

## Telstra Corporation

Margins will fall sharply in an NBN world, but share price stands up to harsh assumptions - just

*A concern hanging over Telstra for many investors is whether the National Broadband Network will rebase margins in the fixed line business radically and if so whether this renders the stock expensive in spite of its high yield. We argue that investors should take a conservative view of fixed-line margins, but that the stock's valuation has not yet moved into risky territory even on these assumptions.*

- The NBN will open the competitive landscape in fixed line communications and move most of the industry's capital into the public sector. Both forces point to lower margins for private companies.
- We believe that many industry observers over-estimate the returns that will be achievable on NBN products because they are used to looking at capital-intensive businesses with oligopoly characteristics. Forecasts for EBITDA margins of 20-30% seem unrealistic given the low capital intensity of NBN participation. From a bottom-up model we derive a figure of 15% for a large player, and even that may prove generous.
- It is argued that market concentration might allow NBN resellers to achieve high returns. We think this is too simplistic – industries can be competitive with few players. We also question the economies of scale in NBN provision and the potential for establishing entry barriers through content and bundling.
- Incorporating a more aggressive margin fade into our Telstra valuation makes less difference than might be expected because the fixed line business ends up being quite a small contributor to value. In our view this is a reassuring conclusion because it implies that the stock's high yield is not giving a grossly misleading signal.
- Even so our valuation and June-13 share price target of \$3.97 now sit below the share price. Given legitimate room for debate over the right discount rate the gap is not large enough to shift our Neutral rating.

**Neutral**

TLS.AX, TLS AU

Price: A\$4.26

▲ **Price Target: A\$3.97**

Previous: A\$3.86

### Australian Telecoms

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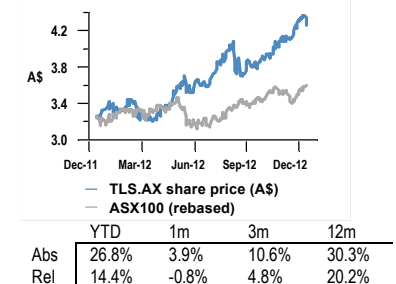
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### Price Performance



### Telstra Corporation Limited (Reuters: TLS.AX, Bloomberg: TLS AU)

Year-end Jun (A\$)	FY11A	FY12A	FY13E	FY14E
Total Revenue (A\$ mn)	25,304.0	25,533.0	25,798.0	26,521.7
EBITDA (A\$ mn)	10,151.0	10,234.0	10,360.0	10,772.0
Net profit after tax (A\$ mn)	3,231.0	3,405.0	3,465.4	3,764.8
EPS (A\$)	0.261	0.274	0.279	0.303
P/E (x)	16.3	15.5	15.3	14.1
EV/EBITDA	6.6	6.5	6.3	6.1
Dividend (A\$)	0.280	0.280	0.280	0.280
Net Yield (%)	6.6%	6.6%	6.6%	6.6%
Normalised* EPS (A\$)	0.262	0.286	0.289	0.303
Normalised* EPS chg (%)	-19.8%	9.0%	1.1%	4.7%
Normalised* P/E (x)	16.2	14.9	14.7	14.1

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

### Company Data

52-week range (A\$)	4.39 - 3.18
Market capitalisation (A\$ bn)	53.01
Market capitalisation (\$ bn)	55.81
Fiscal Year End	Jun
Price (A\$)	4.26
Date Of Price	13 Dec 12
Shares outstanding (mn)	12,443.1
ASX100	3,766.8
ASX200-Ind	6,681.9
NTA/Sh (A\$)	-
Net Debt <sup>A</sup> (A\$ bn)	12.77

**See page 34 for analyst certification and important disclosures, including non-US analyst disclosures.**

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## NBN profitability from first principles

Australia's National Broadband Network will be an unusually pure example of structural separation. The network owner has no actual or perceived ties to the former incumbent; and whether NBN Co remains a government-owned monopoly or moves to the private sector, it is indifferent between suppliers. Indeed both government policy motives and NBN Co's commercial interests favour a bias towards fostering competition and fragmentation.

In our view estimates of steady-state industry margins on reselling NBN products tend to be too high for two reasons.

### The risk of extrapolation

Telco analysts are used to high EBITDA margins, but these margins reflect capital-intensive models and often high degrees of concentration and market power. In this report we try to estimate where returns could go from first principles rather than starting from what is normal for the industry in its current form. The NBN alters the industry's competitive dynamics completely and shifts a large part of its capital employed into a public vehicle. On both counts, private sector returns should eventually be much lower than in the past.

### The risk of 'ARPU-minus'

Early pricing of NBN products by Retail Service Providers (RSPs) looks similar to ADSL at the lower speed levels (see Table 1 for some examples). Understandably, the industry takes the view that consumers will be happy to pay the same for a better product and a bit more for a much better one.

Table 1: Summary of Selected NBN Retail Plans

<b><u>Naked broadband</u></b>	<b>Telstra</b>	<b>Optus</b>	<b>iiNet</b>	<b>Internode</b>
<b>Speed/Allowance</b>				
25/5, 150-300GB	NA	\$69.99	\$64.95	\$74.95
Allowance	NA	150GB	200GB	300GB
100/40, 500-1000GB	NA	\$99.99	\$99.95	\$114.95
Allowance	NA	500GB	1000GB	600GB
<b><u>Bundled plans</u></b>	<b>Telstra</b>	<b>Optus</b>	<b>iiNet</b>	<b>Internode</b>
<b>Speed/Allowance</b>				
25/5, 200GB	\$103.90	\$64.94	\$74.90	\$84.95
Allowance	200GB	120GB	200GB	300GB
100/40, 500GB	\$113.90	\$149.00	\$109.90	\$124.95
Allowance	500GB	1000GB	1000GB	600GB

Source: J.P. Morgan, Company websites

If we deduct what RSPs would pay to NBN Co and an estimate of other operating costs, we would get high margins from these numbers. We estimate that the iiNet 25/5 plan costing \$64.95 would earn a gross margin after NBN costs of around \$32, which is a little lower than their current on-net gross margin (\$36).

The problem with this is that consumers may be happy with ARPUs at or around current levels, but they will be even happier with lower ones. The question is, would the current ARPUs generate abnormal returns on capital and would competition drive them lower? In this report we argue that the answer to both questions is 'yes'.

## The cost structure of an NBN RSP and economies of scale

In our view NBN Co’s pricing structure is highly variable with respect to the number of subscribers that a Retail Service Provider (RSP) has. According to our estimates, as we show below, this produces a flat cost curve with a break-even market share of 3% or about 2000 subs per Point of Interconnect (POI) – though smaller models can still exist (see Wholesale section, page 6). This cost structure implies that scale players will not have a significant cost advantage.

The main charges levied by NBN Co on an RSP are geared to user numbers:

- The Access Virtual Circuit (AVC) is a per-sub charge which depends on the service speed that the user will be allocated and ranges from \$24/month for the slowest service (12 Mbps download) to \$38 for the fastest (100 Mbps).
- The Connectivity Virtual Circuit (CVC) is geared to the ‘claim’ made by the RSP on the network. It is also a function of user numbers and their speed settings, as well as the reliability of that speed, captured in a contention ratio.

The fixed charges which are not related to user numbers are relatively small. Table 2 summarises how the charges could work for a hypothetical smaller player sitting just above break-even.

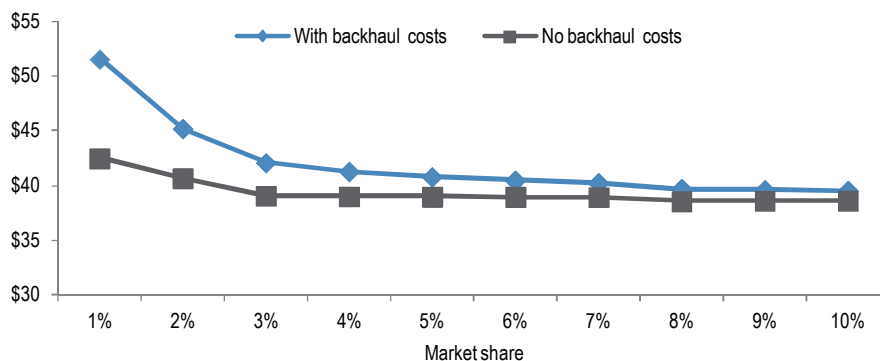
**Table 2: Smaller NBN RSP network costs - hypothetical example**

Market share	3%				
Users per POI	1985				
Proportion on voice	30%				
<b>Speed</b>	<b>12/1</b>	<b>25/5</b>	<b>50/20</b>	<b>100/40</b>	<b>Voice</b>
User split	15%	30%	45%	10%	
Number of users	298	596	893	199	596
Contention ratio	100	100	100	100	10
AVC charge/user	24	27	34	38	
AVC charges/mth	7147	16081	30375	7544	
CVC Mbps	36	149	447	199	9
Total AVC charge	61147				
CVC Mbps gross	800				
Credit (0.05 Mbps per user)	99				
CVC Mbps net	701				
CVC charge (\$20/mbps)	14015				
Total AVC and CVC charges \$	75161				
Per user per month	37.86				
<i>'Fixed costs':</i>					
NNI interface 10 Gbps	400				
Full rack access	2000				
Total NBN cost/month	77561				
Backhaul charge per POI	6000				
Total network cost	83561				
Per user	42.09				

Source: Source: NBN Co, industry sources, J.P. Morgan estimates. For simplicity we omit the 25/10 speed option. Backhaul charge is derived from industry feedback and assumes a competitive metro market. Takes the average POI size according to NBN Co.

In Figure 1 we show how the cost per user would vary by market share on our assumptions. Considering network costs alone, the cost curve is very flat with respect to size and most of the return to scale comes from our assumed backhaul cost.

Figure 1: Estimated network costs per customer per month for an NBN RSP



Source: NBN Co., Industry sources, J.P. Morgan. Speed split as in Table 2.

Of course network costs are not the whole story. However we think that too much can be made of billing systems, customer care etc. as a scale advantage. Outsourcing services and cloud computing are in our view lowering the cost to serve and making it more variable with respect to customer base. We recently met a start-up ‘virtual ISP’ which aims to grow an NBN-based business: it has outsourced billing and customer support on a per-customer cost basis.

### Where is the marginal player’s revenue-margin mix?

We can build a simple break-even model for a smaller RSP using these costs of connecting to the NBN and some assumptions about non-network costs. TPG reports (Table 3) non-network opex of approximately \$13.50 per sub (FY12); while this is a low bar, we think that a more competitive NBN landscape along with the presence of outsourcing models will push costs lower.

Table 3: Non-network costs, iiNet and TPG (FY12)

	iiNet	TPG
Revenue	815	663
Employee cost	111	59
Other non-network opex	98	38
Total above costs	209	96
% revenue	25.6%	14.5%
Subs k	839	595
Non-net opex/sub \$	249	162
...per month \$	20.73	13.47

Source: Companies

In Table 4 we show the margin that would come from the NBN cost structure we describe above, non-network costs of \$15/customer/month and a \$60 ARPU.

**Table 4: NBN reseller profitability – ARPU and margins of a hypothetical small RSP (cf Table 2)**

Market share	3%
Users per POI	1985
Network cost per user	42.09
ARPU	60.00
Revenue per POI per month \$	119117
Gross margin per user/month \$	17.91
Gross margin %	30%
Non-network opex per user	15.00
EBITDA margin	4.8%
EBITDA per POI \$	69,316
EBITDA total \$m (100 of 121 POIs)	6.9
<b>Payback period for POI investment</b>	
Capex per POI estimate	50000
Depreciation per POI/year if 10-year life	5000
Taxed cash flow per POI \$/year	50021
Payback period (years)	1.00
<b>Assumptions:</b>	
Cost structure as per Table 2	
RSP serves 100 Points of Interconnect (of 121)	
Average POI size as quoted by NBN Co	
Penetration (% premises)	91%

Source: Source: NBN Co., J.P. Morgan estimates, industry sources

We have assumed the \$60 ARPU number to generate a small margin. EBITDA break-even in our model is around \$57, giving a revenue base of \$113k/month. We cross-checked this with an industry source (a company servicing RSPs seeking to connect to the NBN); their estimate was that a monthly revenue base of around \$100k would cover costs in a metro POI, where backhaul is competitive. Another industry source (a start-up RSP) put the minimum ‘subs per POI’ threshold at around 2,000. These estimates are in the same ballpark as our results.

