Liberty Global (LBTYA.OQ)

Rating	**OUTPERFORM***
Price (11 Mar 16, US$)	36.07
Target price (US$)	50.00[1]
Market cap. (US$ m)	29,953.29
Enterprise value (US$ m)	75,441.4

**Stock ratings are relative to the coverage universe in each analyst's or each team's respective sector.*
[1]Target price is for 12 months.

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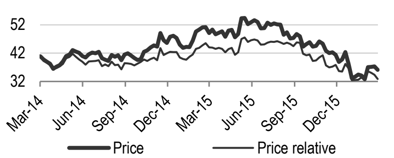
COMPANY UPDATE

More CAPEX, more growth

- **Event:** We increase LBTY CAPEX forecasts to reflect the increased new build plan at LBTY. This lowers near-term FCF forecasts but raises medium-term growth forecasts. We maintain our Outperform rating, expecting the new build plan to create value over the medium term.
- **Investment Case:** LBTY continues to evolve, focusing on new opportunities that can create value for the group. After years of upselling RGUs to the TV base, LBTY is returning to expanding the network to increase marketable homes. With the plan to pass 4m homes in the UK showing some early success, LBTY is extending new build to Germany and CEE, planning to pass in total 7m homes in the next 3 years. The extra c. eu1.5bn of CAPEX per annum lowers near-term FCF forecasts but adds 1pp to 4-year EBITDA CAGR, assuming 30% demand penetration in this new build area, a reasonable starting assumption (we believe) given LBTY's speed advantage when high speed broadband penetration of telco lines is below 30%.
- Pricing power remains a pivotal issue for LBTY. Customer churn in Q1 15 spiked on a series of price increases, leading to a slowdown in LBTY organic EBITDA growth to just 1.2% y/y. LBTY has been more targeted in its price increases this year. Churn fell in Q4 in the UK despite communication of the Q1 16 price increase in November, and Ziggo has recently cut back promotions—early signs that churn may be closer to budget this time around.
- **Valuation:** LBTY trades on 9.0x 2016E adjusted EV/EBITDA, falling to 8.3x for FY17E on our forecasts. Adjusted equity FCF yield if 6.8%, rising to 7.0% in FY17E and 9.5% by FY19E after the 7m new build plan is complete.

Share price performance



The price relative chart measures performance against the S&P 500 INDEX which closed at 2022.19 on 11/03/16
On 11/03/16 the spot exchange rate was US$1.12/Eu 1. - Eu .9/US$1

Performance over	1M	3M	12M
Absolute (%)	14.8	-12.9	-26.6
Relative (%)	4.2	-13.3	-25.1

Financial and valuation metrics

Year	12/15A	12/16E	12/17E	12/18E
Revenue (US$ m)	18,280.0	18,849.9	19,599.0	20,241.3
EBITDA (US$ m)	8,667.30	8,822.62	9,249.11	9,704.35
Adjusted Net Income (US$ m)	-1,152.50	40.15	186.06	366.69
CS adj. EPS (US$)	-1.36	0.05	0.25	0.53
Prev. EPS (US$)	—	-0.09	0.08	—
ROIC (%)	6.56	2.77	3.74	4.16
P/E (adj., x)	-26.52	711.22	142.72	67.63
P/E rel. (%)	-160.6	NM	NM	533.4
EV/EBITDA	8.6	8.6	8.2	7.7

Dividend (12/16E, US$)	—	IC (12/16E, US$ m)	55,702.57
Dividend yield (%)	—	EV/IC	1.4
Net debt (12/16E, US$ m)	45,488.1	Current WACC	8.00
Net debt/equity (12/16E, %)	445.3	Free float (%)	92.63
BV/share (12/16E, US$)	13.5	Number of shares (m)	844.31

Source: FTI, Company data, Thomson Reuters, Credit Suisse Securities (EUROPE) LTD. Estimates.

Liberty Global LBTYA.OQ

Price (11 Mar 16): **US$36.07**, Rating**: OUTPERFORM**, Target Price: **US$50.00**

Income statement (US$ m)	12/15A	12/16E	12/17E	12/18E
Revenue (US$ m)	18,280	18,850	19,599	20,241
EBITDA	**8,667**	**8,823**	**9,249**	**9,704**
Depr. & amort.	(5,826)	(5,933)	(6,098)	(6,263)
EBIT (US$)	**2,349**	**2,572**	**2,833**	**3,124**
Net interest exp.	(2,441)	(2,369)	(2,387)	(2,377)
Associates	—	—	—	—
Other adj,	(592)	36	36	36
PBT (US$)	**(685)**	**239**	**482**	**783**
Income taxes	(365)	(95)	(193)	(313)
Profit after tax	**(1,050)**	**143**	**289**	**470**
Minorities	(103)	(103)	(103)	(103)
Preferred dividends	—	—	—	—
Associates & other	—	—	—	—
Net profit	**(1,153)**	**40**	**186**	**367**
Other NPAT adjustments	—	—	—	—
Reported net income	**(1,153)**	**40**	**186**	**367**

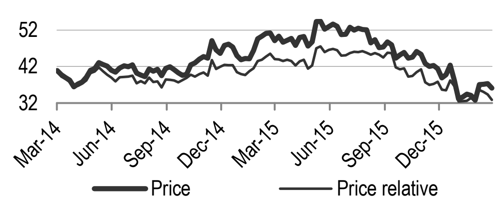
Cash flow (US$)	12/15A	12/16E	12/17E	12/18E
EBIT	2,349	2,572	2,833	3,124
Net interest	(2,441)	(2,369)	(2,387)	(2,377)
Cash taxes paid	—	—	—	—
Change in working capital	—	—	—	—
Other cash & non-cash items	8,267	8,302	8,485	8,639
Cash flow from operations	8,175	8,504	8,931	9,386
CAPEX	(2,500)	(2,872)	(3,000)	(3,114)
Free cashflow adj.	—	—	—	—
Free cash flow to the firm	**5,675**	**5,633**	**5,931**	**6,272**
Acquisitions	—	—	—	—
Divestments	—	—	—	—
Other investment/(outflows)	—	—	—	—
Cash flow from investments	**(2,500)**	**(2,872)**	**(3,000)**	**(3,114)**
Net share issue/(repurchase)	—	—	—	—
Dividends paid	—	—	—	—
Issuance (retirement) of debt	—	—	—	—
Other	(6,975)	(6,369)	(5,899)	(5,899)
Cash flow from financing	**(6,975)**	**(6,369)**	**(5,899)**	**(5,899)**
Effect of exchange rates	—	—	—	—
Changes in Net Cash/Debt	**(1,300)**	**(736)**	**32**	**373**
.				
Net debt at start	43,453	44,752	45,488	45,456
Change in net debt	**1,300**	**736**	**(32)**	**(373)**
Net debt at end	44,752	45,488	45,456	45,083

Balance sheet (US$ m)	12/15A	12/16E	12/17E	12/18E
Assets				
Cash and cash equivalents	982	982	—	—
Accounts receivable	1,468	1,468	—	—
Inventory	—	—	—	—
Other current assets	908	908	—	—
Total current assets	**3,357**	**3,357**	**—**	**—**
Total fixed assets	21,684	20,203	—	—
Intangible assets and goodwill	34,113	32,532	—	—
Investment securities	—	—	—	—
Other assets	8,713	13,873	—	—
Total assets	**67,867**	**69,966**	**—**	**—**
Liabilities				
Accounts payable	1,050	1,050	—	—
Short-term debt	—	—	—	—
Other short term liabilities	8,108	8,108	—	—
Total current liabilities	**9,158**	**9,158**	**—**	**—**
Long-term debt	44,519	46,578	—	—
Other liabilities	4,016	4,016	—	—
Total liabilities	**57,693**	**59,751**	**—**	**—**
Shareholders' equity	10,652	10,693	—	—
Minority interest	(478)	(478)	—	—
Total equity & liabilities	**67,867**	**69,966**	**—**	**—**
Net debt (US$ m)	44,752	45,488	45,456	45,083

