Telecom Italia

Buy

We initiate a **BUY** recommendation for Telecom Italia. The estimated price for TI as of April 16th is between €1.13 and €1.34. This suggests an upside of between 20.3% – 32.8% based on current market price of €0.90 as of April 16th 2016.These figures are the result of our Discounted Cash Flow and Sum of the Parts Valuation techniques.

Investment Thesis

Telecom Italia's current share price offers the opportunity to buy a cheap, misunderstood, high-quality business protected by strong moats at a material discount to intrinsic value. We believe TI has reached an inflection point and will now transition from a decade of revenue decline to years of strong fundamental growth.

Key Stats	
Ticker	TIT.MI
Shares Out	14,851
Market Cap	17.33bn
52w high	€ 1.32
52w low	€ 0.80
Beta	1.01

Our **BUY** recommendation is based on forecasted total revenue growth 0.5% for 2016 and increasing year on year up to a rate of 2% by 2020 as the unit economics of the fiber business start to shine through.

Operating margins are set to improve in line with management's commitment to cut €100m of labour expenses per year and the EBITDA uplift of €5 - €10 per fiber subscriber improves overall profitability.

Capex. TI is leveraging its position as an incumbent and is currently in an "accelerated" phase with an annual bill forecast of ~€5.4bn. This is expected to come down after 2018 to a more normalized level of ~€3.8bn per annum.

Key Financials					
	2016	**2017**	**2018**	**2019**	**2020**
Revenue	20,103.4	20,249.9	20,500.6	20,849.8	21,261.1
EBITDA Margin	*36.8%*	*37.2%*	*37.5%*	*37.9%*	*38.2%*
Net Margin	1.5%	1.8%	2.2%	2.6%	3.0%
Capex	-5,430.0	-5,469.8	-5,537.4	-3,754.2	-3,828.0
Potential Upside	**20.2% - 32.8%**				

Please see the disclaimer at back of this report

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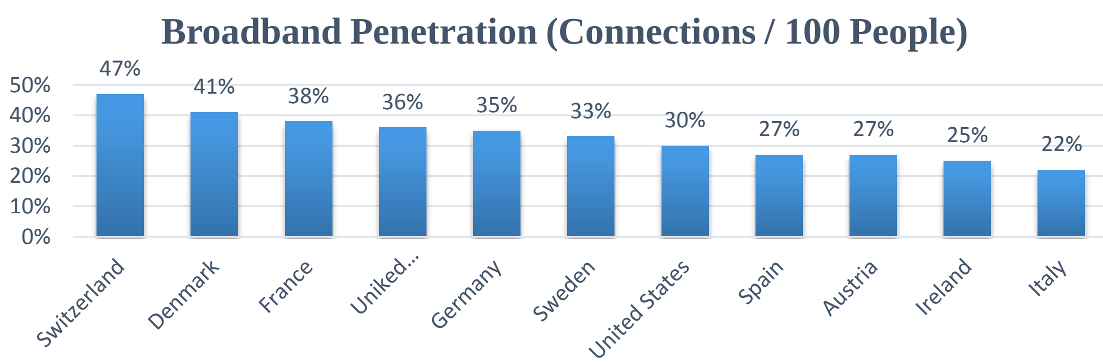
Yale SCHOOL OF MANAGEMENT

I. Company Overview

Business Overview

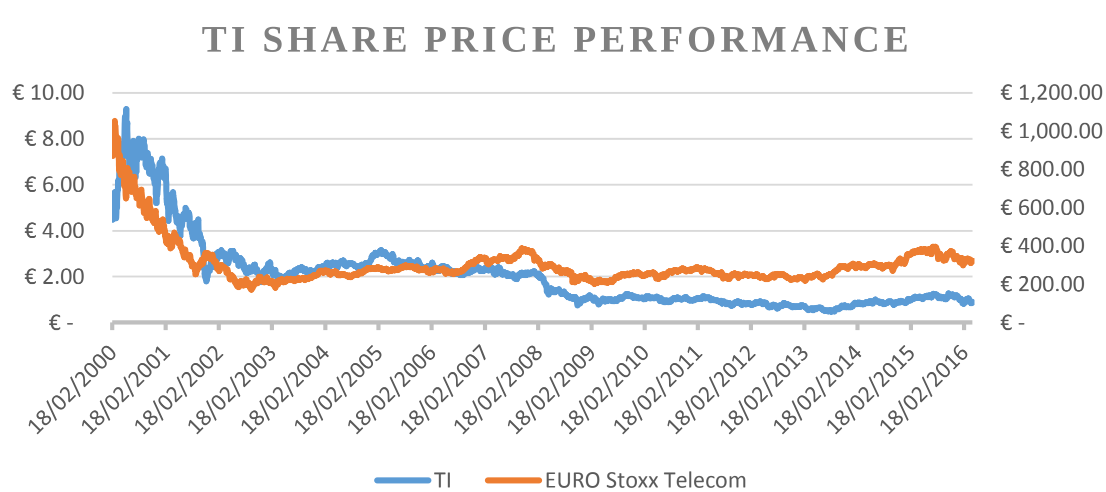
TI, like many traditional telecom incumbents, experienced little competition throughout its history. Like other former quasi government-owned enterprises in Western Europe, TI failed to innovate for decades due to a lack of viable competition and despite significant cost largesse. As a result, the Company never transitioned to next generation technologies including ultra-high speed internet and advanced mobile data. Italy has consequently lagged behind other developed countries with one of the lowest level of broadband and high speed mobile data penetration in the world.