#### **How does this ARPU break-even compare with actual NBN plans?**

With the speed bucket split that we use (see Table 2), iiNet’s current NBN plans would generate an ARPU of \$71.69, quite a bit higher than our \$60. From Exetel, a small price-led ISP, we get \$51.49.

IIN is perhaps pricing for a margin similar to what it earns now in ULL while Exetel is presumably trying to drive share, so a result halfway between the two seems plausible. We would however suggest not reading too much into early NBN prices.

#### **NBN capital costs are low**

Table 4 uses a capital cost per POI of \$50k. This is derived from a conversation with a medium-sized existing player which is currently establishing a presence in POI’s. We conservatively assume that this capex will have a long accounting life (hence a lower tax shield).

On this basis our smallish RSP would have a payback period on POI investment of about a year once the run rate of revenue is hit. Thus although the EBITDA margin we arrive at is low relative to current industry norms, at under 5%, the return on investment looks good. In principle the margin could be even lower and still

generate a return, though we acknowledge that there would be capital employed outside the POI as well.

### The tail could be long: wholesale models provide an way in

Our hypothetical ‘small’ player has a presence in 100 of 121 POI’s and 3% share, which on our assumptions gives them 199k subs - a reasonable size compared to TPG’s 595k (end FY12, 10.5% of fixed broadband subs on our estimates). A large part of the difference is that we assume a high penetration rate for the NBN (see page 20 below). Even so, this may seem a relatively high size for the marginal RSP.

However we think that the tail can stretch beyond this in an NBN world because of wholesale models, which can create an ecosystem for smaller and localised players. A number of providers have already announced plans for a wholesale NBN service including Telstra, Optus and Nextgen (Table 5).

The wholesale market can provide two functions:

- By aggregating resellers, wholesale can fractionate backhaul costs for smaller players.
- Wholesale providers can provide a ‘turnkey’ solution including billing and customer management systems which lower the entry barrier for new players. Nextgen’s Virtual Connect package claims to support a \$40 price for the entry-level NBN speed (12 Mbps) and has 13 of 27 RSPs in the Brunswick POI as its customers. An unusual illustration of the relative ease of access to this market is DeVoted, a DVD shop in South Morang which is now an NBN reseller via Nextgen.

Table 5: NBN wholesale providers

AAPT	Nextgen Networks
Amcom	Optus
Aurora Energy	PIPE Networks
Clear Networks	Platform Networks
Eftel	Symbio
ispONE	Telstra Wholesale

Source: NBN Co., NEC

### What would this mean for a larger player’s margins?

We can model the margin of a larger player by

- Taking the ‘marginal’ ARPU that we derived above of \$60;
- Add a small premium, say \$1, to reflect branding benefit (see below);
- Eliminating backhaul costs;
- Cutting non-network costs per sub to TPG’s current level (\$13.47/month).

This gives us an EBITDA margin of 15% for a 30% market share (Table 6).

Table 6: NBN reseller profitability – hypothetical large player

Market share	30%
Users per average POI	19,853
Total network cost \$/mth	762,014
Per user \$/mth	38.38
ARPU	61.00
Revenue per POI per month	1,211,022
Gross margin per user \$/mth	22.62
Gross margin %	37%
Non-network costs per customer/mth	13.5
EBITDA per customer/mth	9.14
EBITDA margin	15.0%
EBITDA per POI per year	2,178,280
EBITDA total \$m (121 POIs)	264

Source: NBN Co, industry sources, J.P. Morgan

### Why not a higher price premium?

- Over time the brand benefit of scale is likely to be eroded as customers realise that the network is generic. Smaller players may suffer if they try to ‘cut corners’ on how much capacity they buy from NBN Co, leading to performance issues, but this can be resolved by adding variable costs (additional CVC charge) so it is not a scale barrier. In any case the household market is unlikely to be highly sensitive to performance since most applications will not stretch the speed of fibre too heavily.
- With a level network playing field, customer service and brand affinity become more influential and large providers may be at a disadvantage in this respect.
- The relevant threat for large players is not small ones but actual or potential scale competitors (see page 11). If TLS, IIN etc try to command a large price premium simply because they are large, they will open the market to a player willing to pursue share more aggressively. This could be a challenger emerging from the tail or a new entrant. We discuss some candidates below (page 12).

### What we assume for Telstra: 15% margin

Based on this we use an EBITDA margin for residential NBN product resale by Telstra of 15%. It could be argued that the profitability of our small player is too skinny and therefore our large player will earn more too. But in our view 15% still implies a very high return on capital (next section). If anything, we think the risk is more to the downside: large-player margins may be squeezed down by each other and the tail may be squeezed out altogether (see page 13 for market share scenarios).

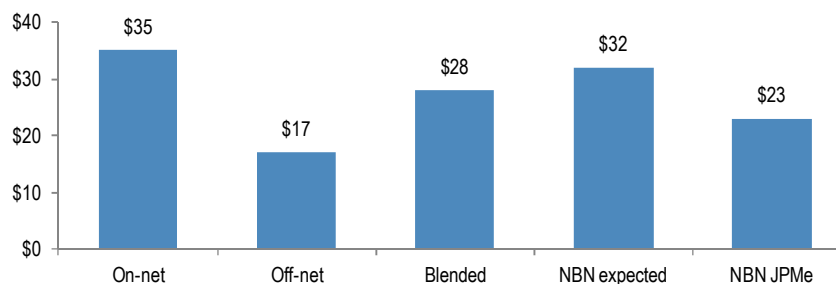
## NBN margins – don't start from here

Telcos and the analysts that follow them are used to higher margins because the industry is capital-intensive and often oligopolistic with scale barriers. In this section we discuss why we think that existing margin norms are not a reliable guide to an NBN world which is more open and less capital-intensive.

### Unbundlers' returns – not a realistic reference point

In a presentation on the NBN in 2011, IIN estimated that its gross margin in NBN products would be \$32, compared with \$35 for on-net customers now (Figure 2). Our calculations for a large player come in about \$9 lower than IIN's estimate.

**Figure 2: iiNet: current gross margins and IIN's expectation for NBN products versus JPMe**  
Per customer per month



Source: iiNet, J.P. Morgan estimates

We think that high margin predictions reflect an 'ARPU-minus' approach. This assumes that NBN pricing will be like ADSL with a premium for the higher speeds, so customers will get a better product for the same dollars or a much better one for a bit more. After deducting NBN costs the resulting margins are high.

This takes current pricing as an anchor and also implicitly assumes that the high margins of the DSL world are will continue. In our view this underestimates the role of stronger competition in an NBN environment.

The purest unbundling model in Australia is TPG Ltd (84% of broadband customers are on-net). In FY12 TPM reported an EBITDA margin of 39%. iiNet's margin is skewed by a larger off-net customer base and M2 is off-net but SME-focused.

We think that the margins earned in the ULL product by TPM etc. are an unrealistic basis for expectations about the profitability of selling NBN products for two reasons.

- The capital involved in unbundling requires a return; NBN provision requires less capital on the part of the reseller. Provided the NBN market is competitive, and we think it will be, margins should be lower because asset turn is higher. Woolworths, even as the larger player in a near-duopoly, earns an EBITDA margin of 'only' 7.9% (FY12) because its asset turn is high.
- Even allowing for capital intensity, the large ISPs are earning high returns. Table 7 shows the returns on capital for the Australian sector's second-line ISP/telcos and, for comparison, the UK unbundler TalkTalk. They all achieve high returns



on tangible capital (removing goodwill, not software and other intangibles). (See Figure 3 for the history of IIN's returns.)

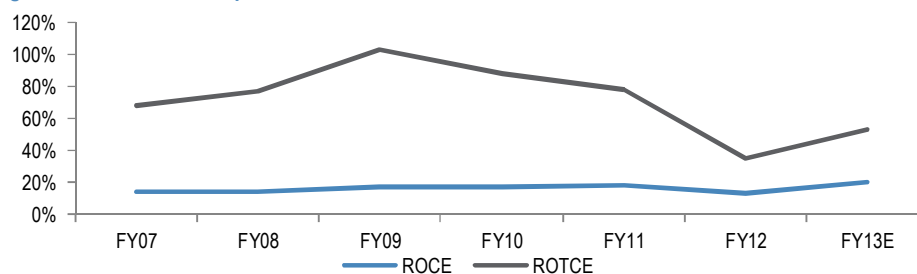
In our view these high returns on capital reflects acquisition-led growth. Challengers face a problem in pursuing organic price-led growth as customers are likely to assume some quality trade-off versus the incumbent, who is still perceived as owning the physical network. A faster and surer strategy is to buy smaller players. But that means a need to generate a return on goodwill on acquired customers; recent ISP acquisitions have averaged about \$600 per sub. This incentivises second-tier players to price for high margins and the incumbent is happy to go along with this.

Table 7: Return on capital and asset turn metrics, various ISPs

\$m FY12 (unless otherwise stated)	TPG	iiNet	M2	TalkTalk (GBPm)
EBITDA margin (MTU = 13E)	39%	18%	18%	19%
Book value of equity	591	287	189	444
Debt	145	289	150	436
Goodwill	392	344	195	480
Invested capital less goodwill	344	171	144	400
EBIT (MTU = 13E)	180	87	85	233
Pre-tax ROCE	24%	15%	25%	26%
Pre-tax ROTCE (i.e. after goodwill)	52%	38%	59%	58%
Current assets	107	90	107	191
Current liabilities ex borrowing	177	171	113	403
Working capital to be funded	-69	-81	-6	-212
Plant and equipment:				
Gross	538	320	60	521
Net	324	179	51	292
Revenue	663	815	393	1,687
<b>Asset turn metrics:</b>				
Revenue/(gross fixed assets + working capital)	1.4	3.4	7.3	5.5
Revenue/(net fixed assets + working capital)	2.6	8.3	8.6	21.1
Subscribers FY12 end ('000)	595	839	165	4,066
Net fixed assets/sub \$	544	214	310	111

Source: Companies, Bloomberg. MTU earnings are 13E (Bloomberg consensus) to allow for Primus acquisition

Figure 3: IIN Return on Capital



Source: J.P. Morgan estimates Company data. Note that IRU lease liabilities were taken on balance sheet in FY12, lowering returns.

By netting goodwill off the capital employed we give some sense of the opportunity for a new entrant which could achieve scale organically. This entrant would not need to earn a return on goodwill and does not have a pre-existing margin to dilute. Instead it can spend up on customer acquisition costs and/or undercut on price and still make a reasonable return on capital.

In the DSL environment, layered with regulatory and technology issues and dominated by a competitor who owned the infrastructure, a purely organic growth strategy was hard. In the NBN world, these barriers are much lower.

We think that the high margins of the existing fixed line market would generate high returns on organic investment. In a more open environment they would act as a stimulus to entry – and therefore not persist.

### Electricity retail market shows the potential for margin fade

Energy retailing is a useful benchmark for fixed line returns in an NBN market, since it involves reselling a generic product without owning significant capital employed. Table 8 shows that energy retailing in Australia earns high-single-digit EBITDA margins. (ORG is not strictly comparable because its ‘retail’ division includes wholesale operations). NBN resellers are analogous to Australia Power & Gas, which is a pure retailer. Conversely generators earn very high EBITDA margins because they are capital-intensive.

Table 8: Power retail and generation margins

COMPANY	AGL Energy	Origin Energy	Energy Australia	Australian Power & Gas	DUET Group	Spark Infrastructure	SP AusNet
Period	FY12	FY12	CY12	FY12	FY12	FY12	FY12
Country	Aus	Aus / NZ	Aus	Aus	Aus	Aus	Aus
<b>Retail Segment</b>							
EBITDA Margin	9.3%	16.2%	8.8%				
EBIT Margin	7.9%	13.7%	7.6%				
<b>Group</b>							
EBITDA Margin	12.1%	17.4%	15.2%	9.2%	64.4%	64.8%	59.1%
EBIT Margin	9.8%	12.4%	11.3%	3.8%	41.7%	43.2%	40.0%

Source: Companies. ORG includes Contact Energy fully consolidated.

It could be argued that energy resellers are a low bar for NBN RSP margins because energy offers fewer opportunities to differentiate through bundling content or other products such as mobile. We agree, though the benefits of bundling can be overstated (page 16). What’s more, energy retailers are exposed to wholesale price volatility which argues for a higher margin whereas NBN resellers will have a very predictable cost structure.