Per share data	12/15A	12/16E	12/17E	12/18E
No. of shares (wtd avg)	847	792	736	688
CS adj. EPS (US$)	**(1.36)**	**0.05**	**0.25**	**0.53**
Prev. EPS (US$)	—	(0.09)	0.08	—
Dividend (US$)	—	—	—	—
Div yield	—	—	—	—
Dividend payout ratio	—	—	—	—
Free cash flow per share	6.70	7.11	8.06	9.12

Key ratios and valuation	12/15A	12/16E	12/17E	12/18E
Growth (%)				
Sales	0.2	3.1	4.0	3.3
EBIT	5.4	9.5	10.2	10.3
Net profit	12.1	(103.5)	363.4	97.1
EPS	(17.9)	103.7	398.3	111.0
Margins (%)				
EBITDA margin	47.4	46.8	47.2	47.9
EBIT margin	12.9	13.6	14.5	15.4
Pretax margin	(3.7)	1.3	2.5	3.9
Net margin	(6.3)	0.2	0.9	1.8
Valuation metrics (x)				
EV/sales	4.1	4.0	3.8	3.7
EV/EBITDA	8.6	8.6	8.2	7.7
EV/EBIT	31.8	29.3	26.6	24.0
P/E	(26.5)	711.2	142.7	67.6
P/B	2.9	2.7	—	—
Asset turnover	0.27	0.27	—	—
ROE analysis (%)				
ROE stated-return on	(9.1)	0.4	3.5	—
ROIC	6.6	2.8	3.7	4.2
Interest burden	(0.29)	0.09	0.17	0.25
Tax rate	(53.3)	40.0	40.0	40.0
Financial leverage	4.4	4.6	—	—
Credit ratios (%)				
Net debt/equity	439.9	445.3	—	—
Net debt/EBITDA	5.2	5.2	4.9	4.6
Interest coverage ratio	1.0	1.1	1.2	1.3

Source: FTI, Company data, Thomson Reuters, Credit Suisse Securities (EUROPE) LTD. Estimates.



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More CAPEX, more growth

We update our forecasts for LBTY Group (which include LBTY Global Group and LiLAC assets) to reflect Q4 results, raised CAPEX guidance and recent industry trends. Our forecasts also reflect updated FX, including a slightly weaker euro but also a material rally in the Chilean peso. Our forecasts also include for the first time the impact of acquiring BASE, increasing EBITDA forecasts for Belgium.

Figure 1: **Change in CS forecasts for LBTY (new FX*)**

	2016E	2016E		2017E	2017E		2018E	2018E	
	Old	New	Change	Old	New	Change	Old	New	Change
Revenues	18,146	18,850	3.9%	18,655	19,599	5.1%	19,223	20,241	5.3%
UK/Ireland	6,921	6,934	0.2%	7,184	7,291	1.5%	7,494	7,662	2.2%
Germany	2,491	2,493	0.1%	2,626	2,637	0.4%	2,770	2,786	0.6%
Belgium	2,073	2,737	32.0%	2,156	2,938	36.3%	2,221	2,981	34.2%
The Neths	2,623	2,631	0.3%	2,599	2,604	0.2%	2,575	2,585	0.4%
Switz/Austria	1,791	1,732	-3.3%	1,836	1,767	-3.7%	1,881	1,802	-4.2%
CEE	1,086	1,088	0.1%	1,070	1,109	3.7%	1,081	1,154	6.8%
Chile	781	850	8.7%	805	875	8.7%	821	893	8.7%
EBITDA	8,703	8,823	1.4%	8,989	9,249	2.9%	9,310	9,704	4.2%
UK/Ireland	3,152	3,161	0.3%	3,272	3,375	3.1%	3,438	3,603	4.8%
Germany	1,571	1,587	1.0%	1,667	1,703	2.1%	1,774	1,825	2.9%
Belgium	1,042	1,096	5.2%	1,092	1,159	6.1%	1,125	1,228	9.2%
The Neths	1,446	1,487	2.8%	1,433	1,478	3.1%	1,420	1,474	3.8%
Switz/Austria	1,039	1,025	-1.3%	1,065	1,046	-1.8%	1,091	1,066	-2.3%
CEE	478	483	1.1%	471	493	4.7%	476	513	7.8%
Chile	310	337	8.7%	323	352	8.7%	334	363	8.7%
EBIT	2,427	2,572	6.0%	2,550	2,833	11.1%	2,709	3,124	15.3%
Adjusted Earnings	(71)	40	-156.8%	60	186	211.8%	217	367	68.9%
Adj EPS	(0.088)	0.049	-155.4%	0.080	0.244	202.7%	0.314	0.515	64.2%
CAPEX	(2,530)	(2,872)	13.5%	(2,597)	(3,000)	15.5%	(2,677)	(3,114)	16.3%
Adj FCF	2,206	2,011	-8.8%	2,171	2,032	-6.4%	2,365	2,123	-10.2%
Net debt	43,038	45,488	5.7%	42,667	45,456	6.5%	41,852	45,083	7.7%

*Source: Source: Credit Suisse estimates   * new FX usd1 = eu0.91, CLP683 , £0.70, old FX usd1 = eu0.92, CLP730, £0.69*

Our underlying forecasts change as follows:

- We increase Group CAPEX to reflect the new plan to increase marketable homes through new build. LBTY has guided that it will increase marketable homes by +1.5m in FY16 (including 0.5m in the UK), costing an extra usd700m of CAPEX vs FY15 and increasing CAPEX/sales to 25-27% in FY16 (vs 22.6% in FY15). LBTY now plans to expand marketable homes by 7m over the whole of 2016-2018E, with CAPEX/sales within the range 25-28% over FY16-18. Of the 7m build, around 3m are in the UK (the existing Project Lightning plan)—and already in our forecasts—whilst the extra 4m is primarily in CEE (Poland and Romania) and Germany, with smaller new build also planned in Switzerland, Ireland and Hungary. We also raise CAPEX forecasts for Ziggo to reflect guidance of 20-22% CAPEX/sales, with Ziggo focused on increasing broadband speeds (recently launching 500Mbps DL for business customers).
- Our forecast for organic EBITDA growth rises by +1pp per annum (e.g., our FY18E EBITDA forecasts rise 3.3% before FX changes), to reflect the new build plan. We forecast c. 30% (20-40%) 3P uptake in these new build areas over time despite customer inertia, driven by LBTYs advantage on speed, ability to price

locally and low level of NGA penetration of telco lines curently (when including both wholesale and incumbent retail lines). This growth in customers offsets slowing growth in RGU/sub and allows LBTY to sustain organic EBITDA growth of c. 5% on our forecasts.

- We continue to give little overall benefit for Liberty3.0 (cost cutting plan), assuming the savings to indirect costs are offset from the rising opex costs relating to investments in e.g. content and new build. This may be conservative, depending on how much LBTY has to invest to sustain pricing power and growth. LBTY takes a more positive view—including the benefits of LBTY3.0, LBTY is guiding 7-9% EBITDA CAGR growth over 2016-2018E (both for LBTY Global Group and for LiLAC) vs our 5% forecast.
- The net effect of the higher CAPEX and higher growth forecast lowers our near tern (2016-2018E) FCF forecasts by up to 10%. For FY16E, we expect half of the usd700m increase in CAPEX to be funded with <1 year vendor financing, delaying the full impact of the increased CAPEX on reported FCF by one year. CAPEX is likely to rise again in FY17 as new build accelerates, with again a lagged impact on FCF due to <1yr vendor funding. So the new build plan drags on FCF growth over 2016-18, with FCF growth then surging in FY19 as new build slows (on current plan).