Exhibit 1: Broadband Connections per 100 people in the EU [(1)]



As a result of TI's lack of innovation, several competitors entered the Italian wireline and wireless market over the last decade. These players include the giant Vodafone and low priced insurgents Wind and Three. As competitors started providing similar services to TI at competitive prices, TI lost significant share. The share loss translated into domestic revenues falling every year over the last decade. As financial results continued to deteriorate, investors punished TI and the share price fell from nearly €2.00 in 2005 to a low of €0.50 in mid-2013.

Exhibit 2: TI Share Price Performance vs EURO Stoxx Telecom



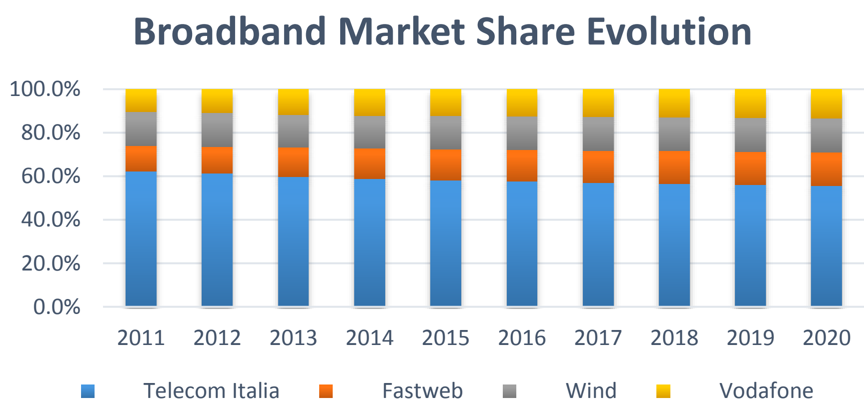
[1] Source: Bloomberg

II. Revenue Drivers

Broadband Business

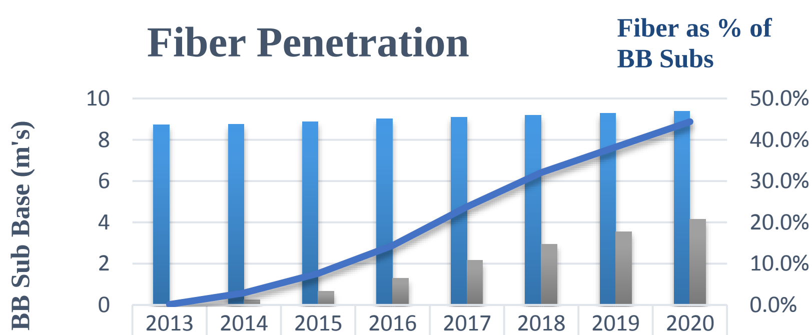
The market remains focused on TI's declining revenue and market share losses over the last decade, but TI still has a significant competitive advantage. TI is the largest provider of fixed line services in Italy with ~58% market share (we estimate that fixed line services make up ~70% of TI's domestic earnings) [(3)] and TI covers roughly 85% of Italy with its fiber and copper network, 3x-4x more coverage than its closest competitor. The cost of replicating TI's network is astronomical and would take a long time to implement. TI's Broadband market share has slowly been deteriorating from ~62% in 2011 to 58.1% in 2015. We've assumed that this deterioration will continue at a rate of 50bps per year. We are not worried about this deterioration as we believe the uptake in fiber will more than offset the loss of these lower value customers.

Exhibit 4: 2015 Broadband Market Share



TI's management team has just decided to start innovating and using its competitive advantage to stifle the competition. TI recently began aggressively investing in fiber across its Italian footprint, (details on this in the "capex" section) bringing high-speed data to its entire customer base. Given its huge copper network across Italy, TI can deploy fiber much more quickly and efficiently than all its competitors. The reason we view this as a game changer is because our value added research suggests that the lifetime value of a fiber customer is ~3x the value of a copper customer. (See exhibit 6)

Exhibit 5: Fiber Subscribers as a percentage of Broadband Subscribers



	2013	2014	2015	2016	2017	2018	2019	2020
Broadband Subscribers	8.73	8.75	8.89	9.02	9.11	9.20	9.29	9.38
Of which Fiber	0.015	0.255	0.678	1.3	2.17	2.95	3.55	4.16
Fiber penetration	0.2%	2.9%	7.6%	14.4%	23.8%	32.0%	38.3%	44.4%

Why? Fiber customers pay more every month than copper customers (because they get 10-20x the internet speed) and they also churn significantly less than non-fiber customers (because they can't get this speed anywhere else). Currently, fiber penetration in TI's base is ~7%. TI's plan is to roll out fiber to cover 85% of its footprint by 2018. We have forecasted our subscriber base to grow based off our research on Verizon, a US based Telecom Company. We analyzed their fiber subscriber base growth rates and use them as proxies for TI's fiber uptake. We apply the 2008 – 2012 growth rates for our 2016-2020 fiber subscriber base growth. Given the superior value generated by a fiber customer vs. a copper customer (see exhibit 6 below), as TI's base becomes increasingly penetrated by fiber customers we believe that there will be uplifts in domestic revenue and EBITDA. While consensus forecasts 2016 to be yet another year of negative growth in the domestic business, we believe that revenue and EBITDA will grow, both in 2016 and for years to come.