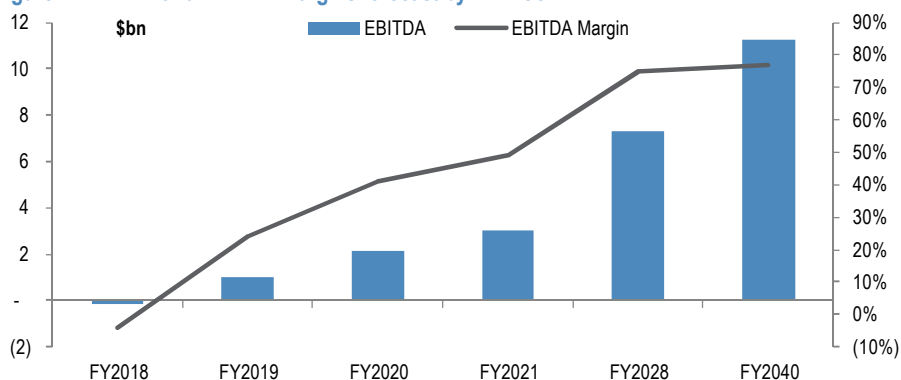
### Sense check: where’s the industry EBITDA gone?

On our rough modelling (Table 6, page 7), a player with 30% share in NBN products would earn around \$264m in EBITDA on today’s prices. That would imply that the whole RSP sector would earn well under \$1bn. Telstra's fixed line businesses earned \$6.2bn in FY12; we estimate that the fixed-line products industry earned \$7.4bn. Where has the profitability gone?

Mostly it has moved to NBN Co. In steady state, on current assumptions, NBN Co would earn very high EBITDA margins as it will have a monopoly asset and relatively low operating costs. Figure 4 shows NBN Co’s projections for its own margins.

Given how much capital it will have sunk into the network, this is as it should be: indeed NBN Co’s estimate of its IRR is only 7.1%. The point is that the scale of the network build along with structural separation will mean that a large part of the industry’s profit will shift into the NBN vehicle.

Figure 4: EBITDA and EBITDA margins forecast by NBN Co



Source: NBN Co (August 2012 Corporate Plan)

NBN Co's forecast for 2028 has it earning EBITDA of \$7.3bn from \$9.8bn of revenue, which allows for price rises and market growth. If we (optimistically) apply the 37% gross margin and 15% EBITDA margin that we derived for a large RSP (above), the 2028 EBITDA for the RSP sector would be around \$2.3bn. For the whole fixed line sector (including TLS's income from leasing infrastructure to NBN Co) it would be around \$10.7bn (Table 9).

This is equivalent to our 2012 industry estimate grown at a 2.3% CAGR, which we think is a plausible outcome. It may seem optimistic given that the industry is prone to technology-driven deflation and will be more competitive in some respects; in our view this has to be offset against the need to generate a return on a very large investment in fibre, and the creation of a monopoly owner of that infrastructure.

Table 9: Fixed line industry EBITDA, 2012 and 2028E scenario

<b>Fixed line industry EBITDA FY12 \$bn</b>	
Telstra	6.2
Optus	0.8
Others	0.5
Total	7.4
<b>Potential EBITDA in 2028:</b>	
NBN revenue \$bn	9.8
RSP gross margin	37%
Total fixed revenue \$bn	15.5
RSP EBITDA margin	15%
RSP EBITDA \$bn	2.3
Infrastructure payments to TLS, EBITDA	1.0
NBN EBITDA (per Corporate Plan) \$bn	7.3
Industry EBITDA estimate 28E \$bn	10.7
CAGR from 2012	2.3%

Source: Source: Company reports, NBN Co Corporate Plan, J.P. Morgan estimates

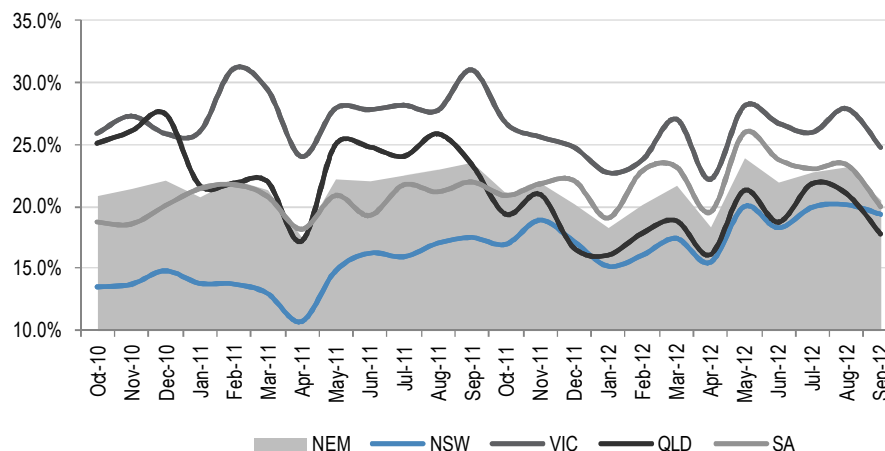
### 'Entrant for scale' is the real threat

The real risk for large players is not the tail of smaller RSPs but a new entrant with patience and resources which aims for scale through organic growth. This player is willing to accept a lower margin than the incumbents because it does not have to worry about diluting existing margins or earning a return on goodwill. This means it can be disruptive on price and still earn reasonable returns.

In our view the NBN creates a favourable environment for organic growth:

- Network quality becomes a neutral factor, as long as the provider is willing to buy enough bandwidth. In the copper world TLS has an advantage, or at least is perceived to, because it controls the physical infrastructure.
- NBN churn is less likely to involve down time because the provider does not have to reconfigure exchange infrastructure in the way a ULL competitor does. This is similar to the energy retail market, which demonstrates very high churn. In Victoria, the most deregulated market, churn can be as high as 20-30% (Figure 5).
- NBN reselling has low capital intensity and a variable cost structure. A possible deterrent to entry in any industry is prolonged cash burn at low levels of share. In our view this barrier is lowered significantly by the relatively small capital required to be an NBN reseller (including the wholesale option) and by the variable nature of NBN costs. We also note that ISP models tend to feature low or negative working capital (Table 7 page 9) because customers pay for service monthly while networks and other suppliers offer longer terms. This lowers the cash drain of growth.

Figure 5: Churn rates, retail energy markets



Source: AEMO

**Possible ‘entrants for scale’**

We can see a range of possible new entrants which would have the pockets and strategic interest to play a ‘long game’ in building an NBN business and thereby keep the market competitive.

- **Australia Post** in our view has the right characteristics to pursue an organic-led path to being a scale player in the NBN market. It has strong brand awareness, local presence, payments systems and a need for a growth strategy. It has a communications division headed by Maha Krishnapillai, formerly of Optus, and John Stanhope, formerly the CFO of Telstra, was recently appointed as its Chairman.
- **Energy retailers** are potential candidates. NBN reselling is less about technology and more about customer management, which is a core competence for the sector.

- **Foreign telcos** may be attracted by the NBN opportunity. The market opportunity may be too small for overseas incumbents but **Vodafone** is a candidate, given its mobile presence in Australia; its purchase of TelstraClear in NZ suggests that it sees fixed products as a growth area. Also second-line ISPs from offshore may look at Australia as an opportunity. One such is MyRepublic, a ‘challenger’ model which is already active on Singapore’s NBN and which plans to enter the Australian market.
- **Supermarket chains** and other retailers have brand awareness and can bundle NBN products with loyalty programmes. Using stores as marketing venues and points of contact for customers would fit the piecemeal roll-out of the NBN. The sector is also looking for new growth avenues. We note that Tesco has developed an ISP business in the UK.
- **Online businesses** such as Google and Amazon may see service provision as an extension of their ‘tech’ brand, an opportunity to promote content and a way to get more data on usage patterns. Google is rolling out its own fibre network in Kansas City, including a set-top box and Google TV.
- **Content companies:** telcos see content as a way to differentiate and make customers more sticky (see page 16), but content providers may turn the tables, using content as a selling point for NBN products without the need for a carrier in the middle. The most logical candidate is Foxtel: Telstra’s 50% ownership complicates the issue, though TLS is on record as saying that nothing is preventing Foxtel from having a triple play offering.
- **Wholesale** models such as Nextgen or Amcom could add a retail arm. This would put them in competition with their customers, but Telstra and Optus would already be in that position and we expect there to be enough players in wholesale to maintain competitive tension.

## Possible market structure in an NBN world

For valuing Telstra we assume an eventual fade to 32% market share in NBN products. This compares with our estimate for FY12 of 48% share in fixed broadband and 71% across all fixed products. To illustrate our thinking about the market dynamics, Table 10 shows a possible market structure for a mature NBN marketplace.

Table 10: Subscriber share of fixed broadband in FY12 and possible NBN market structure

FY12 share		
Telstra	46.0%	
Optus	17.9%	
iiNet	14.8%	
TPG	10.5%	
Other	10.8%	
Possible NBN marketplace		% change
Telstra	32%	-30%
Optus	16%	-11%
iiNet + TPG aggregated	22%	-13%
Scale entrant 1	8%	
Scale entrant 2	7%	
Other	15%	39%

Source: Companies, J.P. Morgan estimates

Our logic is as follows:

- In metro areas fixed broadband has been competitive for some time but not as competitive, we think, as the NBN market will be. TLS's share of this market may already be in the low 40's (Table 11). TLS is likely to lose share disproportionately outside metro where competition has been weak.

**Table 11: Estimate of Telstra fixed broadband share in metro areas**

TLS market share in FBB overall (FY12)	46%
Estimate of TLS share in non-metro (source: IIN)	60%
Est. % of population in settlements smaller than 80k	25%
Implied TLS share in metro	41%

Source: Telstra, iiNet, Dept of Environment and Heritage, J.P. Morgan estimates

- Optus could lose a little less share than IIN and TPG. Having lower margins and being part of a large group it has more flexibility on price than the listed players.
- We assume that two new entrants (see above) manage to gain reasonable scale.
- We estimate that the 'tail' currently accounts for 11% of the FBB market and we think that this likely to grow somewhat given the open nature of NBN resale.

### **Wouldn't margins go up again as the market matures?**

It could be argued that the NBN market will ultimately revert back to an oligopolistic dynamic, even if there are 5-6 players accounting for most of it instead of the current 4, and margins will drift back up.

In our view the key feature of oligopolies is not the small number of players but the presence of barriers which keep it that way even if the incumbents earn high profits.

We think that the NBN landscape looks more like what economists call a '**contestable market**' which is characterised by

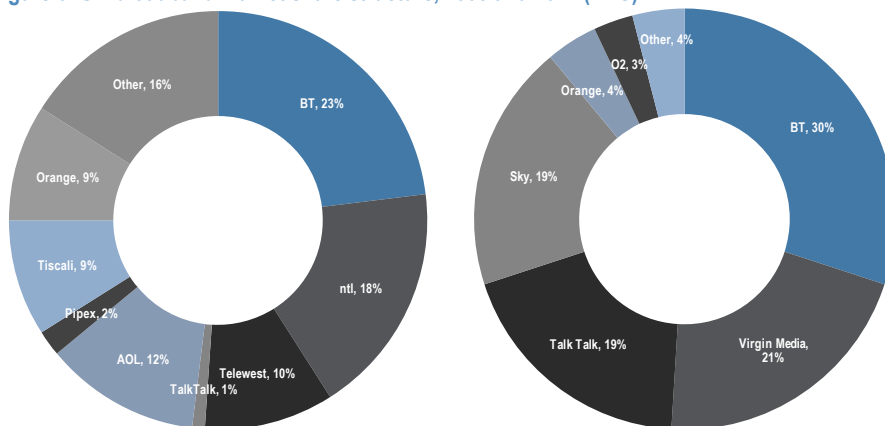
- low entry and exit barriers
- low sunk costs and
- equal access to technology for both incumbents and entrants.

Contestable markets may have only a few players but they behave competitively because of the threat of entry. Incumbents know that if they try to extract excess returns they will attract competitors and ultimately end up with lower margins and a lower share – so it's better to at least keep the share. For example, airline routes can be very competitive with just 2 or 3 players because if margins are any higher there will soon be 4 or 5.

### **Does the UK experience prove us wrong?**

BT was functionally separated in 2006 into a network company, Openreach, and a retail service provider, BT. Since 2005 the UK ISP market has become more concentrated (Figure 6). This experience might be used to argue that a more open environment will lead to more consolidation, not more fragmentation.