As a result, we forecast usd2.0bn of FCF in FY16E, close to LBTY guidance (usd2.0bn FCF for Liberty Europe, 'minimal' FCF for LiLAC ex C&W). This also reflects a slightly lower cost of borrowing in FY16E vs FY15 (offsetting higher debt), only a slight increase in cash tax and no outflow from working capital. Our EBITDA forecasts include Liberty an EBITDA CAGR for FY16-18E of c. 5%, below the company's 7-9% guidance on this basis.

Figure 2: **CS forecasts for LBTY FCF**

Cash flow (us$ 'm)	2012A	2013A	2014A	2015A	Q1 16E	2016E	2017E	2018E	2019E
EBITDA	4,870	6,763	8,522	8,667	2,170	8,823	9,249	9,704	10,245
Cash paid for interest	-1,592	-2,149	-2,377	-2,170	-536	-2,143	-2,160	-2,150	-2,112
Cash Taxes	(11.8)	(109.2)	(99.5)	(236.3)	(62.5)	(250.0)	(260.0)	(270.0)	(280.0)
Other			(433.3)	-555	0	0.0	0.0	0.0	0.0
Net cash provided by operating activities		3,921	5,613	5,706	1,572	6,429	6,829	7,284	7,853
CapEx (before capital leases etc)	-1,874	-2,482	-2,684	-2,500	-718	-2,872	-3,000	-3,114	-3,078
Excess tax benefits from share based comp		41	7	9	0	0	0	0	0
Cash payments for direct acquisition costs		61	80	264	25	100	100	100	100
Principal payments on vendor finance		-320	-678	-1,125	-375	-1,500	-1,750	-2,000	-2,000
Principal payments on capital leases		-96	-183	-147	-37	-147	-147	-147	-147
Other		0	0	312	0	0	0	0	0
FCF	1,391.8	1,125.3	2,154.2	2,519.2	467.6	2,011.1	2,032.0	2,123.4	2,728.0
Adjustments	-432.6	210.5	52.7	0.0	-28.0	0.0	0.0	0.0	0.0
Adj FCF (co definition)	468	1,335.8	2,206.9	2,519.2	439.6	2,011.1	2,032.0	2,123.4	2,728.0
Buybacks	-970	-1,157	-1,585	-2,321	-500	-2,000	-2,000	-1,750	-1,500
Other net	-2,316	(12401)	(3875)	(1056)	(1325)	(747)	0	0	0
Available for debt reduction	-1,894	-12,222	-3,299	-857	-1,357	-736	32	373	1,228
Net debt b/f (usd 'bn)	23,100	25,485	40,154	43,453	44,752	44,752	45,488	45,456	45,083
Net debt c/f (usd 'bn)	25,485	40,154	43,453	44,752	46,110	45,488	45,456	45,083	43,855
net debt / LTM EBITDA	5.23	5.94	5.10	5.16	5.28	5.16	4.91	4.65	4.28

Source: Company data, Credit Suisse estimates

We are slightly above consensus on LBTY revenue forecasts, whilst broadly in line on EBITDA. The comparison with consensus is however complicated by the varying approaches analysts will be taking on M&A, including BASE (which we include), C&W (which we do not) and Vodafone-Ziggo (which we have also not updated for).

Figure 3: CS vs consensus forecasts

	2016E			2017E			2018E		
	CS	Cons	Diff%	CS	Cons	Diff%	CS	Cons	Diff%
Revenues	18,850	18,688	0.9%	19,599	18,824	4.1%	20,241	19,615	3.2%
EBITDA	8,823	8,825	0.0%	9,249	8,775	5.4%	9,704	9,499	2.2%
EBIT	2,572	3,067	-16.2%	2,833	3,264	-13.2%	3,124	4,050	-22.9%
Earnings	40	654	-93.9%	186	1,135	-83.6%	367	1,697	-78.4%
EPS	0.049	0.58	-91.5%	0.244	1.05	-76.7%	0.515	1.75	-70.5%
CAPEX	4,872	3,186	52.9%	4,872	3,417	42.6%	4,872	3,520	38.4%
Cash CAPEX*	2,872			3,000			3,114		
Net debt	45,488	43,835	3.8%	45,456	41,526	9.5%	45,083	41,737	8.0%

*Source: Reuters consensus, Credit Suisse estimates * CAPEX includes total PP&E adds, cash CAPEX excludes leases. The compiled consensus is likely to be a mix of the two*

Figure 4: LBTY valuation multiples on CS forecasts

LBTY		2014	2015	2016E	2017E	2018E	2019E
Number of shares	share price (usd)						
A Class (voting)	36.20	250.0	235.9	220.2	204.4	190.6	178.7
B Class (10 votes)	31.50	10.5	10.5	10.5	10.5	10.5	10.5
C Class (LBTYK - nonvoting)	35.44	630.0	594.6	554.8	515.0	480.2	450.4
Total shares ('m)		890.5	841.0	785.4	729.9	681.3	639.6
Market cap (usd'm) - LBTY		31,707	29,943	27,962	25,981	24,248	22,763
Market cap (usd) - LiLAC		1,590	1,590	1,590	1,590	1,590	1,590
Total Market cap		33,297	31,533	29,552	27,572	25,838	24,353
Net debt (usd'm)		43,453	44,752	45,554	45,510	45,026	44,016
EV (usd'm)		76,750	76,286	75,107	73,081	70,864	68,369
Co reported FCF		2,154	2,519	1,945	2,045	2,233	2,510
Co reported FCF yield		6.5%	8.0%	6.6%	7.4%	8.6%	10.3%
Adjusted FCF		2,518	2,248	2,014	2,075	2,209	2,394
Adjusted FCF yield		7.6%	7.2%	6.9%	7.6%	8.6%	9.9%
EBITDA		8,522	8,667	8,820	9,154	9,487	9,887
EV/EBITDA		9.0	8.8	8.5	8.0	7.5	6.9
Adj EBITDA		8,050	8,251	8,364	8,668	8,984	9,365
EV/adj EBITDA		9.5	9.2	9.0	8.4	7.9	7.3
EBITDA-CAPEX		4,613	4,530	4,229	4,410	4,613	4,870
EV/(EBITDA-CAPEX)		16.6	16.8	17.8	16.6	15.4	14.0
EPS adj for writedowns		(1.09)	(1.33)	0.05	0.17	0.33	0.60
PE Ratio (A share)		- 33.25	- 27.30	784.21	217.92	109.02	60.19

Source: Company data, Credit Suisse estimates

LBTY trades on 9.0x 2016E proportionate EV/EBITDA on our forecasts, falling to 8.3x for FY17E. LBTY trades on an adjusted equity FCF yield of 6.8%, rising to 7.0% for FY17E.

Expansion of new build to 7m

VirginMedia announced Project Lightning—the plan to expand VirginMedia's network by 4m homes over 5 years for an extra £3bn CAPEX—in February 2015. LBTY is citing encouraging early progress, with 20% penetration within 6-12 months in new build areas (rising over time) and up to 50% penetration in areas where new houses are built.

This early progress has been sufficient for LBTY to announce an expansion of its new-build plan to cover +7m homes in total (+1.5m in 2016). The full details of this 7m plan haven't been published yet, but includes

- 3m of the 4m Project Lightning plan UK plan
- New build in CEE (mostly Poland and Romania, some in Hungary)
- Increase of marketable homes in Germany by upgrading of level-4 (D-line) and in-house wiring within the UnityKBW level3 network area (+200k in FY16 alone). Vodafone KDG has disclosed that one third of its homes passed aren't currently marketable due to the need for an upgrade of level-4 and/or in-home wiring. We believe UnityKBW's ratio of unmarketable homes is closer to c. 20-25% of its 12.76m homes passed, suggesting a potential to upgrade 2.5-3.0m homes over time, subject to cost-demand dynamics.
- Also some new build on a smaller scale in other operations e.g. Chile, Switzerland, and Ireland.