Exhibit 6: Unit Economics of Copper vs Fiber Customers (5)

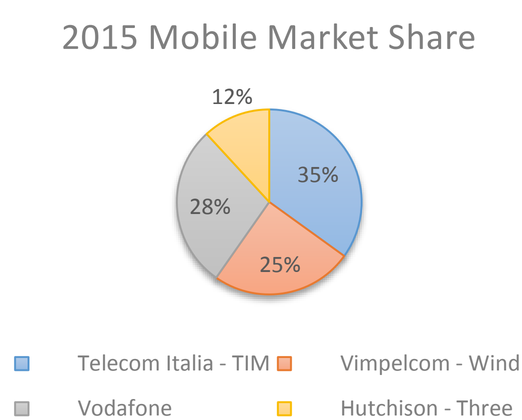
Unit Economics of Copper vs Fiber Customer

	Copper	**Fiber**	***Comments***
Monthly Price	35.00	40.00	*Price of Copper vs Fiber offering*
Cost per Month	-25.00	-25.00	*Cost of servicing per month (management stated it as roughly equivalent)*
Monthly EBITDA (A)	10.00	15.00	*TI CEO "we expect 5-10 euros of EBITDA uplift per additional fiber customer"*
Margin	28.6%	37.5%	
Churn	20%	10%	*TI says fiber churn is 50% of non-fiber churn.*
Average Customer Life (Years) (B)	5	10	*Observed in US telcos that fiber churn is in fact lower than non fiber*
Lifetime EBITDA	**600**	**1800**	*3x lifetime EBITDA ----> (A*12*B)*

Mobile Business

TI's Mobile business generated €5.1bn in revenue for 2015. This represents ~32% of domestic revenue. Mobile revenue growth hit parity in Q4 2015, it had been declining for the prior 7 quarters. While 4G coverage is at 88% for Italy. Management expect the 4G customer base to go from 4.4m in 2015 to 8.8m by 2018. We have Mobile service revenue forecast to grow at a CAGR of 0.8% in line with management guidance. We believe this to be reasonable given the current smartphone penetration of only 57% and the increasing use of mobile data with the mobile data traffic up 45% year on year. We believe that the continued strong uptake in 4G users will drive revenue increases. 4G users up 430% in FY14 and 330% in FY'15 to 4,396.

Exhibit 7: Mobile Market Share



Brazilian Business

Many news agencies have reported that Vincent Bolloré an activist investor with a ~24% stake in TI is pushing Telecom Italia to dispose of its 66% holding in Brazilian mobile telecom provider, Tim Brazil. The Brazilian segment of the business has seen the steepest declines with revenues falling from 7.5bn in 2012 to 4.6bn in 2015. A lot of this decline can be explained by the deterioration of the Brazilian Real/Euro exchange rate which has gone from 2.868 in 2013 to 3.697 in 2015. While Tim Brazil represents less than 17% of TI's value, a disposal would improve sentiment dramatically as Tim Brazil operates in a highly competitive Brazilian mobile market, is burning cash, (negative CFO contribuition in 2015 of ~270m) and provides a drag on TI's consolidated earnings. For our revenue forecasts we analysed the 2010 to 2015 revenue CAGR and found it to be 3.5% on a like for like basis. We believe this rate is too optimistic for forecasting purposes given the current economic conditions in Brazil, and the negative YoY growth rates in 2014 and 2015 of -2.1% and -12.1% on a like for like basis. Therefore we have forecast revenues in Brazil to grow in line with IMF GDP forecasts for Brazil. (details in Appendix)

Combining the three segment revenue forecasts gives us our group revenue forecasts depicted in exhibit 7.

Exhibit 7: Group Revenue Forecasts by Segment

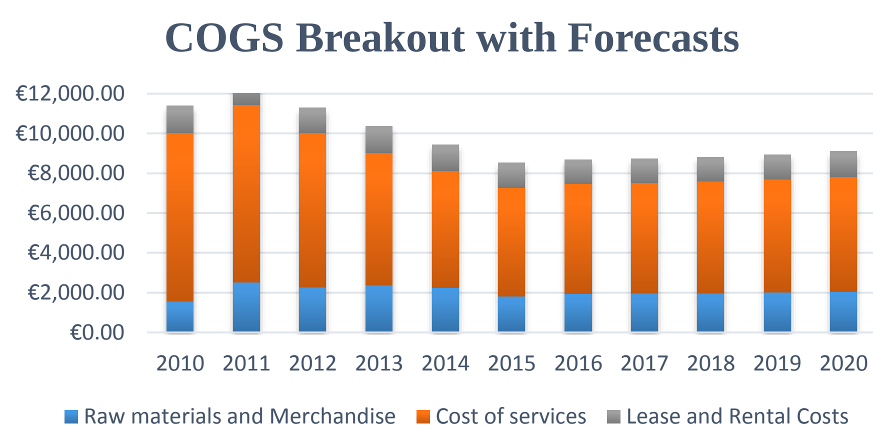
	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
Italy					
Broadband	10,654.00	10,760.54	10,921.95	11,140.39	11,418.90
Growth	*0.00%*	*1.00%*	*1.50%*	*2.00%*	*2.50%*
Mobile	4,989.60	5,029.52	5,069.75	5,110.31	5,151.19
Growth	*0.80%*	*0.80%*	*0.80%*	*0.80%*	*0.80%*
Brazil	4,459.83	4,459.83	4,508.89	4,599.07	4,691.05
Growth	*-3.80%*	-	*1.10%*	*2%*	*2%*
Group Revenue	20,103.43	20,249.89	20,500.59	20,849.77	21,261.14
Growth	*0.5%*	*0.7%*	*1.2%*	*1.7%*	*2.0%*