Figure 6: UK broadband market share structure, 2005 and 2012 (RHS)



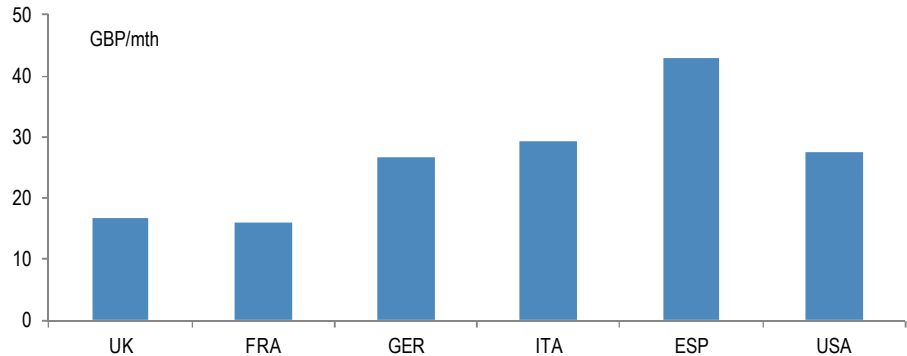
Source: Companies, J.P. Morgan

In our view this conclusion is unjustified because the UK experience is very different to how the NBN marketplace will look.

- Competition across the Openreach network has remained predominantly driven by local loop unbundling, as Ofcom (the regulator) promoted infrastructure-led competition to give consumers a genuine choice on service. Just as it has in the Australian market, ULL favoured scale because the capital commitment could be more effectively leveraged. This does not apply in our view to NBN resellers which will have a more variable cost structure and less infrastructure investment.
- BT's fixed line share has increased following functional separation, which might be seen as encouraging for TLS. (About half of the share increase was due to an acquisition.) But it started from a low level for an incumbent (23% in 2005), partly because cable operators started to push broadband before separation and this rebased BT's share. Also the main ULL player, TalkTalk, has struggled with customer service issues; we see no reason to expect a repeat of this in Australia.
- Churning from a functionally separated incumbent onto a ULL competitor is different from churning between resellers on a structurally separated netco. In the first case there is a risk of service interruption and customers may feel that it's safer to stick with the incumbent. NBN Co is indifferent between providers and if anything will be inclined to encourage fragmentation as its revenues are higher with more players. We therefore expect switching to become smooth.
- The two main drivers of consolidation in the UK have been infrastructure and content. Virgin Media's cable network and TalkTalk's DSLAM investment have given them a degree of infrastructure differentiation; Sky has established a barrier through content. In our view NBN's infrastructure playing field will be very flat: backhaul networks are not a selling point for consumers and are regulated. We think that the NBN will make it hard to 'stick' content to a particular reseller (see page 16).
- UK fixed line prices are low by international standards (Figure 7), narrowing the window for price-based competitors with no infrastructure or content levers.
- The early stages of functional separation in the UK saw a much more competitive landscape, resulting in higher churn and pressure on smaller players who were

incentivised to sell out. Low returns drove consolidation, rather than consolidation driving high returns.

Figure 7: Average fixed broadband price per month (single service)



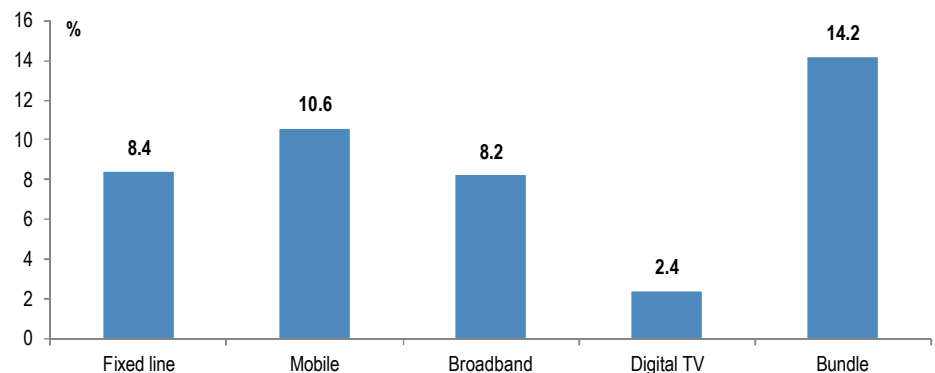
Source: Ofcom

### Content is not the solution to defending margin and share

Is bundling content with internet and telephony a way for NBN resellers to protect margin and limit churn?

The evidence that bundling reduces churn is not clear-cut. UK data actually suggests that bundles see more churn than single products (Figure 8).

Figure 8: % of UK customers who had switched suppliers in the previous year, 2007-11 average



Source: Ofcom

In our view the key to limiting churn is not having content in the bundle – in some respects bundling makes it easier to move several products at once – but the degree to which the content is exclusive to the communications provider. There are two aspects to this:

- How much key content can a single media platform lock up? This essentially means sports: other 'must have' content is available for download or is limited to specific shows which come and go. The success story is of course BSkyB's use of football rights to increase pay TV penetration in the UK. In Australia there is strong political resistance to key sports being tied in this way to a specific platform.



- Will media companies want to tie themselves to a single reseller in an open platform like the NBN? In our view, no: the value of content is more likely to be maximised across a wider base. As things stand, an ‘over-the-top’ model within the NBN is not straightforward because media companies would have to become RSPs and/or reach separate distribution arrangements with other RSPs. However NBN Co recently announced that it is working was working with media organisations on an arrangement that would allow them to inject content onto the NBN multicast platform once. (Multicast allows broadcast content without multiple user 'calls' on the infrastructure).

Our view is that the NBN provides content players with a way to reach customers in a carrier-neutral way. Rather than strengthening the leverage that content gives to Telco/ISP companies, the NBN if anything weakens their position in our view.

### Voice will be commoditised

One area in which forecasts of NBN margins may be too optimistic is voice. In our worked examples above we assume that there are no standalone voice services but that 30% of customers take a voice option on top of broadband. In the short term this is unrealistic, because large numbers of customers will come across to the NBN as voice-only. But in the long term we think standalone NBN voice makes little sense for the customer.

An NBN voice-only service would cost the provider about \$24.30 a month in NBN charges (Table 12). The provider has to buy a separate chunk of connectivity for this (Traffic Class 1 CVC) which will prioritise voice traffic to give a service comparable to traditional telephony. An entry-level broadband service with voice added would cost not much more because the bulk of the cost is the access charge (AVC).

Hence in a competitive market providers are likely to offer voice as a low-cost upgrade to a broadband package, or encourage them to use a VoIP phone (or an analogue telephone adapter) over their broadband service<sup>1</sup>. Meanwhile a basic mobile plan can be had for around \$30 a month. In this context we cannot see enough space in the price spectrum for voice-only: customers will migrate to broadband-plus-voice, broadband only with VoIP or mobile.

Table 12: Cost of NBN services with and without voice

	AVC charge	CVC charge	Total	Price if 37% gross margin
Voice-only (TC1)	\$ 24.00	\$ 0.30	\$ 24.30	\$38.57
BB only, allowing VoIP	\$ 24.00	\$ 2.40	\$ 26.40	\$41.90
12/1 Mbps broadband plus voice (TC1+TC4)	\$ 24.00	\$2.70	\$ 26.70	\$42.38
For comparison: Optus BYO SIM postpaid, \$200 calls/mth				\$30.00

Source: NBN Co., Optus, J.P. Morgan calculations

<sup>1</sup> A voice service can be routed through a ‘Traffic Class 1’ service which allows lower contention and therefore a high quality; or it can be sent through the ‘Traffic Class 4’ service which is used for broadband, and in practice would offer very high quality without the (small) extra charge of a TC1 service.

## NBN impact: don't forget the business market

In our view it is wrong to isolate the NBN impact to residential fixed products because it is also likely to have a significant impact on Telstra's Data & IP product, which provides networks to business and other organisations. Typically these customers need an assurance of quality that is not available from the public network and are above the micro or 'small-office- home-office' market, which can use ADSL.

For many of these customers, standard NBN connectivity may be sufficient if it is provisioned adequately. NBN's standard product is a shared 'pipe' or GPON. For residential users, providers will make an assumption about how many users will be active at any time and if they under-provision the service it would slow down.

A business-focused reseller can offer lower contention ratios and hence higher consistent speeds, giving customers an assurance of quality without having to provide a dedicated link. The current NBN options are limited from a business perspective by slower upload speeds, but NBN Co has said that it will launch plans with symmetric 40 and 100Mbps speeds aimed at medium-sized businesses.

Larger customers may still want a dedicated service, but even that should be covered by NBN Co which has said that an enterprise product – with speeds of up to 1Gbps and dedicated fibre links rather than GPON – will follow in 2015.

Over time, the NBN will weaken the value of proprietary networks and both prices and margins are likely to fall. We note that Melbourne-based business-focused ISP Connexus was recently sold to MyNetFone for only around 3x pre-tax earnings (Table 13). In our view this is evidence the NBN will open up the playing field in business as well as residential.

**Table 13: Connexus – estimated financials**

Average revenue per customer per month (\$), estimate	\$900
No. of business customers	1,000
Estimated revenue p.a. (\$)	\$10.8m
Pre tax earnings (\$)	\$1.6m
Pre -tax margin %	14.8%
Bought by MyNetFone for	\$4.75m
Multiple of pre-tax earnings	3.0x

Source: Company, Communications Day

Telstra's Data & IP business earned EBITDA of \$2bn in FY12 (19.5% of the total) and a 64% margin. In our valuation we fade this to 20% over the next 10 years to reflect a move from an infrastructure to a resale model; though we also assume (see below) that it becomes much less capital-intensive.

### *Humility clause*

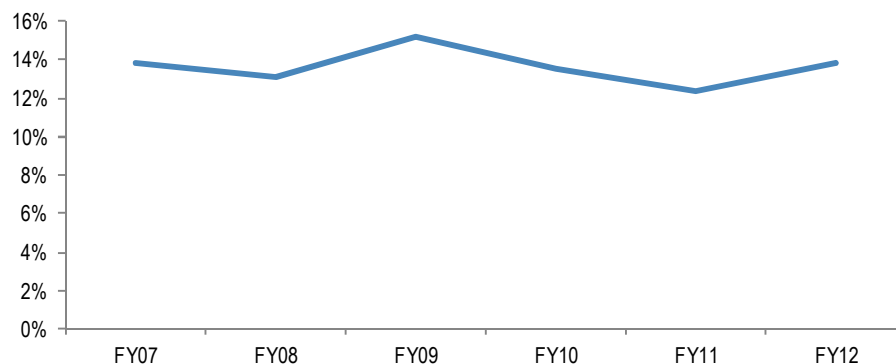
We acknowledge that there is a higher degree of uncertainty surrounding the fade that we apply to Data & IP products than there is for household-grade products. Business churn is lower and less price-driven, as challengers like M2 will attest. The network product can be bundled with services such as storage and security; and while these sit in Telstra's Network Applications & Services line, which we continue to grow through our forecast, they may make the network product more sticky and higher-margin. Finally we have less granularity of disclosure in Data & IP as far as the structure of the customer base is concerned.

## Lower margins...but also lower capex

With NBN Co taking the role of network operator, the capital intensity of Telstra's businesses will be much lower in an NBN environment. At Telstra's recent investor day, CEO David Thodey hinted at a longer-term aspirational capex to sales target of 12-13%, versus FY13 guidance of 15% of sales, excluding spectrum. We believe that even this aspirational target may end up being too high.

Longer term, mobile will be the main driver of Telstra's capex spend. We estimate that this division will require capex of 13% of sales in the long run. Vodafone globally has averaged a capex to sales ratio (ex spectrum) of 13.6% over the past 6 years. In Australia, VHA has averaged 15% of revenue but this is hard to use as a comparison for TLS: VHA has consistently had a lower revenue base but has also built up a sizeable lag in network quality. The figure for Optus is 10%, however we note that some mobile-related capex is shared with Optus' other segments.

Figure 9: Vodafone capex % of sales



Source: Vodafone, J.P. Morgan estimates

A significant proportion of Telstra's business will be less capital-intensive than mobile in the future. Based on disclosure by Chorus we estimate that Telstra's legacy copper capex spend is approximately 5% of sales (Table 14). The last time that TLS disclosed this breakdown, FY09, copper access capex was 5.2% of all fixed line revenue and we think it will probably be falling from there as the NBN rolls out.