Clearly this is a more capital-intensive plan than growing RGU/sub. LBTY guides 25-28% CAPEX/sales over FY16-18E (meaning a usd700m increase in CAPEX in FY16), from historic guidance that CAPEX/sales would fall to below 20%. FCF growth has as a result stalled for now.

LBTY management had been discussing this new build opportunity during 2015, with the UK expansion decision prompting a review of new build opportunities across the group. Having announced Project Lightning the group examined whether similar opportunities lay elsewhere.

IRRs on the new build are in our view likely to be above cost of capital given that the cost per home passed is quite low (building adjacent areas in the UK, upgrading the last few metres of the existing network in Germany) and much of the build will be demand-driven (e.g., VirginMedia's Cable my street campaign).

In February 2015 (see **LBTYA.OQ: Liberty Global - Updating for Project Lightning**) we considered the potential returns on Project Lightning. We estimated a long term ROCE of 13% (pretax) assuming the following:

- 30% customer uptake of broadband after 3 years (15% after 6 months), with 80% also taking TV and 90% also taking a phone service – see Figure 5. This 30% penetration assumption is below the 40% assumed by VirginMedia at the launch of the plan.
- An ARPU of £45 (see Figure 6), which compares to VirginMedia's current revenue per subscriber of £49, reflecting a discount we assume Virgin offers to attract customers.
- A contribution margin on the incremental revenues of 60% and the project being built in line with Virgin Media's published budget of £3bn (cost per line of £750).

Figure 5: **CS forecasts for Customer penetration on Project Lightning**

(000)	Q1 15E	2015E	2016E	2017E	2018E	2019E	2020E
Homes passed in period	50	600	800	800	800	800	200
Homes passed (cumulative)	50	600	1400	2200	3000	3800	4000
Average cumulative		300	1000	1800	2600	3400	3900
Broadband demand							
Uptake after 6 months		15%	15%	15%	15%	15%	15%
Uptake after one year		20%	20%	20%	20%	20%	20%
Uptake after two years		25%	25%	25%	25%	25%	25%
Uptake after three years		30%	30%	30%	30%	30%	30%
New Broadband customers (cumulative)		90	240	430	660	900	1050
Penetration of new build		15.0%	17.1%	19.5%	22.0%	23.7%	26.3%
New Broadband customers in year (000)		90	150	190	230	240	150
TV as % of Broadband	80%	80%	80%	80%	80%	80%	80%
TV net adds in year		72	120	152	184	192	120
Phone as % of Broadband	90%	90%	90%	90%	90%	90%	90%
Phone adds in year		81	135	171	207	216	135

Source: Credit Suisse estimates

A 13% pretax ROCE is clearly NPV positive, particularly when factoring in current LBTY borrowing rates of (<5%) and LBTY's remaining tax shield. The risk of the project is also controlled by its incremental nature – investment is targeted where registered demand is strong enough, and the project scope can be reduced if demand does not emerge. This compares to the historic UK cable and mobile start-ups of the 1990s which represented a significant and inherently risky investment J-curve. This is low risk, reasonable return CAPEX, in our view.

Figure 6: **Returns on Project Lightning investment, based on CS forecasts for demand**

£'m	2014A	Q1 15E	2015E	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E
New customers (000)	0		90	240	430	660	900	1050	1140	1190	1200
ARPU (£/m)			45	45	45	45	45	45	45	45	46
Incremental revenues			24.3	89.1	180.9	294.3	421.2	526.5	591.3	629.1	659.64
Contribution margin			60.0%	60.0%	60.0%	60.0%	60.0%	60.0%	60.0%	60.0%	60.0%
EBITDA			14.58	53.46	108.54	176.58	252.72	315.9	354.78	377.46	395.784
Implied opex			9.72	35.64	72.36	117.72	168.48	210.6	236.52	251.64	263.856
CAPEX in year (£m)			450	600	600	600	600	150	0	0	0
CAPEX cumulative			450	1050	1650	2250	2850	3000	3000	3000	3000
OpFCF (pre tax)			-435.4	-546.5	-491.5	-423.4	-347.3	165.9	354.8	377.5	395.8
OpFCF cumulative			-435.4	-982.0	-1473.4	-1896.8	-2244.1	-2078.2	-1723.4	-1346.0	-950.2
ROCE (pre-tax)			3.2%	5.1%	6.6%	7.8%	8.9%	10.5%	11.8%	12.6%	13.2%

Source: Credit Suisse estimates

VirginMedia UK built past 250k homes in FY15. Virgin has cited 20% uptake after 6-12 months (50% in areas where new houses have been built), suggesting demand is broadly on track. VirginMedia Net customer adds accelerated during 2015, reaching +55k in Q4 despite an XL TV price increase in Q3 15. VirginMedia UK revenue growth also accelerated to +5.7% y/y in Q4. This was the fastest Virgin Media revenue growth for some years, the combination of the price increase and customer growth. There are a number of moving parts within Virgin Media (mobile and B2B are also growth drivers), but the network expansion is at least coinciding with stronger revenue and stronger EBITDA growth for VirginMedia overall (UK and Ireland combined).

LBTY is guiding CAPEX (PP&E adds)/sales of 25-28% over the 3 year period, implying around eu14.0bn (usd15.5bn) CAPEX over FY16-18E or eu4.7bn (usd5.2bn) per annum. This compares to an adjusted CAPEX base of eu3.2bn (usd4.1bn) in FY14 (adding Ziggo to actual FY14 spend), the annual level of PP&E spend before LBTY starting such new build. So altogether we estimate the guidance implies around eu1.5bn per annum of new build CAPEX or c. eu4.5bn (usd5.0bn) cumulative over FY16-18E (of which the UK is c £2bn, or eu2.6bn).

Build cost per home passed is expected to be lower in CEE and Germany than in the UK, reflecting lower unit costs in CEE and a shorter loop upgrade in Germany. Whilst ARPUs are also commensurately lower (see Figure 7), returns have similar potential as the UK, judging from the ratio of potential build costs to ARPU. Clearly if insufficient demand emerges, returns would be lower, but LBTY is also likely to pull back such build plans given its own incremental approach to the build plan and focus on investment returns.

Figure 7: Comparing hypothetical economics of different build plans in LBTY 2016-2018E

	Homes targeted (m) 2016-2018E	Budget 2016-2018E	Cost per home passed	ARPU	Cost/ARPU	Customer penetration (of current homes passed)
UK*	4.0*	£3bn*	£ 750 usd 1050	£ 45 usd63	16.67x	40%
CEE			usd200****	usd20	10.00x	54%
Germany***			eu 409 usd450	eu 25	16.36x	56%
Total**	7.0**	eu4.5bn** usd5.0bn	eu 643 usd 707			

*Source: Company data, Credit Suisse estimates * Project Lightning, over FY15-19E ** LBTY Group plan, over FY16-18E *** total potential in Germany is 2m homes, but how much done over FY16-18 not disclosed. **** low cost to build in CEE with much of the plant above ground and low labour costs*

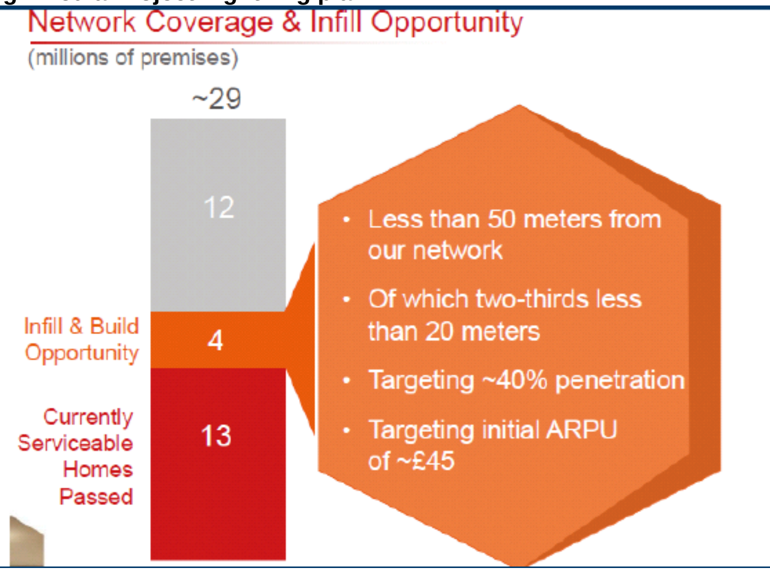
2016 will be a critical year for the plan, with LBTY aware that it needs to demonstrate that penetration targets are being hit. Hitting 20% penetration after 6m will be crucial. We take a bullish view of demand for several reasons:

- As we discussed in a recent note (**Credit Suisse: Sector - fixed line regulation likely to remain supportive**), we expect the EC to protect investment incentives on NGA build out to a least 2025. Current wholesale prices on FTTc are likely to remain intact as a consequence, protecting the pricing ladder for services of FTTc speeds and above, including cable broadband.
- LBTY should be able to offer targeted prices at new build areas. LBTY should also be able to offer superior speeds to the networks it is over-building (i.e. xDSL).
- Penetration of NGA (faster than DSL) has plenty of scope for growth, with the unbundlers in the UK and Germany only starting to migrate their customers (and generally an inferior TV service) and overall NGA penetration on telco lines (incumbent and unbundlers combined) still below 30% in most markets.
- LBTY is in most markets not tied down by the regulatory burdens placed on the incumbent telcos it competes against (e.g., BT - Openreach). The unbundlers' ability to react is also constrained by their gearing (TalkTalk), limited FCF and their reliance on asset light, low margin, high ROCE business models (whether or not Openreach duct and pole access is made easier). LBTY should be able to outpace its competitors commercially as a result.

- We do not currently see 1Gbps 5G mobile networks as a threat to cable broadband, partly due to the likely delay for mm-wave frequencies to be released (2020+), partly the demanding economics of building at such frequencies (small cells, clear line of sight – see **Speed dial - 5G in Europe - vision vs reality**), partly the fact that mobile cells are shared (constraining usage and GBs available) and partly the likelihood that cable broadband will have exceeded 1Gbps by the time mm-wave 5G networks are (if ever) wide-spread.

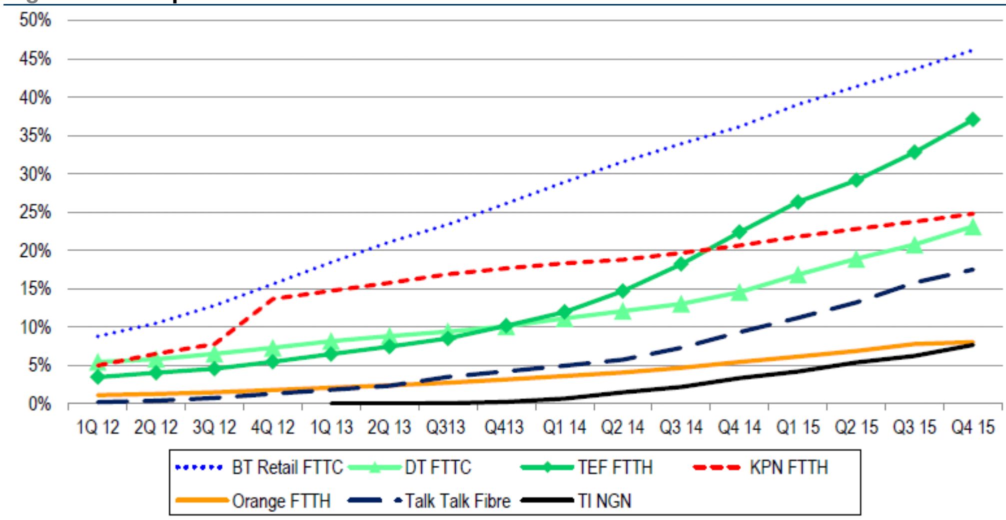
30%+ medium term penetration seems an achievable target and 30% long term penetration of new build areas should be sufficient to generate double digit returns, given the short loop lengths being built/upgraded, on our calculations above.

Figure 8: **VirginMedia Project Lightning plan**



Source: Company data

Figure 9: **NGA penetration of retail broadband customers of each incumbent telco**



Source: Credit Suisse research

Pricing power in focus at the Q1 results

Liberty has gradually switched gear, moving from relying on increasing RGU per sub and price rises to growing partly through the expansion of marketable homes as well, as RGU/sub has matured (2.08x in Q4 15 vs 2.05x in Q4 14). However pricing power still remains pivotal to the investment case, with LBTY's 9x EV/EBITDA multiple requiring 5%+ EBITDA growth to be sustained.

Investors cooled on European cable and LBTY over 2015 with concerns over pricing power rising, following ongoing growth in demand for OTT services (e.g. Netflix) and weaker trends at Ziggo. LBTY has in the past increased price by giving customers a speed boost first and also by bundling both speed and content together, making it hard for customers to spin-down without sacrificing both speed and content. But with the customer base already on ever-faster broadband services (LBTY's customer base averages 90Mbps now) and with the growing availability of TV content on OTT (making it easier to spin-down ie "cord-shave"), investors are questioning how long cable's ability to price up can last.

Q1

Q1 is a key test of LBTY's pricing power, with LBTY putting through price increases across most of its assets at this time of year (see Figure 10).

Figure 10: LBTY tariff rises – key assets

	2015	2016
Virgin Media UK	5.9% price increase in Feb 15	5% price increase in Feb 16
UnityMedia	eu2.9 price increase on half the broadband base. +eu10 increase in broadband prices in March for new customer contracts, reduced to eu5 in August	eu2.09 increase to SDU TV subscription (+11%) from 1 March. 3.8% increase in MDU TV price on 2.7m MDUs from 1 Jan
Telenet	5% price increase to 3P in Jan 15	3% price increase to 3P prices in Jan 16. Whop rises by 3.2%, Whoppa by 2.7%
Ziggo	Ziggo raised 3P pricing by 2-3% in March 2015, similar move by UPC in July 2015	Nothing announced yet. LBTY has also been adding content and functionality for free to lower churn.
UPC Switzerland	eu0.9 price increase on the customer base	eu2-3 (+7%) price increase on the base

Source: Company data, Credit Suisse estimates

Last year customer LBTY customer churn picked up significantly in Q1 following a similar round of price increases (see Figure 11), leading to weakness in earnings momentum and share price performance. LBTY has stated it has learned from last year and is putting through price increases in a more targeted way. But how customers respond remains a decisive factor.

In Germany for example, after a first-time broadband price increase on half its customer base in Q1 15 and higher prices for new connections (that was reversed later in 2015), UnityKBW has instead raised TV pricing, (an equivalent +2.3% price rise), with:

- A 3.8% price increase to the MDU (housing association) basic TV price, impacting 2.7m TV subs (more than half the MDU base
- A eu2.09 or 11% price increase to the SDU (single homes) basic TV price, impacting 2.1m TV subs (most of the SDU base).
- A eu2.9 price increase to 250,000 broadband subscribers (8% of the base) that were not included in the back book price increase in 2015.