[3] Source: Bloomberg and Company Financials
[4] Source: 2015 Form 20-F

III. Cost Drivers

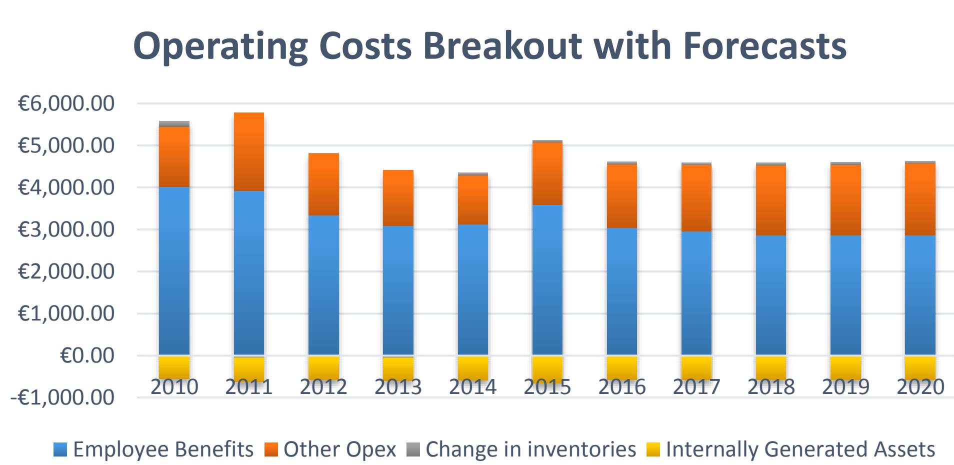
Cost of Goods Sold are expected to remain in the region of ~8.5bn to ~9bn for our forecasting horizon. This is due to the virtualy identical cost of servicing a Fiber customer vs a Copper customer of €25 per month and this cost of servicing has accounted for ~65% of COGS over the past 5 years. Increases in COGS over the horizon are coming from our forecasts of increased Broadband supplier base from 2015 of 8.89m to 9.38m by 2020. (Based on the 5 year historical CAGR of 1% per annum) We believe that there will Gross margin expansion in the region of 10bps per year as a result of the €5 premium that TI can charge to its Fiber customers.

Exhibit 7: Cost of Goods Sold Breakout with Forecasts



Operating Expenses are forecast as a percentage of revenues and we see them declining as a percentage. The 2015 Opex of 4.5bn contains a one off expense of €400m employee provisions, this expense is paving the way for managements plan to cut down on its labour costs by 100m each year. As well as the declining labour costs we believe that there will be less costs related to marketing and advertising in line with the halfing on the rate of churn for its broadband subscribers. (20% down to 10%) This means less expenditure on customer retention. We have forecast Opex as a percentage of revenue at 20% for 2016, (reduction of 400m for one off employee provisions.) and have it contracting at a rate of 25bps per year out to 2020.

Exhibit 8: Operating Expenses Breakout with Forecasts



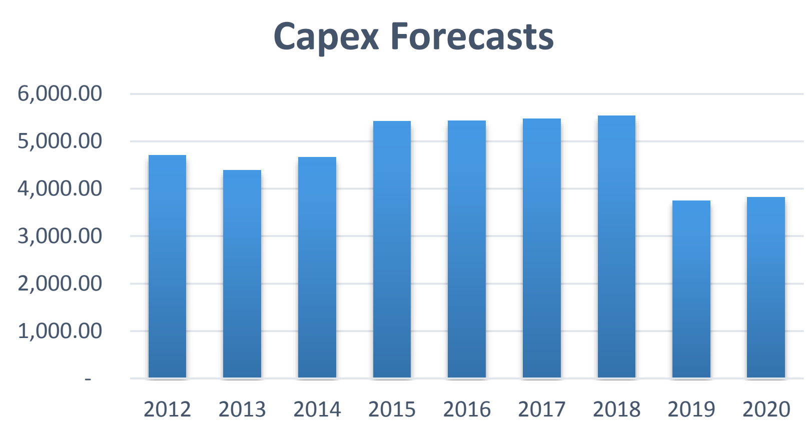
Capital expenditure is currently in an "accelerated" stage. Management have provided guidance on capex for the next 3 years. TI will have ~12b of domestic cap-ex from 2016 through 2018. Details on the 2016-2018 domestic capex are as follows:

~4b on fiber rollout
~2b on LTE/4G network development
~1b on IT/cloud services
~5b on restoring old networks and reducing the cost base across the network

There should be a substantial step down in cap-ex in 2018 as the majority of expansionary capex cycle will be over. In 2019, we think the ~5.4b per year will go down by roughly a third. This would be the result of having the majority of fiber and 4G networks being completed.

In Brazil they've comitted to a Capex bill of roughly 1.3bn per year. As the brazilian telecom market is much less developed than the Italian market, (4G coverage at 52% as of 2015) we leave the Capex bill for Brazil at 1.3bn per year for 2019 and 2020 also.