Table 14: Estimate of TLS Annual Copper Capital Expenditure

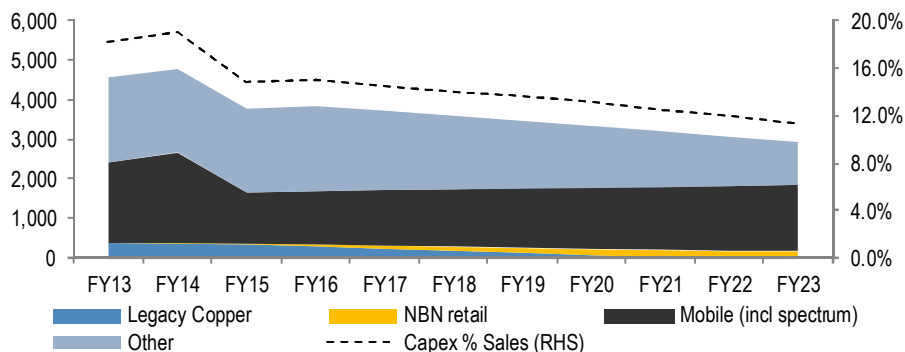
Chorus average capex/line, FY12, NZ\$	49.4
Chorus average capex/line, FY12, converted to A\$	38.5
Average Telstra access lines in FY12	9,294,500
Estimate of TLS Copper capex in FY12	357.7
TLS Fixed revenues (A\$m)	7,518
<b>Estimated TLS copper capex % of Fixed revenues</b>	<b>4.8%</b>

Source: J.P. Morgan estimates, Chorus

We also use a 5% capex/sales ratio for NBN products in the long term. Compared with copper, this may be on the high side but we prefer to be conservative given how little we know at this stage about NBN capital intensity.

Based on the above analysis, we forecast Telstra's capex to sales ratio to decline to c.11% once the NBN rollout has been completed.

Figure 10: JPM capex forecasts for Telstra



Source: J.P. Morgan estimates.

We argue that these low capex assumptions for fixed line products are the mirror image of our relatively low margin forecast. In steady state, a 15% EBITDA margin and 5% capex/sales would mean that selling NBN products would generate a 7% operating cash flow margin (before working capital, which could be self-funding as we argue on page 12). This equates to a reasonable return on capital as long as asset turn is 1.5x or better, which we think is highly likely.

The other side of this coin is that if capital intensity is lower it will in our view wash through to lower margins and a similar return on capital.

## NBN take-up: we are optimists

### Fibre rollout speed

We have assumed a slight but not meaningful delay in the rollout of the NBN in our fibre rollout forecasts (Figure 11). We think that the rollout process is becoming increasingly industrialised and the risk of significant slippage is falling.

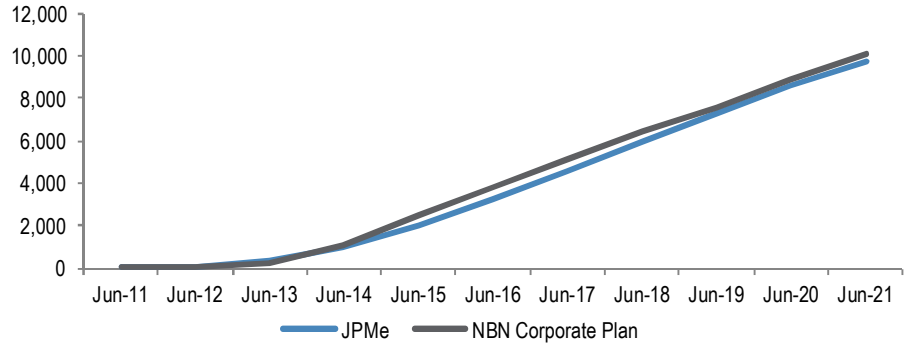
Table 15: NBN Rollout Forecasts

	Jun-11	Jun-12	Jun-13	Jun-14	Jun-15	Jun-16	Jun-17	Jun-18	Jun-19	Jun-20	Jun-21
<b>Brownfields premises passed</b>											
JPMe	18	29	307	1,024	2,048	3,278	4,609	5,941	7,272	8,604	9,730
NBN Corporate Plan	18	29	286	1,129	2,499	3,862	5,168	6,423	7,610	8,879	10,091
<b>Greenfields premises passed</b>											
JPMe	0	10	55	178	413	763	1,111	1,415	1,673	1,904	2,111
NBN Corporate Plan	0	10	55	178	413	763	1,111	1,415	1,673	1,904	2,111
<b>Total fibre premises passed</b>											
JPMe	18	39	362	1,202	2,461	4,041	5,720	7,356	8,945	10,508	11,841
NBN Corporate Plan	18	39	341	1,307	2,912	4,625	6,279	7,838	9,283	10,783	12,202

Source: J.P. Morgan estimates, NBN Corporate Plan August 2012

**Figure 11: NBN Brownfields Rollout Forecasts**

'000s of premises passed



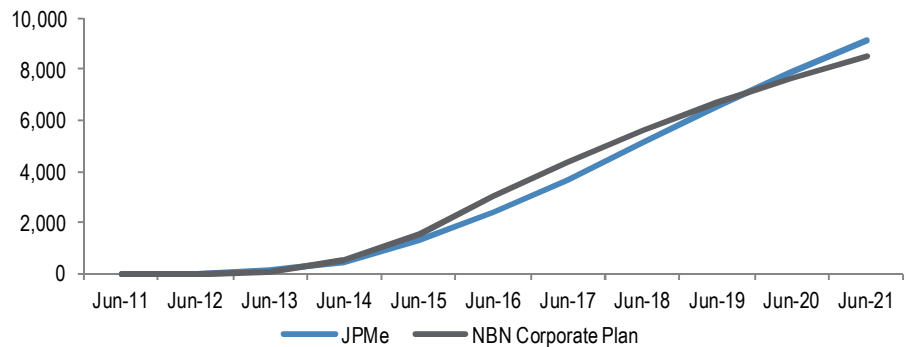
Source: J.P. Morgan estimates, NBN Corporate Plan

### NBN fibre take-up and penetration

We believe that the take-up assumptions in NBN Co's Corporate Plan are conservative and hence have assumed higher take-up rates of the NBN in our estimates (Figure 12 and Figure 13). Our assumption is that take-up converges to 87% of premises passed two years after the area rolls out, though because of the lag overall penetration does not reach this level until beyond 2023.

**Figure 12: Premises connected to NBN Fibre**

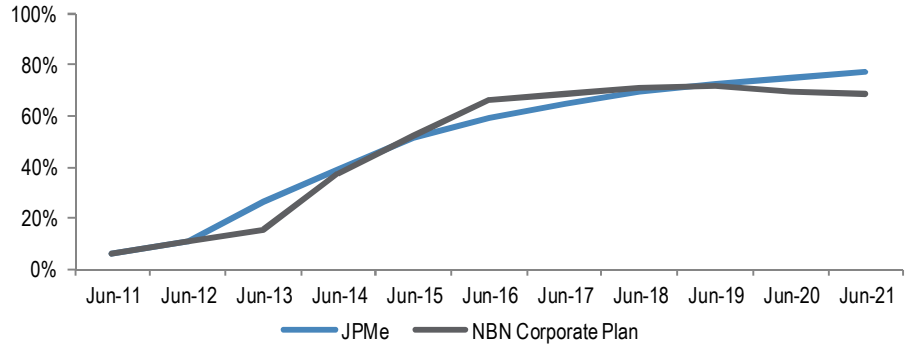
'000s of premises



Source: J.P. Morgan estimates, NBN Corporate Plan

Figure 13: NBN Fibre Penetration

% of Premises Passed



Source: J.P. Morgan estimates, NBN Corporate Plan

**Why we are optimistic on take-up**

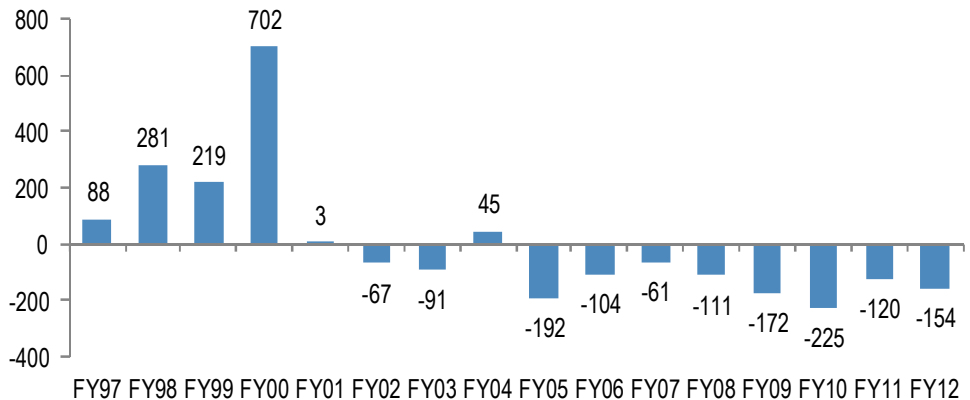
With a forced shut-down of the copper network 18 months after NBN Co. declares an area complete, the risk to take-up assumptions is fixed line loss. We see two reasons to be relatively optimistic on this:

*Copper line loss rate is steady, not accelerating*

In FY12 there was a 154k fall in basic access lines, a bit larger than FY11 but lower than the previous two years. The average annual decline since 2004, when it began in earnest, is 271k.

To some extent this slowing is because the loss of second lines (dial-up, fax) has largely run its course. But it also argues for being cautious about the growth of unwired premises; we think that fixed-to-mobile substitution for static data connections is increasingly coming up against a growing appetite for higher-intensity content. We note that TLS have commented that wireless broadband is increasingly an 'out-and-about' product rather than a substitute for fixed (and now refer to the product as 'mobile broadband').

Figure 14: Basic access lines in operation, change per annum



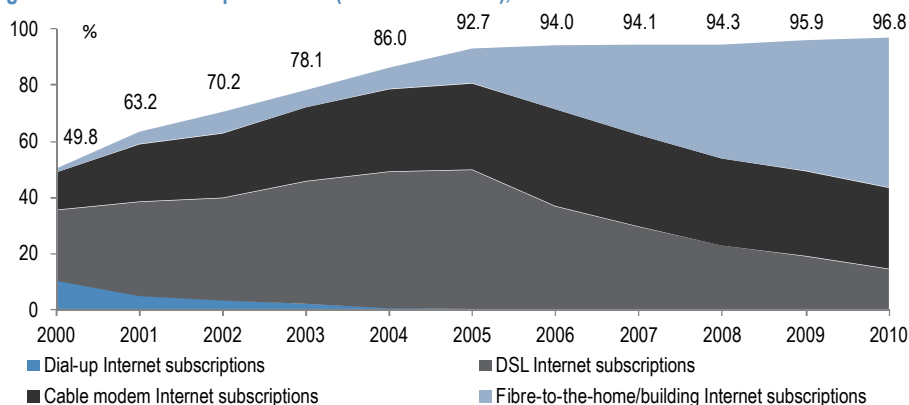
Source: Telstra, J.P. Morgan

*Fibre is likely to alter the trajectory of fixed line loss*

Copper technology has been fairly static since ADSL2 while wireless data speeds have improved significantly. This has made wireless broadband a close substitute for fixed. However fibre will shift the comparison decisively in favour of fixed, provided that there are the applications that can exploit its speed: we think that high-quality content will underpin the demand for fibre.

The experience of South Korea (Figure 15) suggests that fibre can lead to growth in fixed-line penetration.

Figure 15: Fixed internet penetration (% of households), South Korea



Source: ITU

**US ‘wireless-only’ metrics can be misleading**

We note that high forecasts for ‘unwired homes’ (and thus low NBN take-up) may rely on numbers for the US market which show that around 34% of households have only a wireless phone (2H11, source CDC). This is misleading because it refers only to voice services; the US has a high level of cable and fibre penetration: not having a fixed voice connection is not the same as being ‘wireless-only’. A survey by techbargains.com in June 2012 estimated that 64% of households with no landline have cable or satellite. Even ignoring fibre connections, which this survey did not include, this would imply that only 15% of households have *nothing but* a wireless connection.

In our view the relevant driver of NBN take-up will be broadband demand, not voice. A survey by Strategy Analytics in 2011 estimated that 6.1m US households depended only on wireless for their broadband connection; this is about 5% of all households and about 7% of all broadband connections. This may rise over time but as we explain above it is simplistic to extrapolate recent trends. In any case, it implies a lot less cord-cutting than the voice market data.

## What it means for Telstra's valuation

Our assumptions for TLS's margins and share in an NBN world are laid out in Table 16.

