price Target

To the upside:

Cisco's switching business could be more resilient than we anticipate. Demand for Cisco's routers could also hold up better than we currently forecast. Finally if enterprise and government spending trends improve more quickly than we currently anticipate, this could benefit Cisco.

To the downside:

Sharp deceleration in enterprise networking spend: Should enterprise networking spend decline sharply in H2, our estimates for Cisco would be at risk.

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Cisco Systems: Summary of Financials

Income Statement - Annual	FY13A	FY14E	FY15E
Revenues	**48,607**	**46,008**	**46,982**
Growth (y/y)	5.5%	(5.3%)	2.1%
Gross Profit	**30,400**	**28,579**	**13,762**
Gross margin	62.5%	62.1%	29.3%
SG&A	(11,169)	(9,914)	(10,101)
R&D	(5,549)	(5,603)	(5,530)
Other expense	-	-	-
Operating income	**13,682**	**13,062**	**13,295**
Operating margin	28.1%	28.4%	28.3%
Net Interest expense	71	104	116
Other income / (expense)	(40)	224	224
Pretax income	13,713	13,390	13,635
Income taxes	(2,907)	(2,812)	(2,863)
Tax rate	21.2%	21.0%	21.0%
Net income (pro forma)	10,806	10,578	10,772
EPS (pro forma)	**2.01**	**1.94**	**1.94**
Diluted shares outstanding	5,379	5,461	5,544

Income Statement - Quarterly	1Q14A	2Q14E	3Q14E	4Q14E
Revenues	**12,085A**	**10,982**	**11,240**	**11,701**
Growth (y/y)	1.8%A	(9.2%)	(8.0%)	(5.8%)
Gross Profit	**7,617A**	**6,805**	**6,951**	**7,206**
Gross margin	63.0%A	62.0%	61.8%	61.6%
SG&A	(2,676)A	(2,328)	(2,405)	(2,504)
R&D	(1,397)A	(1,397)	(1,405)	(1,404)
Other expense	-	-	-	-
Operating income	**3,544A**	**3,079**	**3,141**	**3,298**
Operating margin	29.3%A	28.0%	27.9%	28.2%
Net Interest expense	29A	24	25	26
Other income / (expense)	56A	56	56	56
Pretax income	3,629A	3,159	3,222	3,380
Income taxes	(762)A	(663)	(677)	(710)
Tax rate	21.0%A	21.0%	21.0%	21.0%
Net income (pro forma)	2,867A	2,496	2,546	2,670
EPS (pro forma)	**0.53A**	**0.46**	**0.47**	**0.49**
Diluted shares outstanding	5,430A	5,451	5,472	5,492

Balance Sheet	FY13A	FY14E	FY15E
Assets			
Cash and short-term investments	50,610	46,851	51,637
Inventories	1,476	1,474	1,520
Accounts receivables	5,470	5,200	5,565
Other current assets	7,965	7,297	7,526
Total current assets	**65,521**	**60,822**	**66,247**
Net property, plant and equipment	3,322	3,083	2,952
Long-term investments	-	-	-
Other assets	7,026	6,982	7,201
Total assets	**101,191**	**99,042**	**103,679**
Liabilities			
Current debt	3,283	3,279	3,279
Accounts payable	1,029	979	1,010
Accrued expenses and other	17,880	16,464	16,981
Total current liabilities	**22,192**	**20,722**	**21,270**
Long-term debt	12,928	16,291	16,291
Other non-current liabilities	5,195	5,662	5,790
Total liabilities	**42,063**	**44,250**	**44,926**
Shareholders' equity	59,128	54,791	58,753
Total liabilities & shareholders' equity	**101,191**	**99,042**	**103,679**
DSOs	20.5	22.9	21.7
Inventory turns	34.1	33.7	32.7
Book value per share	10.99	10.03	10.60
Tangible book value per share	6.22	4.85	5.65