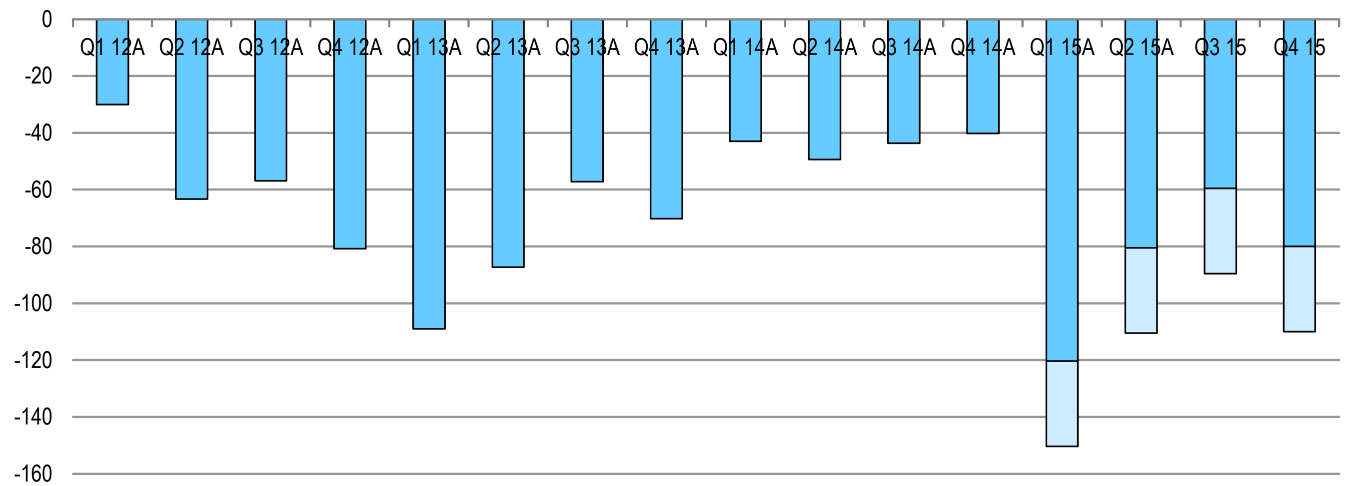
LBTY also emphasises that it has not touched front book prices in Germany this time. The increase to broadband prices offers for new customers in Q2 15 made a particular impact on net adds during Q215, a move reversed later in Q3. LBTY expects less impact on net adds simply by not repeating this front-book price increase in FY16.

In the Neths, LBTY has kept pricing unchanged whilst it works to get churn down. Clearly pricing power has diminished in this market. LBTY aims to turn-around Ziggo commercial momentum in FY16.

There are already one or two early signs that LBTY customer churn might not increase in Q 116 in the way it did in Q1 15:

- VirginMedia communicated the Q1 16 5% price increase in November 15, with customers having the right to churn from November. Customer churn actually fell in Q4 15 vs Q3 15 - churn rose in Q3 15 following a separate price increase to TV XL (due to some pass-on of the costs of BT Sport Europe), but disconnections returned to normal levels in Q4, according to the company's Q4 results statement. Customers could still churn in a second wave when they see their first bill increase (March-April 2016), but as (we believe) Virgin Media communicated the move in the usual way (by letter or email) this delayed effect should not be any bigger than usual.

Figure 11: LBTY TV net customer losses (000) picked up in Q1 15



Source: Company data, Credit Suisse estimates

- Ziggo in Q1 16 reduced its promotional discounts on new triple-play connections from 6 months to 3 months, suggesting that churn trends are starting to improve (the discounts were introduced in July 2015 after Ziggo's churn increased). KPN has followed Ziggo's latest move quickly, suggesting that pricing trends in consumer can normalise. Telecompaper also reported an improvement in NPS (net promoter score) for Ziggo in Q4 on telecompaper's long-established Dutch consumer panel, an improvement in NPS for the first time since the integration of UPC with Ziggo.

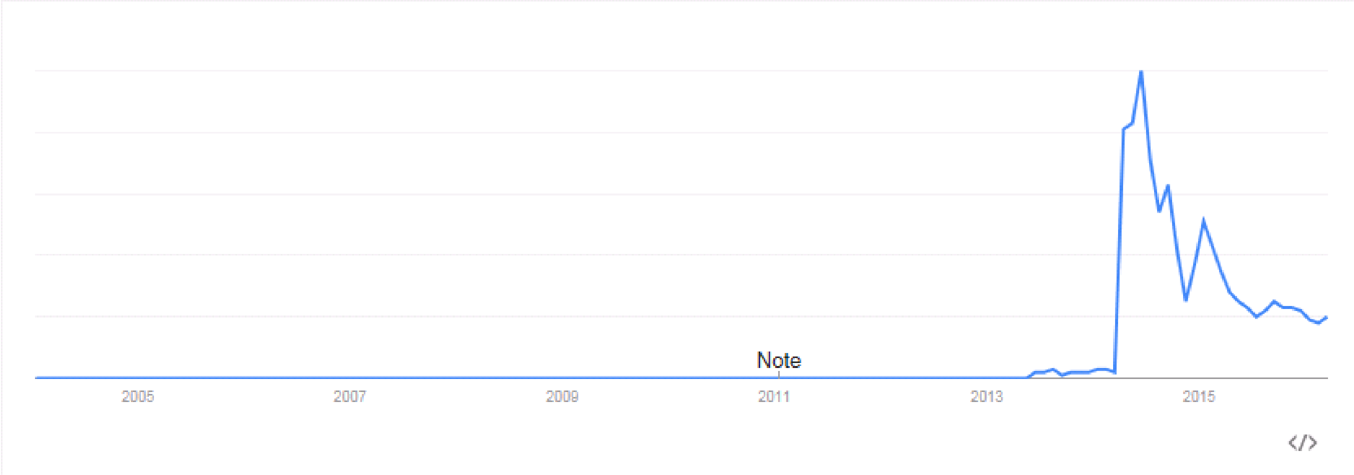
Some continued level of TV churn is expected by LBTY. UnityKBW expects RGUs adds to be adversely affected in Q1 16, as most customers have an extraordinary contract termination rate. Telenet also expects continued TV RGU disconnects due to high market share and loss of subs to "other digital tv, OTT and satellite providers", including the launch of cable-resale by Mobistar. How much could such churn increase?

Germany

Perhaps the biggest risk of a churn upset is in Germany, where UnityKBW has added eu2.09/m (11%) to the basic TV price for SDUs. Many of these customers have always been able to switch to free TV packages over DTH but haven't, suggesting low price elasticity. However the SDU basic digital cable TV price has gradually risen from eu15/m to now eu21/m over several years. Furthermore, cheaper versions of the basic TV service are now available OTT e.g., from Zattoo (a Swiss-based OTT service also available in Germany) and MagineTV (which originated in Sweden in 2013 and launched web-based TV in Germany in 2014).

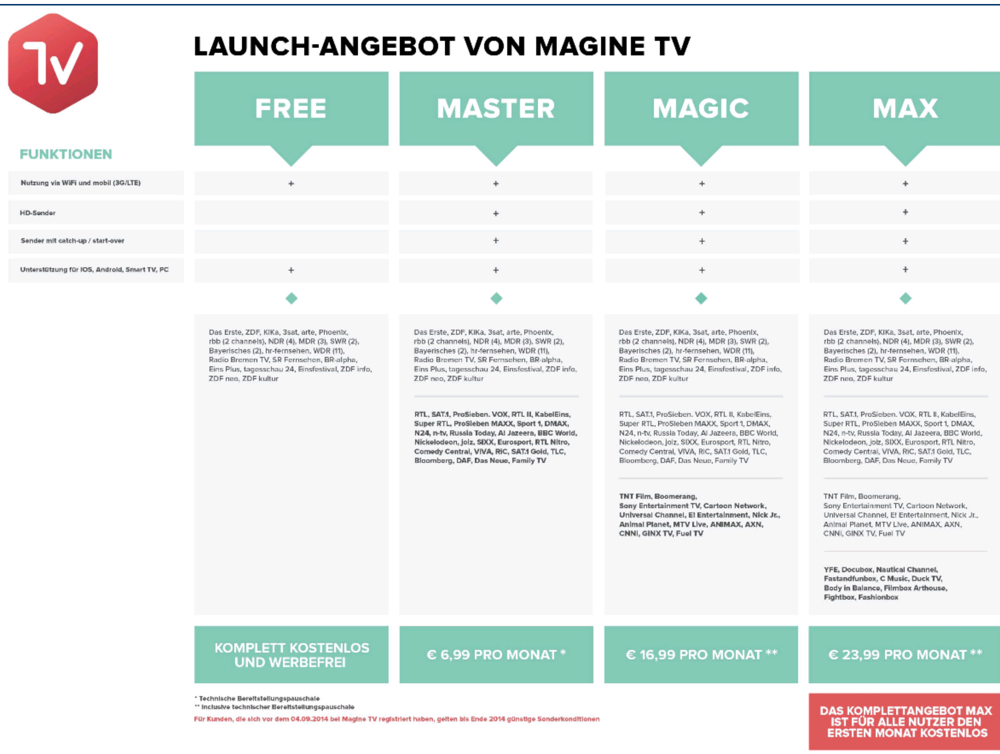
Zattoo has been available for several years, being a pioneer of web based TV services operating in a number of European markets. Magine launched more recently (2014) with a free TV bundle and had some initial success (citing more customers in Germany than in Sweden by May 2014, a month after launch in Germany), but initial interest appeared to tail off somewhat (see Figure 12) and the service has yet to impact German cable TV customer dynamics, partly due to challenges penetrating the traditional TV set. Furthermore, Magine has arguably become less of a threat, raising its prices in Sept 2014 by starting to charge for its previously free bundle (launching a much more limited free package made up from several national FTA channels).