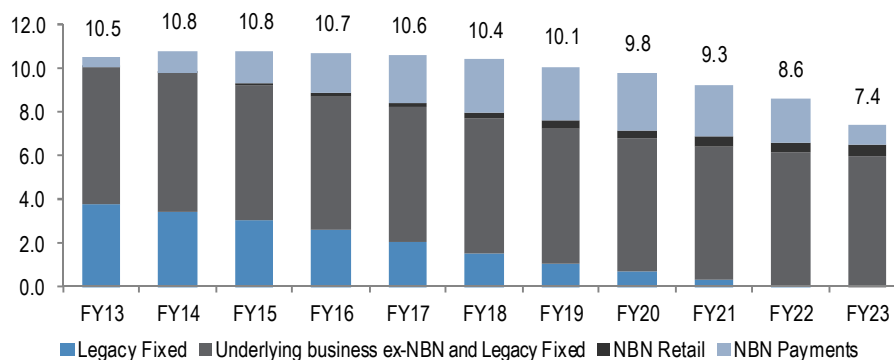
Table 16: TLS Valuation Summary

A\$m	
Enterprise value - Underlying business	43,753
NPV Cash Flows - NBN Payments	19,438
<b>TLS Enterprise value</b>	<b>63,191</b>
Net Debt	13,602
Minorities	226
Equity value	49,363
Number of shares	12,443
<b>Value per share (\$)</b>	<b>3.97</b>
<u>Assumptions</u>	
WACC - Underlying business (%)	7.8%
Discount rate applied to NBN Payments (%)	5.0%

Source: J.P. Morgan estimates.

We accept that there is a high degree of uncertainty around our projections for NBN profitability and share. However, the valuation of the stock is relatively insensitive to changes in them because the fixed line business ends up being small in the scheme of things and is of course diluted by the discounting effect. We estimate that NBN retailing will contribute only 7% of Telstra's Group EBITDA when the rollout is complete. Figure 16 shows the evolution of TLS's EBITDA by business over our forecast horizon.

Figure 16: TLS EBITDA breakdown over the NBN rollout period (A\$bn)

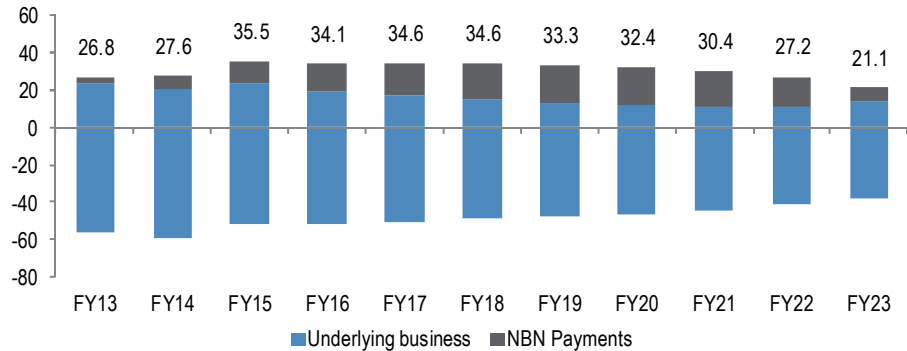


Source: J.P. Morgan estimates.

Hence the TLS valuation is dominated by the Mobile business and by the NBN 'compensation' cash flows which accrue earlier in the valuation, and have little capex attached.



Figure 17: TLS free cash flow per share



Source: J.P. Morgan estimates.

In our view this is a moderately bullish conclusion. Investors may be asking whether buying TLS for yield could prove to be a mistake if fixed line returns are rebased radically. We think that it is right to be conservative about those returns, but the stock’s valuation can withstand it – though admittedly the share price has now drifted above our June 2013 price target of \$3.97.

**Dividend – for now, for quite a while but not for ever**

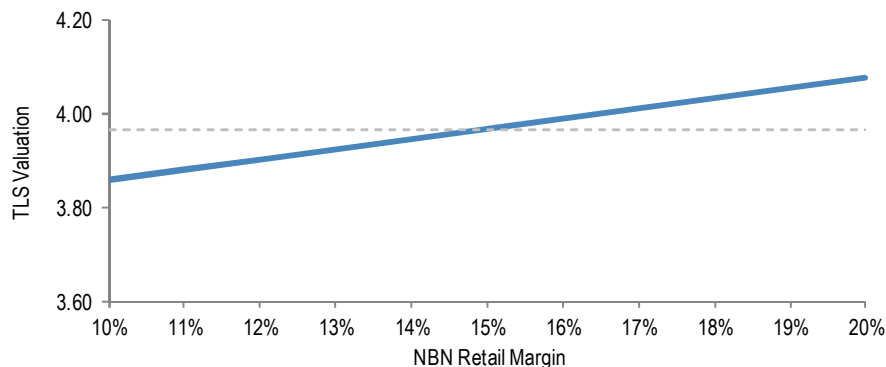
Using our estimates the 28 cent dividend would be covered by free cash flow until FY22 and by earnings until FY21. Once NBN disconnection payments run down, however, free cash flow falls sharply (FY23E – 21cps).

We admit that this makes TLS an unusual investment as it is effectively selling part of its business (fixed line customers), returning capital to shareholders and ultimately growing off a much lower earnings base. One challenge posed by this is that valuation multiples, including yield, do not work well for TLS as they imply that the cash flow is ongoing. Hence we stick to a DCF valuation.

**Long term EBITDA margin**

We currently forecast Telstra’s EBITDA margin to decline to 27% over the long term. The stock valuation is fairly sensitive to this – we estimate that for every 1% change our valuation moves by approximately 14 cents (c.3%). However the valuation is relatively insensitive to changes in the NBN retail product EBITDA margin from our base case of 15%; a 1% change moves our valuation by only about 2 cents.

Figure 18: Sensitivity of our Telstra valuation to the NBN retail margin



Source: J.P. Morgan estimates.

**Long term share of NBN retail broadband services**

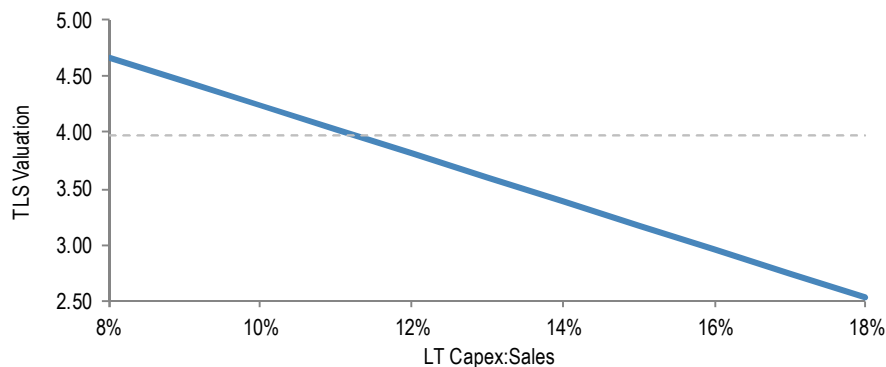
We forecast Telstra’s share of NBN retail broadband services (household and small business) falling to 32.5%, compared with a 46.0% share at June 2012. Again, changes in this assumption do little to move our valuation: a 1% shift makes a difference of 2 cents.

**Capex**

Not surprisingly, our Telstra valuation is highly sensitive to our long term capex assumptions. CEO David Thodey commented at the recent investor day that a longer-term aspirational capex target might be in the range of 12-13%. We believe this may prove to be conservative; we currently forecast a long term capex to sales ratio of 11% (refer to page 19).

We estimate that every 1% move in capex as a % of sales in the long term (FY16 onwards) moves our valuation for Telstra by approximately 21 cents.

Figure 19: Sensitivity of our TLS Valuation to the long term capex to sales ratio assumption



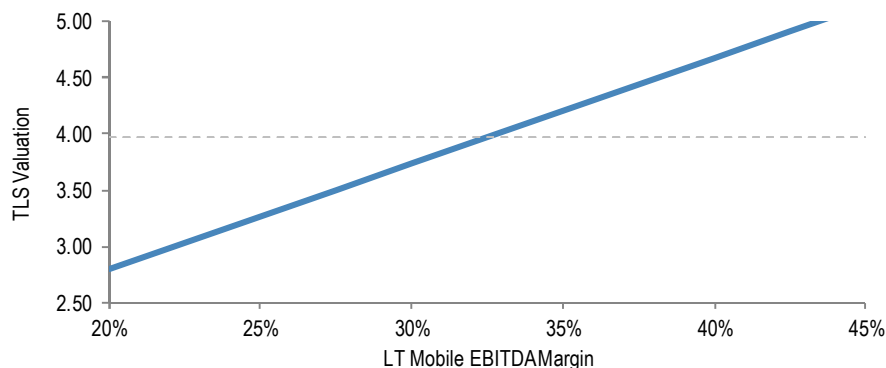
Source: J.P. Morgan estimates.

The highest degree of uncertainty is around the capex intensity of NBN products, where we have assumed 5% – which is what pulls down the group average. But on our forecasts NBN revenue in steady state would be only 12% of the total; so to move the group capex/sales ratio up by a point the NBN product ratio would have to go from 5% to 13%. In any case there is a natural offset: if NBN selling is more capital-intensive than we think, its margins will also be higher.

### Mobile EBITDA margin

We believe Mobile will be main driver of earnings after the NBN rollout, contributing 50% of revenue and 57% of EBITDA once the NBN has been completed, versus 34% of revenue and 30% of EBITDA in FY12. Hence the sensitivity of our valuation is greatest to our long term Mobile EBITDA margin. Every 1% move in Telstra's mobile EBITDA margin from a base case of 32.5% results in a ~9c movement to our valuation.

Figure 20: Sensitivity of our TLS valuation to the long-term Mobile EBITDA margin assumption



Source: J.P. Morgan estimates.

### Valuation methodology for TLS

We value Telstra's receipts from NBN Co separately from the underlying business because we think that NBN payments carry much less risk and should therefore have a lower discount rate. NBN Co's debts are guaranteed by the Federal Government, and the infrastructure lease payments are not subject to patronage risk and are indexed to inflation.

The risks to NBN payments are therefore relatively small:

- Disconnection payments vary with fixed line loss (TLS is not paid for disconnected lines), but even then fixed line attrition is unlikely to lurch onto a much steeper downward trajectory in our view.
- Government policy could change, though TLS's position is protected by contracts.

As a result we use a 5.0% discount rate for these payments, and 7.8% for the underlying business. The latter is based on a beta of 0.7x, which reflects the lower-risk (albeit declining) legacy fixed-line business, and higher-risk NBN retail, NAS and IP & Data businesses, with the mobile business somewhere between.

On a value-weighted basis we get a beta for the group of 0.48, which is similar to the adjusted beta estimated by Bloomberg (raw = 0.3).

Table 17 below provides a sensitivity analysis of our valuation to various discount rate assumptions.

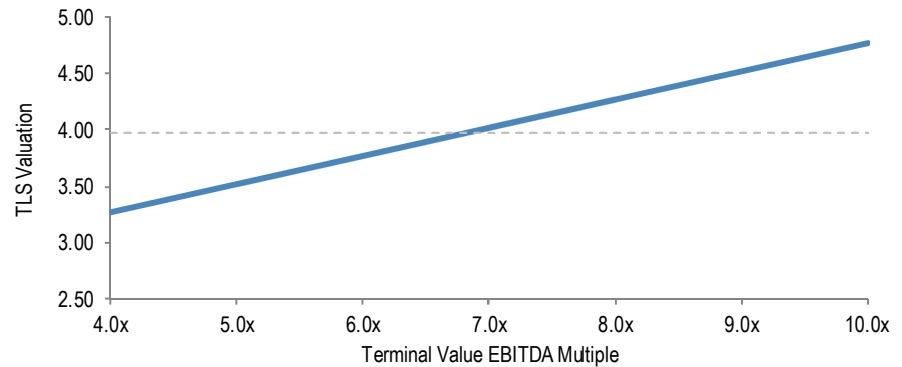
Table 17: Sensitivity of our TLS Share Price Target to the Discount Rate

		Underlying business WACC						
		7.0%	7.5%	7.8%	8.0%	8.5%	9.0%	9.5%
NBN Payments Discount Rate	4.0%	4.74	4.42	4.27	4.16	3.93	3.73	3.56
	4.5%	4.58	4.26	4.11	3.99	3.77	3.57	3.40
	5.0%	4.44	4.12	3.97	3.85	3.63	3.43	3.26
	5.5%	4.32	4.00	3.85	3.73	3.51	3.31	3.14
	6.0%	4.22	3.90	3.74	3.63	3.40	3.21	3.04
	6.5%	4.13	3.81	3.65	3.54	3.31	3.12	2.94
	7.0%	4.05	3.73	3.57	3.46	3.23	3.03	2.86

Source: J.P. Morgan estimates.