Exhibit 9: Capital Expenditure Forecasts



Depreciation is forecast as a percentage of revenue. Large jumps are inline with increase in capex spends to ramp up 4G rollout, and the Fibre to the home investments.

Taxes are assumed to be at 31.4% in line with the Italian corporate tax rate

Competitive Responses

Vodafone's management stated in their earnings call that they will enter into Italy's TV market in 2016. Like Telecom Italia, Vodafone are currently accelerating their Capex across all divisions since 2015, as a part of the Project Spring. Project Spring is a plan to spending ~€3.6bn on next-generation fibre and 4G networks in Italy over the course of 2015 and 2016. Therefore we expect their Capex levels to be at ~€1.8bn for 2016 which is considerably below Telecom Italia's guided Capex of €5.4bn.

Wind's management stated that they will keep their Capex at the same rate (€556 million) in Italy, which is already at a low level in comparison to Telecom Italia (€5.4bn). This is because of their parent company Vimpelcom are focusing their growth on emerging economies and not Italy. Fastweb also expect to keep their Capex a flat level of 33% of its sales at around €500 million. Their main aim is to roll out more Fiber-to-the-Home and Fiber-to-the-Cabinet.

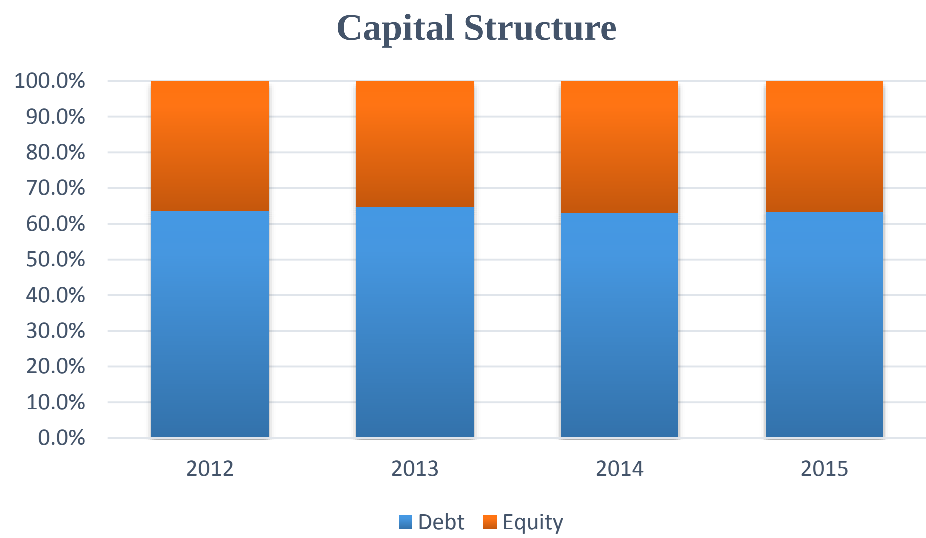
We believe that the substantially lower capex spends will result in slower rollout by competitors and TI's existing market share of 58% puts it in the best position to monetize on the higher value fiber customers as it continues to invest at a much faster pace than it's competitors.

IV. Valuation

DCF Analysis

Given that TI has maintained the same capital structure in the past 4 years we believe the WACC to be a suitable method to discount future cash flows.

Exhibit 10: Historical Capital Structure



For WACC assumptions, we use a market risk-free rate that is based off the past five years of 10 year Italian Sovereign debt returns. The beta calculation methodology is explained in the appendix. For our cost of debt we take the average of the historical interest expense over the historical debt. Using a tax rate of 31.4%, we estimate a WACC of 7.3%.

Exhibit 11: WACC Calculation

Cost of capital assumptions		
Cost of debt		9.0%
Tax rate		31.4%
After tax cost of debt		6.2%
Risk free rate		1.8%
Beta		1.01
Market risk premium		7.5%
Cost of equity		9.3%
Capital weights		
	Amount	% of total
Market value of equity	13,366.2	34.7%
Net debt	25,119.0	65.3%
Cost of capital (WACC)		**7.3%**

With these assumptions in place we project out future unlevered free cashflows for Telecom Italia for the next five years.

Exhibit 12: Discount Cashflow Projections

Discounted Cash Flow Model for Telecom Italia

General assumptions	
Share price as of last close	$0.90
Latest closing share price date	16/04/2016
Latest basic share count	14,851.39
Weighted average cost of capital	7.3%

Free cash flow buildup

Fiscal year	2012A	2013A	2014A	2015P	2016P	2017P	2018P	2019P	2020P
Fiscal year end date	*12/31/12*	*12/31/13*	*12/31/14*	*12/31/15*	*12/31/16*	*12/31/17*	*12/31/18*	*12/31/19*	*12/31/20*
EBITDA	6,346.0	7,353.0	8,785.0	6,760.0	7,398.1	7,522.8	7,687.7	7,891.6	8,121.8
EBIT	1,709.0	2,718.0	4,530.0	2,961.0	3,377.4	3,422.2	3,485.1	3,565.3	3,656.9
tax rate	*(370.6%)*	*208.8%*	*39.5%*	*89.7%*	*31.4%*	*31.4%*	*31.4%*	*31.4%*	*31.4%*
EBIAT (NOPAT)	**8,043.4**	**-2,958.1**	**2,738.8**	**304.7**	**2,316.9**	**2,347.7**	**2,390.8**	**2,445.8**	**2,508.6**
Depreciation and amortization					4,020.7	4,100.6	4,202.6	4,326.3	4,464.8
Change in WC					-122.2	0.6	42.8	-49.8	-3.9
Unlevered CFO					**6,215.3**	**6,448.9**	**6,636.2**	**6,722.3**	**6,969.6**
Less: Capital expenditures					-5,427.9	-5,467.5	-5,535.2	-3,753.0	-3,827.0
Less: Purchases of intangible assets					0.0	0.0	0.0	0.0	0.0
Unlevered FCF					**787.4**	**981.4**	**1,101.1**	**2,969.3**	**3,142.6**
% growth						24.6%	12.2%	169.7%	5.8%
Discount factor					71%	171%	271%	371%	471%
Assume cash flows are generated at:	End of period								
Midperiod adjustment factor	100.0%				0.7	1.0	1.0	1.0	1.0
Present value of Unlevered FCF					**749.2**	**870.4**	**910.4**	**2,288.5**	**2,257.8**