Figure 12: Google web searches for Magine TV in Germany



Source: Google trends

Figure 13: Magine TV offer



Source: BroadbandTVnews website

Most likely this latest +eu2/m price increase will not stimulate a rush for the exit by Unity customers - TV habits change only slowly. Overall there seems a reasonable prospect that LBTY will price-up this Q1 without a material increase in churn beyond the usual short term customer reaction. LBTY also sound confident, believing that the main mistake in Germany last year was raising front-book pricing, suggesting gross adds should hold up better in FY16 than FY15.

Belgium

Mobistar launched its long-awaited cable TV offer in early March 2016, offering 70 TV channels (including 12 in HD) and 100Mbps cable broadband for eu39/m to high end Mobistar post-paid customers (on Panther 45 and Panther 60, costing eu45 and eu60 respectively) and eu49/m to all other Mobistar postpaid bundle customers, a saving of 30-40% (like for like).

Figure 14: **Comparing new Mobistar cable offer with Telenet and Proximus**

Network	Package	Price per month (eu)	TV channels	Broadband	Fixed line
Mobistar		39	70	100Mbps	No
		49	70	100Mbps	No
Telenet	Whop	67	75	100Mbps	Yes
	Whoppa	78	75	200Mbps	Yes
Proximus	Comfort	62.95	80	70Mbps	Yes
	Maxi	74.95	80	70Mbps	Yes

Source: Credit Suisse

Mobistar has 2.2m post-paid mobile customers, many of who could in theory save 30-40% on their Telenet cable bill switching to Mobistar (at least those who are Telenet subscribers). However there are a number of other factors reducing the appeal of Mobistar's offer:

- As we highlight in Figure 14, Mobistar's bundle excludes fixed line voice minutes, a service bundled in with Telenet and Proximus. Many households will include users that still want a fixed voice service, either due to a preference vs mobile voice or due to capped mobile voice bundles (only high end mobile plans in Belgium offer unlimited voice currently). Telenet has 1.2m fixed voice subscribers relative to its 1.57m broadband base, suggesting still strong demand for traditional phone service from its customers. Fixed line phone is also one of Telenet's fastest growing source of cable RGUs currently (+5.8% y/y growth in Telenet phone RGUs in FY15).
- Telenet offers exclusive access to 1.3m WiFi hotspots across Belgium, which Mobistar lacks. These are actively used by 30% of Telenet customers.
- Mobistar does not yet offer premium TV services such as SVOD or TV anywhere, features that are of increasingly popular on Telenet (30% penetration and rising).
- Mobistar uses the IPTV platform of Orange and supports a DVR, pause for live TV and four simultaneous recordings but Telenet believes this is still inferior to Telenet's 'yelo' user interface (Telenet was the first LBTY asset to launch Horizon).

The Mobistar discount on cable is only particularly large (40%) to high end Mobistar customers, but most of these type of customers are price inelastic and are also the type of customer that will want a fixed line bundle, whilst also valuing the extras provided by Telenet.

Mobistar has in any case started with a limited launch, targeting just two cities - Leuven and Aalst. Leuven is a university town and will therefore have more of the type of customers that would be willing to drop a fixed voice service to save some money, although most will not be on high end Mobistar bundles (so paying the eu49/m price point in theory). Many will not be Telenet subscribers in any case. Aalst is a more typical Flemish town.

Telenet expects Mobistar to widen the targeted area with the re-branding of Mobistar Orange, whilst Mobistar has stated it expects to be offering cable access nationwide by the end of this year. So the impact is likely to be limited in FY16 and grow in FY17.

Telenet will be able to offset some of the impact with the synergies it gains from Base. Furthermore, previous 3P offers from Mobistar on DSL have had little market impact despite a significant price saving vs Proximus and Telenet and more market growth to benefit from.

Whether Mobistar can finally break in to the fixed line market remains to be seen. However, Mobistar is likely to win at least some customers with its cable offering, so we do include higher TV customer churn in our Telenet forecasts for FY17+ to -2.5% per annum (from -0.6% currently), lowering our Belgian cable forecasts slightly.

Ultimately we forecast Telenet to sustain mid-single-digit EBITDA, with the synergies from integrating g BASE offsetting a slowdown in Telenet's core cable business from Mobistar's cable offer.

Improving service

LBTY has also been investing to protect its pricing power longer term:

<u>1.Broadband speed</u>

LBTY is continuing to invest to increase data speeds.

- VirginMedia launched 200Mbps broadband to consumers (Virgin Vivid) in Q4 15, boosting broadband RGUs. Customers were also given a speed increase of 20-50Mbps, ahead of the average 5.4% price increase in Feb 16. Virgin has also launched 300 Mbps speeds for small businesses in the UK. 45% of Vmed customers are now taking 100Mbps.
- In Germany, Unity has launched 400Mbps on 40% of the footprint (likely to expand further) and is charging an extra eu20/m for 400Mbps over the price for 200Mbps service.
- In the Neths, Ziggo has started trials of Docsis3.1, which Ziggo expects to boost broadband speeds to 1Gbps over time in a relatively cost effective manner - CAPEX of eu20/home passed (hp), comparing favourably to European telco's incremental upgrade costs the eu100/hp of FTTc and up to eu1000/hp of FTTH.
- Telenet is part way through its eu500m "Grote Netwerf" upgrade to 1Gbps, increasing usable frequency range from 600Mhz to 1Ghz and recently increased top speeds to 240Mbps for business customers and 200Mbps for consumers.

Figure 15: **Top broadband (download) speeds offered by LBTY**

Top speed	Consumer	Business
UK (Virgin Media)	200 Mbps	300 Mbps
Ireland (VirginMedia)	360 Mbps	
Neths (Ziggo)	200 Mbps	500 Mbps
Belgium (Telenet)	200 Mbps	240 Mbps
Germany (UnityKBW)	400 Mbps	

Source: Company data, Credit Suisse research

Quite how quickly demand for speed will continue to grow remains to be seen. LBTY cites an average broadband speed subscription of 90Mbps across its European business, with Telenet at 114Mbps (comparing to 43Mbps on Telenet in mid 2013), suggesting healthy demand for higher speeds. Data usage growth continues, with Virgin citing more than 110 GB of usage per month by December 2015 for example (up from 80GB a year earlier and compared to typical European cable broadband usage of 50-70GB 2 years ago). Higher usage should, in theory, broadly correlate with demand for speed. LBTY also cites an increasing number of connected devices per household. LBTY is also trying not to get ahead of demand by generally offering only incremental speed-ups of +20Mbps per annum or so.

2.Content

LBTY is also working to protect pricing power by improving the content in its bundles.