Figure 21 below shows that for each movement of the terminal EBITDA multiple by 1.0x, our TLS valuation moves by ~25 cents. Our terminal valuation currently assumes a forward EV/EBITDA multiple of 6.8x.

Figure 21: Sensitivity of Terminal Value EBITDA multiple to our TLS Valuation



Source: J.P. Morgan estimates.

## Political risks to our assumptions

The Coalition has stated its intention to review the NBN business case and consider a fibre-to-the-node strategy in place of NBN Co's fibre-to-the-premise strategy.

We argue that margins will be much lower in an NBN world because the RSP business will be much less capital-intensive and much more open than the copper world is. FTTN would not change this core view:

- Coalition policy is committed to structural separation, so the level playing field would remain and fixed line capital would still predominantly sit with a netco and not the existing telcos/ISPs.
- FTTN would lower the capital commitment required of NBN Co but not meaningfully change things for RSPs. A cheaper build could flow through to lower NBN charges; but if the market is competitive, as we expect, this will in turn flow through to customers rather than profits.
- TLS might be able to extract an additional return from the copper local loop, which NBN Co would have to use from node to premise. However we are not convinced that Telstra's leverage is as strong as it seems. This asset is obsolete under the FTTP strategy and TLS has learnt the hard way that playing hardball with governments does not work in the end.

FTTN would be faster to roll out than FTTP and this would be a negative for TLS because it would lose the high margins of PSTN earlier and get the same compensation, albeit earlier. Coalition thinking is that any change to the NBN deal should leave TLS shareholders at least as well off as now, but this does give a future government some leverage in any discussion about using the copper loop.

Our assumption is that the effect of political transition is neutral, with the negative impact of a faster PSTN decline being offset by a modest payment for the copper loop.

## Earnings revisions

We have made small revisions to our earnings estimates, mainly relating to small changes to our NBN rollout assumptions and changes to our depreciation and amortisation assumptions. As a result we downgrade our EPS estimates by -2% in FY13, our FY14 estimate is virtually unchanged while we upgrade our FY15 EPS estimate by +5.5%.

Table 18: TLS earnings revisions

Revenue	FY13 Previous	FY13 Current	% chg	% pcp	FY14 Previous	FY14 Current	% chg	% pcp	FY15 Previous	FY15 Current	% chg	% pcp
Total Sales	25,120	25,077	-0.2%	-0.7%	25,303	25,154	-0.6%	0.3%	25,734	25,463	-1.1%	1.2%
Total Income	25,950	25,798	-0.6%	1.0%	26,694	26,522	-0.6%	2.8%	27,614	27,475	-0.5%	3.6%
Reported EBITDA	10,431	10,360	-0.7%	1.2%	10,903	10,772	-1.2%	4.0%	10,783	10,802	0.2%	0.3%
Underlying EBITDA	10,561	10,490	-0.7%	1.2%	10,903	10,772	-1.2%	2.7%	10,783	10,802	0.2%	0.3%
Depreciation & Amortisation	-4,436	-4,478	1.0%	1.5%	-4,578	-4,434	-3.1%	-1.0%	-4,608	-4,330	-6.0%	-2.3%
EBIT	5,995	5,882	-1.9%	1.0%	6,326	6,338	0.2%	7.8%	6,175	6,472	4.8%	2.1%
Net Interest Expense	-906	-907	0.0%	2.1%	-935	-938	0.3%	3.4%	-931	-939	0.9%	0.1%
Tax	-1,527	-1,493	-2.2%	-1.2%	-1,617	-1,620	0.2%	8.5%	-1,573	-1,660	5.5%	2.5%
Minorities	-17	-17	0.0%	-10.0%	-15	-15	0.0%	-10.0%	-14	-14	0.0%	-10.0%
Reported NPAT	3,545	3,465	-2.2%	1.8%	3,758	3,765	0.2%	8.6%	3,657	3,860	5.5%	2.5%
Normalised NPAT	3,675	3,595	-2.2%	1.4%	3,758	3,765	0.2%	4.7%	3,657	3,860	5.5%	2.5%
Reported EPS	28.5	27.9	-2.2%	1.5%	30.2	30.3	0.2%	8.6%	29.4	31.0	5.5%	2.5%
Normalised EPS	29.5	28.9	-2.2%	1.1%	30.2	30.3	0.2%	4.7%	29.4	31.0	5.5%	2.5%
DPS	28.0	28.0	0.0%	0.0%	28.0	28.0	0.0%	0.0%	28.0	28.0	0.0%	0.0%
Capex	-4,568	-4,562	-0.1%	15.5%	-4,795	-4,773	-0.5%	4.6%	-3,603	-3,776	4.8%	-20.9%
Capex ex spectrum	-3,768	-3,762	-0.2%	-4.7%	-3,795	-3,773	-0.6%	0.3%	-3,603	-3,776	4.8%	0.1%

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

## Valuation and share price target

Our new Jun-13 share price target is \$3.97 (previously \$3.86). Our share price target is based on a DCF methodology for Telstra's underlying business plus the NPV of the NBN compensation payments. Our DCF valuation of the underlying business assumes a 7.8% WACC, 0.7x beta and a 5.0% market risk premium. Our NPV of the NBN compensation payments assumes a 5.0% discount rate. Relative to our previous valuation, this WACC approach has roughly offset a harsher set of NBN assumptions.

Table 19: TLS Valuation Summary

A\$m	
Enterprise value - Underlying business	43,753
NPV Cash Flows - NBN Payments	19,438
<b>TLS Enterprise value</b>	<b>63,191</b>
Net Debt	13,602
Minorities	226
Equity value	49,363
Number of shares	12,443
<b>Value per share (\$)</b>	<b>3.97</b>
<u>Assumptions</u>	
WACC - Underlying business (%)	7.8%
Discount rate applied to NBN Payments (%)	5.0%

Source: J.P. Morgan estimates.

While this price target is slightly below the current share price, we retain a Neutral recommendation on the grounds that the uncertainty surrounding the appropriate discount rate for the stock justifies some leeway on valuation.

Upside and downside risks to our price target include:

- 1- A dramatic acceleration in retail fixed line loss;
- 2- NBN driven margin compression;
- 3- A change in Government policy;
- 4- Larger/sooner-than-expected capital management programme.

**JPM Q-Profile**

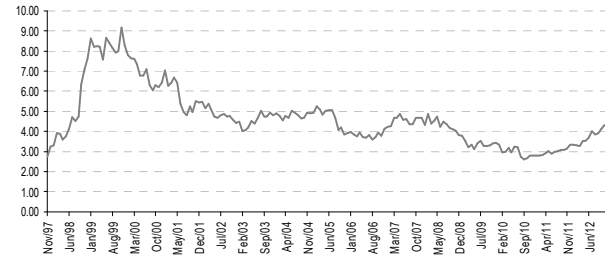
Telstra Corp. Ltd. (AUSTRALIA / Telecommunication Services)

As Of: 07-Dec-2012

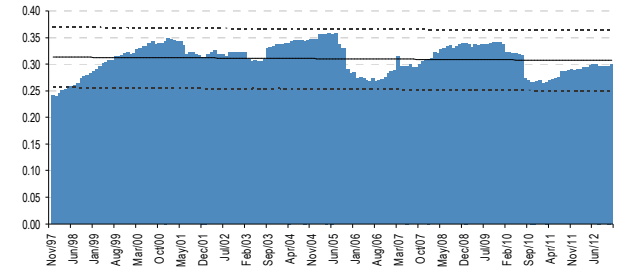
**Global Equity Quantitative Analysis**

Quant\_Strategy@jpmorgan.com

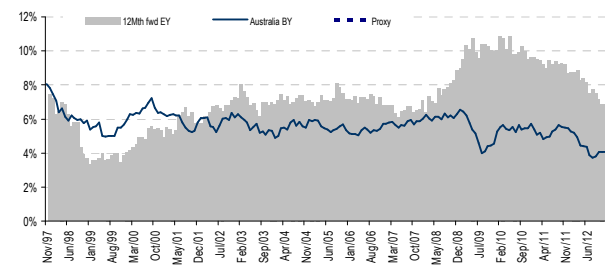
**Local Share Price** Current: **4.36**



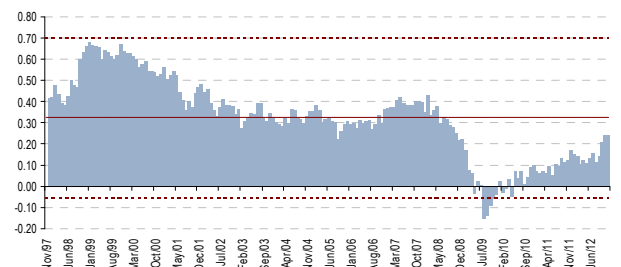
**12 Mth Forward EPS** Current: **0.30**



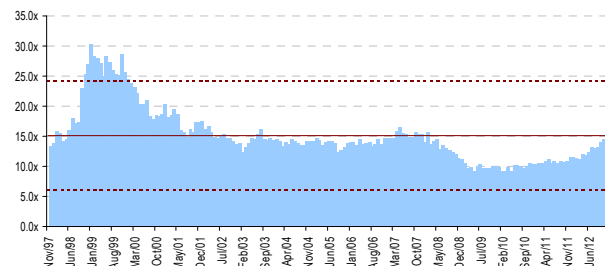
**Earnings Yield (& local bond Yield)** Current: **7%**



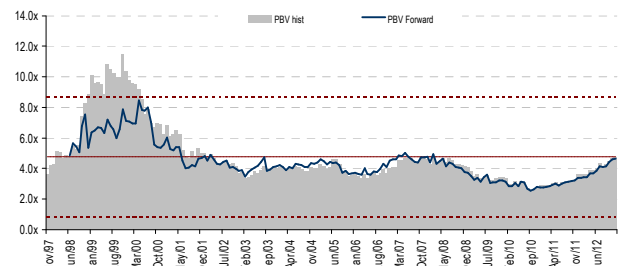
**Implied Value Of Growth\*** Current: **24.43%**



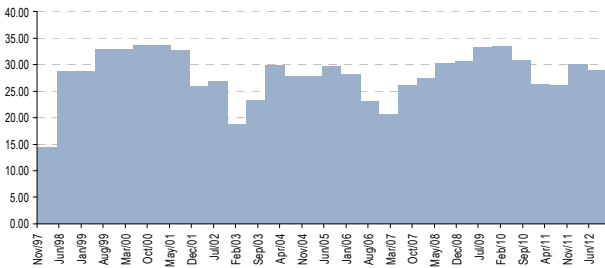
**PE (1Yr Forward)** Current: **14.6x**



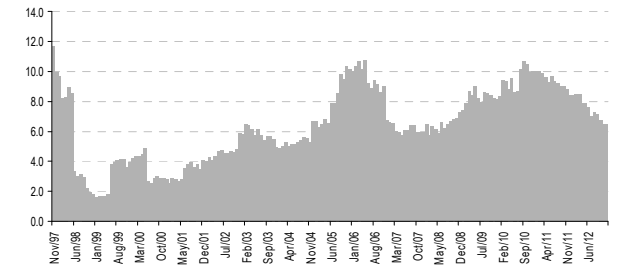
**Price/Book Value** Current: **4.7x**



**ROE (Trailing)** Current: **28.91**



**Dividend Yield (Trailing)** Current: **6.50**



**Summary**

Telstra Corp. Ltd.		SEDOL		6087289		As Of:		7-Dec-12			
AUSTRALIA						Local Price:		4.36			
Telecommunication Services						EPS:		0.30			
	Latest	Min	Max	Median	Average	2 S.D.+	2 S.D. -	% to Min	% to Max	% to Med	% to Avg
12mth Forward PE	14.61x	9.21	30.25	14.25	15.12	24.18	6.05	-37%	107%	-2%	3%
P/BV (Trailing)	4.73x	2.57	11.49	4.17	4.79	8.70	0.88	-46%	143%	-12%	1%
Dividend Yield (Trailing)	6.50	1.62	11.71	6.40	6.42	11.35	1.49	-75%	80%	-2%	-1%
ROE (Trailing)	28.91	14.35	33.66	28.72	28.01	37.24	18.78	-50%	16%	-1%	-3%
Implied Value of Growth	24.4%	-0.15	0.68	0.33	0.32	0.70	-0.05	-162%	179%	37%	32%