Perpetuity approach	
Normalized FCF in last forecast period (t)	2,504.8
Normalized FCF^{t+1}	2,554.9
Long term growth rate (g)	2.000%
Terminal value	48,430.6
Present value of terminal value	34,795.0
Present value of stage 1 cash flows	7,076.3
Enterprise value	**41,871.3**

Exit EBITDA multiple approach	
Terminal year EBITDA	8,121.8
Terminal value EBITDA multiple	6.500x
Terminal value	52,791.4
Present value of terminal value	37,928.0
Present value of stage 1 cash flows	7,076.3
Enterprise value	**45,004.3**
Implied TV perpetual growth rate	*2.250%*

Using a terminal growth rate of 2%, we arrive at a firm value of €41.9bn, with an equity valuation of 16.8bn or €1.13 per share (upside of 20.3%). Using an EBITDA multiple of 6.5x we derived a firm value of €45.0bn and an equity valuation of €19.9bn or €1.34 per share (upside of 32.8%).

Exhibit 13: Fair Value per Share under Perpetuity and EBITDA multiple approach.

Fair value per share

	Perpetuity	EBITDA
Enterprise value	41,881.6	45,017.7
Less: Net debt	-25,119.0	-25,119.0
Less: Trapped cash	0	0
Equity value	**16,763**	**19,899**
Diluted shares	14,851.4	14,851.4
Equity value per share	**€ 1.13**	**€ 1.34**
Market premium / (discount) to fair value	(20.3%)	(32.8%)

Sum of The Parts

Our sum of the parts valuation implies an upside of 31.8% to current market values.

Our sum of the parts is as follows. We assume TI's 66% stake in the Brazilian business is valued at market values. Right now, the Brazilian business is trading at 2.7x 2016 EBITDA.[5]

We assume the core Italian business trades at ~6.5x forward EBITDA. We assume the Italian business starts growing in 2H 16 as the unit economics of the fiber business start to shine through and throughout 2017 and generates ~7.4b of EBITDA. On average over the past 5 years the Brazil business contributes 19% of the group's total EBITDA. We apply this weight to our 2017 group EBITDA estimate

Exhibit 14: Sum of the Parts Valuation

SOTP Telecom Italia	€ 0.90			
	Core Italian Business	**Brazilian Business**	**Towers Business**	**Total**
2017 EBITDA	6,093.5	1,429.3		
Multiple	6.5	2.7		
Enterprise Value	39,607.7	3,859.2		
Less 2017 E Net Debt	- 24,539.0	- 580.0		
Less Minority Int.	-	-		
Equity Value	15,068.7	3,279.2	1,300.0	19,647.9
Shares Out				14,851.4
Ordinary Share Price				€ 1.32

[5] Source: JP Morgan Research

V. Appendix

Beta Calculation

Beta is calculated as a regression of stock excess return against market return:

$$\beta = \frac{Cov\left(R_{ex}^{(m)}, R_{ex}^{(s)}\right)}{Var\left(R_{ex}^{(m)}\right)}$$

Where $^{(m)}$ is the monthly market return above the monthly 10 year French sovereign debt return, and $^{(s)}$ is the monthly total stock return above the 10 year French sovereign debt return. The market return is represented by the total return of the CAC 40 index.

Exhibit 1: IMF GDP forecasts for Italy and Brazil

Exhibit 2: Verizon Fiber Subscriber Base Analysis

Verizon Fiber Subscriber Data

Verizon	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**
Fiber Subs	1.5	2.5	3.4	4.1	4.8	5.4	6.1	6.6	7.1
Growth YoY		*66.7%*	*36.0%*	*20.6%*	*17.1%*	*12.5%*	*13.0%*	*8.2%*	*7.6%*

Exhibit 3: Brazil Revenue Analysis

Brazil Revenue LFL

	2010	**2011**	**2012**	**2013**	**2014**	**2015**	**5 Year CAGR**
Revenue in reais	14,457.00	17,086.00	18,764.00	19,921.00	19,498.00	17,139.00	3.5%
AVF R$ vs Euro	2.332	2.327	2.510	2.868	3.123	3.697	
Revenue in Euro	6,199.00	7,343.00	7,477.10	6,945.23	6,243.76	4,635.58	-5.6%

Exhibit 4: Income Statement model for Telecom Italia

Financial Statement Model for Telecom Italia

Company name	Telecom Italia
Ticker	UNFI
Share price as of last close	€0.90
Latest closing share price date	16/04/2016
Latest fiscal year end date	31/12/2015
Circuit breaker:	ON