- VirginMedia has already accommodated BT's move into sports by including BT Sports in its mid- and high-end tiers, passing on only a fraction of the extra cost to the end customer. This has protected VirginMedia vs BT's 'free sports' offer. VirginMedia is also developing its own exclusive content offer, for example launching on-demand exclusives (e.g., US show *Ash vs Evil Dead*, produced by Starz).
- In Q4 2015 Ziggo launched its own Sports channel (Ziggo Sport), which includes e.g. English Premier League rights and which was included in its basic bundle at no extra cost to the customer, another step towards bringing churn down. Almost 20% of recent customer connections cited this Sports channel as a reason for moving to Ziggo.
- Telenet has also been augmenting its TV offering, revamping its sports offering (re-launched as Play Sports) and recently extending football rights e.g. UK Premier League, Spanish Liga, French Ligue 1, Italian Serie A alongside existing Belgian football rights .

LBTY has also been gradually acquiring content production businesses (e.g. All3Media in the UK, De Vijver Media in Belgium and TV3 in Ireland). LBTY operations have started to include exclusive productions in some of the content bundles (e.g. Telenet) .

Content is not a free ride - clearly adding content to the bundle impacts gross margins. We assume in our forecasts that content costs to continue to rise, one reason we forecast EBITDA growth of 5% rather the 7-9% guided.

Conclusion

There are early signs that churn isn't spiking again in the UK and Neths, LBTY sounds confident German momentum should continue, whilst the Mobistar launch wont impact Telenet much until 2017E. Furthermore, LBTY is not standing still, but investing in broadband speed and content to maintain pricing power.

European cable remains potentially vulnerable to long term trends (see **European Cable - what risk from OTT and the skinny bundle?**) – with high margins in basic TV vulnerable to OTT, and risk of telco FTTH overbuild in the long-term impacting its pricing power in broadband. However TV habits change only slowly, and FTTH overbuild will evolve slowly, constrained by the need of telcos and their resellers to also generate returns.

Meanwhile, LBTY is gradually starting to address what disadvantage it has in quad-play, tying up with Vodafone in the Neths. We continue to believe Vodafone could justify paying a significant premium to the LBTY share price to secure similar synergies across the UK and Germany (a topic we discussed in a recent note **Vodafone and Liberty Global - Revisiting the potential deal scenarios**). We also note the mutual respect voiced by management at the Ziggo-LBTY announcement.

CREDIT SUISSE

Companies Mentioned *(Price as of 13-Mar-2016)*

BT Group (BT.L, 459.05p)
KPN (KPN.AS, €3.51)
Liberty Global (LBTYA.OQ, $36.07, OUTPERFORM, TP $50.0)
Netflix, Inc. (NFLX.OQ, $97.66)
Orange (ORAN.PA, €16.44)
Proximus (PROX.BR, €30.34)
TalkTalk (TALK.L, 233.5p)
Telenet (TNET.BR, €47.14)
Vodafone Group (VOD.L, 217.35p)

Disclosure Appendix

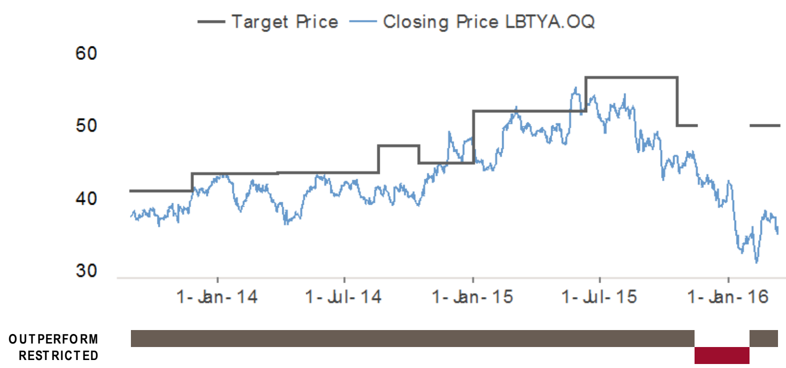
Important Global Disclosures

Justin Funnell and Henrik Herbst each certify, with respect to the companies or securities that the individual analyzes, that (1) the views expressed in this report accurately reflect his or her personal views about all of the subject companies and securities and (2) no part of his or her compensation was, is or will be directly or indirectly related to the specific recommendations or views expressed in this report.

3-Year Price and Rating History for Liberty Global (LBTYA.OQ)

LBTYA.OQ Date	Closing Price (US$)	Target Price (US$)	Rating
30-Aug-13	37.49	41.02	O
25-Nov-13	40.00	43.44	
28-Mar-14	39.02	43.47	
18-Aug-14	41.49	47.25	
15-Oct-14	39.02	44.88	
02-Jan-15	47.34	51.97	
11-Jun-15	52.77	56.70	
19-Oct-15	45.78	50.00	
16-Nov-15	44.10		R
03-Feb-16	34.52	50.00	O

** Asterisk signifies initiation or assumption of coverage.*



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As of December 10, 2012 Analysts' stock rating are defined as follows:

Outperform (O) : The stock's total return is expected to outperform the relevant benchmark* over the next 12 months.

Neutral (N) : The stock's total return is expected to be in line with the relevant benchmark* over the next 12 months.

Underperform (U) : The stock's total return is expected to underperform the relevant benchmark* over the next 12 months.

**Relevant benchmark by region: As of 10th December 2012, Japanese ratings are based on a stock's total return relative to the analyst's coverage universe which consists of all companies covered by the analyst within the relevant sector, with Outperforms representing the most attractive, Neutrals the less attractive, and Underperforms the least attractive investment opportunities. As of 2nd October 2012, U.S. and Canadian as well as European ratings are based on a stock's total return relative to the analyst's coverage universe which consists of all companies covered by the analyst within the relevant sector, with Outperforms representing the most attractive, Neutrals the less attractive, and Underperforms the least attractive investment opportunities. For Latin American and non-Japan Asia stocks, ratings are based on a stock's total return relative to the average total return of the relevant country or regional benchmark; prior to 2nd October 2012 U.S. and Canadian ratings were based on (1) a stock's absolute total return potential to its current share price and (2) the relative attractiveness of a stock's total return potential within an analyst's coverage universe. For Australian and New Zealand stocks, the expected total return (ETR) calculation includes 12-month rolling dividend yield. An Outperform rating is assigned where an ETR is greater than or equal to 7.5%; Underperform where an ETR less than or equal to 5%. A Neutral may be assigned where the ETR is between -5% and 15%. The overlapping rating range allows analysts to assign a rating that puts ETR in the context of associated risks. Prior to 18 May 2015, ETR ranges for Outperform and Underperform ratings did not overlap with Neutral thresholds between 15% and 7.5%, which was in operation from 7 July 2011.*

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Analysts' sector weightings are distinct from analysts' stock ratings and are based on the analyst's expectations for the fundamentals and/or valuation of the sector* relative to the group's historic fundamentals and/or valuation:

Overweight : The analyst's expectation for the sector's fundamentals and/or valuation is favorable over the next 12 months.

Market Weight : The analyst's expectation for the sector's fundamentals and/or valuation is neutral over the next 12 months.

Underweight : The analyst's expectation for the sector's fundamentals and/or valuation is cautious over the next 12 months.

**An analyst's coverage sector consists of all companies covered by the analyst within the relevant sector. An analyst may cover multiple sectors.*

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Global Ratings Distribution

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Underperform/Sell*	11%	(45% banking clients)
Restricted	1%	

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Target Price and Rating
Valuation Methodology and Risks: (12 months) for Liberty Global (LBTYA.OQ)

Method: We derive our usd50 price target based on a stand-alone valuation, reflecting the stock approaching a sector FCF yield for FY17E

Risk: Ability to increase price may wane as customers reach diminishing value from speed upgrades and seek to downside their traditional TV bundle due to increasing viewing of non-linear TV instead. Rising content costs or a substantial investment in content companies could dilute FCF growth and p/t.

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See the Companies Mentioned section for full company names

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