Source: Bloomberg, Reuters Global Fundamentals, IBES CONSENSUS, J.P. Morgan Calcs

\* Implied Value Of Growth = (1 - EY/Cost of equity) where cost of equity = Bond Yield + 5.0% (ERP)



## Telstra Corporation: Financial Summary

Relative recommendation:

Neutral

A\$ in millions, year end Jun

Profit And Loss	FY11	FY12	FY13E	FY14E	FY15E	Valuation Summary	A\$m	cps			
Revenue	25,304	25,533	25,798	26,522	27,475	Current mkt capitalisation	53.01	4.26			
Revenue growth	1.1%	0.9%	1.0%	2.8%	3.6%						
Operating Expenses	-	-	-	-	-	Price Target		3.97			
<b>EBITDA</b>	<b>10,151.0</b>	<b>10,234.0</b>	<b>10,360.0</b>	<b>10,772.0</b>	<b>10,802.1</b>	Capital growth to price target		(6.8%)			
EBITDA growth	-6.4%	0.8%	1.2%	4.0%	0.3%						
EBITDA margin	40.1%	40.1%	40.2%	40.6%	39.3%	<b>Trading Multiples</b>	<b>FY11</b>	<b>FY12</b>	<b>FY13E</b>	<b>FY14E</b>	<b>FY15E</b>
Amortisation	-1,005.0	-1,107.0	-1,195.7	-1,299.3	-1,326.0	PE Pre-abnormals	16.2	14.9	14.7	14.1	13.7
Depreciation	-3,454.0	-3,305.0	-3,282.5	-3,134.9	-3,003.9	PE Reported	16.3	15.5	15.3	14.1	13.7
<b>EBIT</b>	<b>5,692.0</b>	<b>5,822.0</b>	<b>5,881.8</b>	<b>6,337.8</b>	<b>6,472.1</b>	EV/EBITDA	6.6	6.5	6.3	6.1	6.0
EBIT growth	-12.4%	2.3%	1.0%	7.8%	2.1%	EV/EBIT	11.7	11.4	11.2	10.4	10.0
EBIT margin	22.5%	22.8%	22.8%	23.9%	23.6%	<b>Key Ratios</b>	<b>FY11</b>	<b>FY12</b>	<b>FY13E</b>	<b>FY14E</b>	<b>FY15E</b>
Net Interest	-1,135.0	-888.0	-906.8	-937.6	-938.6	Dividend Yield	6.6%	6.6%	6.6%	6.6%	6.6%
<b>Pre-Tax Profit</b>	<b>4,557.0</b>	<b>4,934.0</b>	<b>4,975.0</b>	<b>5,400.2</b>	<b>5,533.5</b>	Franking	100.0%	100.0%	100.0%	100.0%	100.0%
Tax	-1,307.0	-1,510.0	-1,492.5	-1,620.1	-1,660.1	Return on Assets (%)	-	-	-	-	-
Tax Rate	28.7%	30.6%	30.0%	30.0%	30.0%	Return on Equity (%)	-	-	-	-	-
Minorities	-19.0	-19.0	-17.1	-15.4	-13.9	ROIC (%)	45.0%	48.6%	50.3%	53.5%	53.1%
Abnormals (post tax)	-22.0	-142.0	-130.0	-	-						
<b>Reported NPAT</b>	<b>3,231.0</b>	<b>3,405.0</b>	<b>3,465.4</b>	<b>3,764.8</b>	<b>3,859.6</b>	<b>Leverage</b>	<b>FY11</b>	<b>FY12</b>	<b>FY13E</b>	<b>FY14E</b>	<b>FY15E</b>
<b>Normalised NPAT</b>	<b>3,253.0</b>	<b>3,547.0</b>	<b>3,595.4</b>	<b>3,764.8</b>	<b>3,859.6</b>	Gearing (Net Debt / Equity)	110.6%	113.6%	109.3%	106.9%	96.0%
Growth	(20.1%)	9.0%	1.4%	4.7%	2.5%	Gearing (ND / (ND + E))	52.5%	53.2%	52.2%	51.7%	49.0%
End of Period Shares	12,443.1	12,443.1	12,443.1	12,443.1	12,443.1	Net Debt / EBITDA	1.34	1.30	1.23	1.19	1.10
EFPOWA	12,397	12,406	12,443	12,443	12,443	EBIT Interest Cover (x)	5.01	6.56	6.49	6.76	6.90
Reported EPS (\$)	0.261	0.274	0.279	0.303	0.310	<b>Balance Sheet</b>	<b>FY11</b>	<b>FY12</b>	<b>FY13E</b>	<b>FY14E</b>	<b>FY15E</b>
<b>Normalised EPS (\$)</b>	<b>0.262</b>	<b>0.286</b>	<b>0.289</b>	<b>0.303</b>	<b>0.310</b>	Cash	2,630.0	3,945.0	5,251.4	6,206.9	7,143.9
Growth	-19.8%	9.0%	1.1%	4.7%	2.5%	Receivables	4,137.0	4,346.0	4,397.1	4,410.6	4,464.7
DPS (\$)	0.28	0.28	0.28	0.28	0.28	Investments	-	-	-	-	-
Growth	0.0%	0.0%	0.0%	0.0%	0.0%	Inventories	283.0	260.0	258.8	259.6	262.8
DPS/EPS payout	85.4%	84.4%	82.2%	79.0%	75.7%	Other Current Assets	403.0	1,399.0	1,399.0	1,399.0	1,399.0
<b>Cash Flow Statement</b>	<b>FY11</b>	<b>FY12</b>	<b>FY13E</b>	<b>FY14E</b>	<b>FY15E</b>	<b>Total Current Assets</b>	<b>7,453.0</b>	<b>9,950.0</b>	<b>11,306.4</b>	<b>12,276.1</b>	<b>13,270.3</b>
EBITDA	10,151.0	10,234.0	10,360.0	10,772.0	10,802.1	Net PPE	21,790.0	20,504.0	19,330.0	18,886.6	18,530.8
Net Interest (Paid)/Recd	-1,013.0	-1,037.0	-906.8	-937.6	-938.6	Total Intangibles	7,627	7,421	8,028	8,811	8,612
Tax Paid	-1,511.0	-1,597.0	-1,492.5	-1,620.1	-1,660.1	Other Non Current Assets	647.0	1,533.0	1,533.0	1,533.0	1,533.0
(Inc)/Dec in Working Capital	-821.0	537.0	-58.6	-1.6	-6.6	Total Non Current Assets	30,460.0	29,575.0	29,008.4	29,347.3	28,793.3
Other Operating Items	310.0	210.0	0.0	0.0	-0.0	<b>Total Assets</b>	<b>37,913.0</b>	<b>39,525.0</b>	<b>40,314.8</b>	<b>41,623.5</b>	<b>42,063.6</b>
<b>Operating Cash Flow</b>	<b>7,116.0</b>	<b>8,347.0</b>	<b>7,902.1</b>	<b>8,212.7</b>	<b>8,196.9</b>	Creditors	4,093.0	4,131.0	4,122.3	4,134.9	4,185.6
Net Capex	-3,251.0	-3,948.0	-4,561.6	-4,773.1	-3,775.9	Current Borrowings	1,990.0	3,306.0	3,306.0	3,306.0	3,306.0
Net Acquisitions	305.0	-19.0	650.0	0.0	0.0	<b>Total Current Liabilities</b>	<b>8,990.0</b>	<b>10,684.0</b>	<b>10,675.3</b>	<b>10,687.9</b>	<b>10,738.6</b>
Other Investing cashflows	172.0	-337.0	0.0	0.0	0.0	Non Current Borrowings	12,178.0	11,958.0	12,758.0	13,758.0	13,758.0
<b>Investing Cash Flow</b>	<b>-2,774.0</b>	<b>-4,304.0</b>	<b>-3,911.6</b>	<b>-4,773.1</b>	<b>-3,775.9</b>	Non Current Provisions	696.0	264.0	264.0	264.0	264.0
Incl/(Dec) in Borrowings	-196.0	825.0	800.0	1,000.0	0.0	Other Non Current Liabilities	1,822.0	2,992.0	2,992.0	2,992.0	2,992.0
Equity Issued	0.0	0.0	0.0	0.0	0.0	Total Non Current Liabilities	16,631.0	17,152.0	17,952.0	18,952.0	18,952.0
Dividends Paid	-3,489.0	-3,491.0	-3,484.1	-3,484.1	-3,484.1	<b>Total Liabilities</b>	<b>25,621.0</b>	<b>27,836.0</b>	<b>28,627.3</b>	<b>29,639.9</b>	<b>29,690.6</b>
Other Financing Cashflows	-53.0	-86.0	0.0	0.0	0.0	Equity	12,074.0	11,480.0	11,461.4	11,742.1	12,117.6
<b>Financing Cash Flow</b>	<b>-3,738.0</b>	<b>-2,752.0</b>	<b>-2,684.1</b>	<b>-2,484.1</b>	<b>-3,484.1</b>	Reserves	-843.0	-867.0	-867.0	-867.0	-867.0
Net Cash Flow	604.0	1,291.0	1,306.4	955.5	936.9	Retained Profits	7,307.0	6,712.0	6,693.4	6,974.1	7,349.6
						Outside Equity Interests	218.0	209.0	226.1	241.5	255.3
						<b>Total Shareholders Equity</b>	<b>12,292.0</b>	<b>11,689.0</b>	<b>11,687.5</b>	<b>11,983.6</b>	<b>12,373.0</b>
						Net Debt	13,595	13,277	12,771	12,815	11,878

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

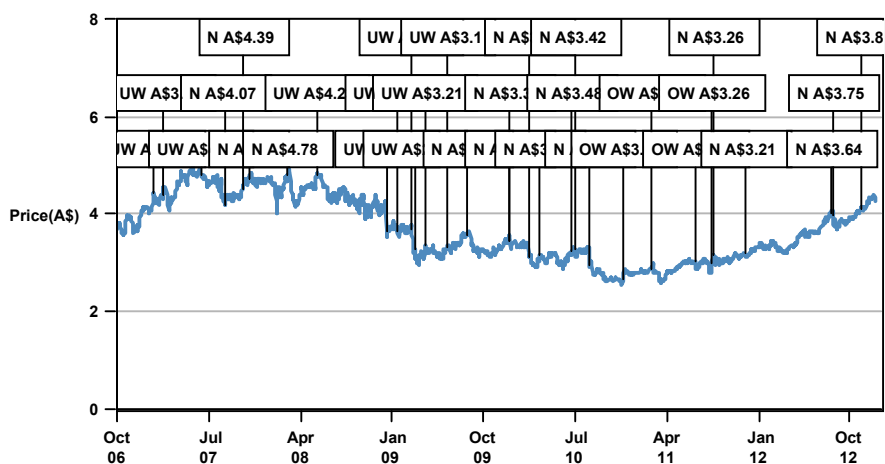
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Telstra Corporation (TLS.AX, TLS AU) Price Chart



Source: Bloomberg and J.P. Morgan; price data adjusted for stock splits and dividends. Initiated coverage Jan 18, 2007.

Date	Rating	Share Price (A\$)	Price Target (A\$)
18-Jan-07	UW	4.42	3.92
15-Feb-07	UW	4.37	3.97
07-Jun-07	UW	4.81	4.07
19-Aug-07	N	4.19	4.07
10-Oct-07	N	4.52	4.39
01-Nov-07	N	4.71	4.70
21-Feb-08	N	4.79	4.78
21-May-08	UW	4.79	4.23
15-Dec-08	UW	3.65	3.55
13-Jan-09	UW	3.65	3.18
26-Feb-09	UW	3.68	2.99
10-Mar-09	UW	3.28	2.92
07-Apr-09	UW	3.35	3.21
15-Jun-09	UW	3.33	3.10
14-Aug-09	N	3.56	3.39
15-Dec-09	N	3.46	3.41
18-Dec-09	N	3.43	3.31
12-Feb-10	N	3.12	3.29
18-Mar-10	N	3.17	3.33
21-Jun-10	N	3.26	3.48
28-Jun-10	N	3.30	3.42
13-Aug-10	N	2.94	3.06
23-Nov-10	OW	2.65	3.08
11-Feb-11	OW	2.88	3.13

24-Jun-11	OW	3.03	3.15
12-Aug-11	OW	2.99	3.26
18-Aug-11	N	3.16	3.26
18-Nov-11	N	3.19	3.21
03-Aug-12	N	4.02	3.64
09-Aug-12	N	3.97	3.75
31-Oct-12	N	4.11	3.86

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IB clients*	69%	61%	53%

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