INCOME STATEMENT

Fiscal year	2012A	2013A	2014A	2015A	2016P	2017P	2018P	2019P	2020P
Fiscal year end date	*12/31/12*	*12/31/13*	*12/31/14*	*12/31/15*	*12/31/16*	*12/31/17*	*12/31/18*	*12/31/19*	*12/31/20*
Revenue	26,044.0	23,731.0	21,974.0	20,005.0	20,103.4	20,249.9	20,500.6	20,849.8	21,261.1
YoY Growth %		-8.9%	-7.4%	-9.0%	0.5%	0.7%	1.2%	1.7%	2.0%
Cost of Goods Sold	-11,289.0	-10,377.0	-9,430.0	-8,533.0	-8,684.7	-8,727.7	-8,815.3	-8,944.6	-9,099.8
Gross Profit	**14,755.0**	**13,354.0**	**12,544.0**	**11,472.0**	**11,418.7**	**11,522.2**	**11,685.3**	**11,905.2**	**12,161.4**
Margin %	*56.7%*	*56.3%*	*57.1%*	*57.3%*	*56.8%*	*56.9%*	*57.0%*	*57.1%*	*57.2%*
YoY Growth %		**-8.9%**	**-7.4%**	**-9.0%**	**0.5%**	**0.7%**	**1.2%**	**1.7%**	**2.0%**
Operating Costs	**-4,230.0**	**-3,814.0**	**-3,758.0**	**-4,468.0**	**-4,020.7**	**-3,999.4**	**-3,997.6**	**-4,013.6**	**-4,039.6**
% of Revenue	*16.2%*	*16.1%*	*17.1%*	*22.3%*	*20.0%*	*19.8%*	*19.5%*	*19.3%*	*19.0%*
EBITDA	**10,525.0**	**9,540.0**	**8,786.0**	**7,004.0**	**7,398.1**	**7,522.8**	**7,687.7**	**7,891.6**	**8,121.8**
Margin %	*40.4%*	*40.2%*	*40.0%*	*35.0%*	*36.8%*	*37.2%*	*37.5%*	*37.9%*	*38.2%*
YoY Growth %		*-9.4%*	*-7.9%*	*-20.3%*	*5.6%*	*1.7%*	*2.2%*	*2.7%*	*2.9%*
Depreciation and Amortization	-4,689.0	-4,553.0	-4,284.0	-4,135.0	-4,020.7	-4,100.6	-4,202.6	-4,326.3	-4,464.8
Profit from ordinary activities (EBIT)	**1,709.0**	**2,718.0**	**4,530.0**	**2,961.0**	**3,377.4**	**3,422.2**	**3,485.1**	**3,565.3**	**3,656.9**
Margin %	*6.6%*	*11.5%*	*20.6%*	*14.8%*	*16.8%*	*16.9%*	*17.0%*	*17.1%*	*17.2%*
Other operating income and expense from investments, net	-4.0	-3.0	11.0	11.0	5.2	9.1	7.1	8.1	7.6
Operating Profit	**1,705.0**	**2,715.0**	**4,541.0**	**2,972.0**	**3,382.6**	**3,431.3**	**3,492.2**	**3,573.4**	**3,664.5**
Interest Expense	-3,981.0	-4,186.0	-4,594.0	-5,281.0	-5,228.2	-5,175.9	-5,124.1	-5,072.9	-5,022.2
Interest Income	1,983.0	2,003.0	2,400.0	2,756.0	2,285.5	2,285.5	2,285.5	2,285.5	2,285.5
Pretax profit	**-293.0**	**532.0**	**2,347.0**	**447.0**	**439.9**	**540.9**	**653.6**	**786.0**	**927.9**
Taxes	-1,086.0	-1,111.0	-928.0	-401.0	-138.1	-169.8	-205.2	-246.8	-291.3
Net income from continuing operations	**-1,379.0**	**-579.0**	**1,419.0**	**46.0**	**301.8**	**371.1**	**448.4**	**539.2**	**636.5**
Margin %	**-5.3%**	**-2.4%**	**6.5%**	**0.2%**	**1.5%**	**1.8%**	**2.2%**	**2.6%**	**3.0%**
YoY Growth %									
Profit (loss) from Discontinued operations/Non current assets held for sale	102.0	341.0	541.0	611.0					
Net Income for Period	-1,277.0	-238.0	1,960.0	657.0					
Basic shares outstanding	13,277.6	13,571.4	14,851.4	14,851.4	14,851.4	14,851.4	14,851.4	14,851.4	14,851.4
Impact of dilutive securities	6,026.1	6,026.1	6,026.1	6,064.6	6,064.6	6,064.6	6,064.6	6,064.6	6,064.6
Diluted shares outstanding	19,303.7	19,597.5	20,877.5	20,916.0	20,916.0	20,916.0	20,916.0	20,916.0	20,916.0
Basic EPS	($0.10)	($0.04)	$0.10	$0.00	$0.02	$0.02	$0.03	$0.04	$0.04
Diluted EPS	**($0.07)**	**($0.03)**	**$0.07**	**$0.00**	**$0.01**	**$0.02**	**$0.02**	**$0.03**	**$0.03**