Ratio Analysis & Cash Flow	FY13A	FY14E	FY15E
Sales growth	5.5%	(5.3%)	2.1%
EBITDA growth	3.4%	(3.7%)	1.0%
EPS growth	8.4%	(3.6%)	0.3%
Gross margin	62.5%	62.1%	29.3%
EBIT margin	28.1%	28.4%	28.3%
EBITDA margin	31.0%	31.5%	31.2%
Tax rate	21.2%	21.0%	21.0%
Net margin	22.2%	23.0%	22.9%
Debt/Equity	(58.2%)	(49.8%)	(54.6%)
Net Debt/Total Capital	(48.1%)	(36.4%)	(42.0%)
Return on assets (ROA)	11.2%	10.6%	10.6%
Return on equity (ROE)	19.6%	18.6%	19.0%
Free cash flow yield	9.3%	8.2%	8.5%
P/E (pro forma)	11.1	11.5	11.4
EV / Revenue	NM	NM	NM
Free cash flow calculation			
EBITDA	15,069	14,508	14,651
Cash tax	(2,907)	(2,863)	(2,245)
Net interest inc / (exp)	71	104	116
Increase in working capital	(485)	(526)	(92)
Other	-	-	-
Operating free cash flow	**12,354**	**11,275**	**11,812**
Capex	(1,160)	(1,199)	(1,225)
Free cash flow	**11,138**	**9,994**	**10,496**

Source: Company reports and J.P. Morgan estimates.
Note: $ in millions (except per-share data).Fiscal year ends Jul

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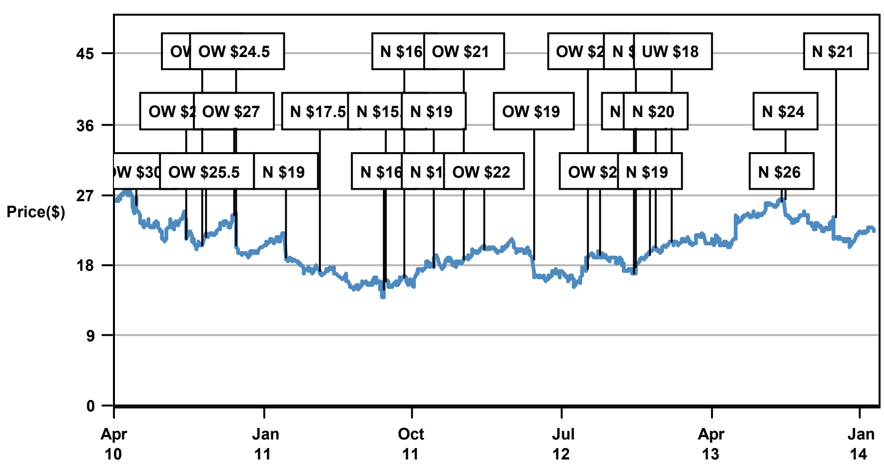
Cisco Systems (CSCO, CSCO US) Price Chart



Source: Bloomberg and J.P. Morgan; price data adjusted for stock splits and dividends.
Initiated coverage May 13, 2010.

Date	Rating	Share Price ($)	Price Target ($)
13-May-10	OW	25.53	30.00
12-Aug-10	OW	21.36	25.50
10-Sep-10	OW	20.61	23.00
15-Sep-10	OW	21.59	25.50
08-Nov-10	OW	24.26	27.00
11-Nov-10	OW	20.52	24.50
11-Feb-11	N	18.92	19.00
14-Apr-11	N	17.25	17.50
08-Aug-11	N	14.94	16.00
11-Aug-11	N	15.92	15.50
14-Sep-11	N	16.35	16.00
07-Nov-11	N	18.03	18.00
10-Nov-11	N	17.61	19.00
03-Jan-12	OW	18.63	21.00
09-Feb-12	OW	20.00	22.00
10-May-12	OW	18.78	19.00
16-Aug-12	OW	17.35	20.00
10-Sep-12	OW	19.15	21.00
09-Nov-12	N	16.83	17.00
13-Nov-12	N	17.66	18.00
10-Dec-12	N	19.34	19.00

20-Dec-12	N	20.27	20.00
17-Jan-13	UW	20.95	18.00
09-Aug-13	N	26.26	26.00
15-Aug-13	N	26.38	24.00
14-Nov-13	N	24.00	21.00

The chart(s) show J.P. Morgan's continuing coverage of the stocks; the current analysts may or may not have covered it over the entire period.
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