Exhibit 5: JP Morgan Research on Industry Multiples

Table 4: Europe – Sector level valuation multiple comparison

	P/E			Dividend Yield			EV/EBITDA			Price to Book		
	2015e	2016e	2017e	2015e	2016e	2017e	2015e	2016e	2017e	2015e	2016e	2017e
Europe	**15.8**	**14.8**	**13.3**	**3.5%**	**3.7%**	**4.0%**	**8.3**	**7.9**	**7.3**	**1.7**	**1.7**	**1.6**
Energy	**13.9**	**13.8**	**10.7**	**6.3%**	**6.2%**	**6.3%**	**4.7**	**4.7**	**4.0**	**0.9**	**0.9**	**0.9**
Materials	**15.8**	**15.5**	**13.2**	**3.8%**	**3.8%**	**4.2%**	**7.7**	**7.6**	**6.7**	**1.4**	**1.3**	**1.3**
Chemicals	17.6	16.4	14.9	3.0%	3.2%	3.4%	9.4	8.9	8.2	2.5	2.3	2.2
Construction Materials	23.3	16.5	13.1	2.5%	2.8%	3.2%	9.9	8.4	7.2	1.1	1.1	1.0
Metals & Mining	11.3	13.5	10.0	6.4%	5.9%	6.9%	6.2	6.4	5.4	0.7	0.7	0.7
Industrials	**16.6**	**15.4**	**13.8**	**3.0%**	**3.2%**	**3.4%**	**8.9**	**8.4**	**7.6**	**2.6**	**2.4**	**2.2**
Capital Goods	16.7	15.6	13.9	3.0%	3.2%	3.4%	9.5	8.9	8.1	2.6	2.4	2.2
Transport	15.5	13.8	12.5	3.0%	3.2%	3.3%	7.2	6.7	6.2	2.1	1.9	1.8
Business Svs	17.6	16.3	15.0	2.9%	3.1%	3.3%	11.0	10.5	9.7	4.5	4.1	3.7
Discretionary	**15.7**	**14.2**	**12.5**	**2.8%**	**2.9%**	**3.2%**	**7.1**	**6.5**	**6.0**	**2.4**	**2.2**	**2.0**
Automobile	10.7	9.7	8.3	2.8%	3.0%	3.5%	4.0	3.6	3.3	1.3	1.2	1.1
Consumer Durables	18.1	16.3	14.7	2.3%	2.6%	2.8%	10.8	9.6	8.8	2.9	2.6	2.6
Media	18.7	17.2	15.7	4.2%	3.7%	3.6%	9.2	8.1	7.5	3.1	3.1	2.9
Retailing	21.6	19.4	17.5	2.3%	2.5%	2.8%	13.2	13.4	12.0	5.5	5.0	4.6
Hotels,Restaurants&Leisure	21.0	18.3	16.3	2.3%	2.6%	2.8%	10.8	10.0	8.9	4.1	3.8	3.6
Staples	**22.3**	**20.7**	**19.1**	**2.6%**	**2.7%**	**2.9%**	**13.0**	**12.6**	**11.8**	**3.6**	**3.5**	**3.2**
Food & Drug Retailing	18.6	15.6	13.7	3.0%	2.7%	3.0%	7.7	7.3	6.7	1.5	1.7	1.6
Food Beverage & Tobacco	22.5	21.2	19.6	2.7%	2.8%	3.0%	13.9	13.6	13.1	3.8	3.7	3.4
Household Products	23.1	21.6	20.2	2.3%	2.4%	2.6%	14.3	13.5	12.3	4.7	4.3	4.0
Healthcare	**18.7**	**17.4**	**15.9**	**2.9%**	**3.0%**	**3.2%**	**12.8**	**11.8**	**10.9**	**4.0**	**3.8**	**3.6**
Financials	**11.5**	**11.0**	**10.0**	**4.1%**	**4.5%**	**5.2%**	**-**	**-**	**-**	**1.0**	**0.9**	**0.9**
Banks	10.7	10.0	9.0	4.2%	4.9%	5.7%	-	-	-	0.8	0.8	0.8
Diversified Financials	12.6	12.2	11.0	2.8%	3.2%	4.2%	-	-	-	1.1	1.1	1.0
Insurance	11.3	11.1	10.5	4.6%	4.8%	5.1%	-	-	-	1.2	1.1	1.1
Real Estate	22.1	20.8	19.8	3.8%	4.0%	4.2%	-	-	-	1.1	1.0	0.9
IT	**21.3**	**18.5**	**16.2**	**1.7%**	**1.9%**	**2.1%**	**12.1**	**10.7**	**9.6**	**3.5**	**3.2**	**2.9**
Software and Services	21.1	18.8	17.3	1.5%	1.6%	1.8%	12.8	11.5	10.5	4.1	3.7	3.3
Technology Hardware	19.5	16.2	14.5	2.6%	2.8%	3.0%	9.6	8.3	7.5	2.6	2.3	2.2
Semicon & Semicon Equip	23.4	20.2	16.0	1.3%	1.5%	1.7%	14.3	12.7	10.8	3.9	3.6	3.2
Telecoms	**20.2**	**19.0**	**17.1**	**4.2%**	**4.4%**	**4.6%**	**6.7**	**6.6**	**6.4**	**1.9**	**1.9**	**1.9**
Utilities	**14.2**	**14.3**	**13.6**	**5.2%**	**5.3%**	**5.4%**	**7.3**	**7.0**	**7.3**	**1.3**	**1.3**	**1.3**

Source: IBES and Datastream.

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