18th Sep 2017

JM FINANCIAL

Cable Monetisation + Broadband Opportunity

Amid Structural Hurdles

JM Financial Institutional Securities Limited

Table of Contents

Contents	Page No.

The share prices in this report are as on the close of trading on 14 September 2017.

Media Distribution

Cable monetisation + broadband opportunity amid structural hurdles

Sanjay Chawla
sanjay.chawla@jmfl.com | Tel: (+91 22) 6630 3155
Shilpa Pattnaik
shilpa.pattnaik@jmfl.com | Tel: (+91 22) 6630 3134

We expect Cable MSOs to register a 20-25% CAGR in video subscription revenues [VSR] over the next three years, led by improving monetisation in Phase-III and IV digitisation areas. Implementation of TRAI tariff order [TTO] may drive higher monetisation and reduce content-cost risk even without any increase in the customer ARPU. Further, with CATV [video] capex-cycle coming to an end in FY18, MSOs can employ rising cash accruals to drive faster broadband [BB] growth and/or reduce debt. We prefer MSOs with regional dominance, significant primary business (last mile or LM ownership), strong presence in HSM [Hindi Speaking Markets] and good balance sheet [<3x net debt to EBITDA].

We are Neutral on the Indian MSO sector, as upsides from nearly double-digit growth in pay TV revenues, cable digitisation [DAS] and BB under-penetration, are tempered by structural hurdles, such as: (1) lack of control over LM cable access; (2) a fragmented MSO industry structure given low entry-barriers; and (3) a relatively concentrated broadcasting industry. Upside risks are: (1) TTO implementation; (2) stronger unity and pricing discipline among MSOs; and (3) MSO industry consolidation. Downside risks: (1) competition from DTH; (2) faster growth in content costs; and (3) BB competition from Jio. We see limited risk to pay TV revenues from growth in over-the-top or OTT video [subscription video on demand: SVOD], given fairly affordable pay TV pricing, relative to the cost of data access.

We initiate coverage on GTPL Hathway with a BUY and Sep-18 DCF-based target price of INR 200. We initiate on SITI Networks [Siti] with a SELL and Sep-18 TP of INR 20. We also discuss Ortel Communications [Not Rated] in this report. Ortel is a regional MSO, dominant in Odisha, and it has a unique B2C business based on LM ownership incl. LCO acquisitions.

- **Nearly double-digit revenue growth in pay TV, under-penetration in BB:** We forecast a 9% CAGR in pay TV revenues over the next 5 years (CY16-CY21), driven by CAGRs of c.3.0% in the number of pay TV households [HHs], and 6.0% in ARPU. Further, while cable pay revenues may see single digit CAGR (c.7%), subscription revenue of MSOs (incl. share of broadcasters or BCs) is likely to grow in the high-teens (c.19% CAGR), thanks to ARPU growth and revenue redistribution, brought about by digitisation. Finally, BB is a long-term growth opportunity for MSOs, as fixed [wired] BB currently has a paltry 6.5% household [HH] penetration. However, weak balance sheets, lack of B2C experience and the impending Jio entry, are key hurdles to fully exploiting the BB opportunity.

- **MSO business model—repair in slow motion; TTO may speed it up:** While MSO-share of pay TV ARPU is still below the TRAI recommended (not mandated) 55%, monetisation levels i.e. secondary ARPUs have improved in Phase-I and II areas, with clear signs of a pick-up in P-III. Further, MSOs have started collecting higher activation fee (from LCOs) on set-top-boxes [STBs], thereby reducing the net-subsidy burden to below INR 500/sub. We see scope for higher ARPUs and monetisation based on faster HD penetration, and GST and TTO implementation. In fact, implementation of TTO (currently under litigation) would also reduce content risk, as pay channel [PC] costs would become pass-through for MSOs.

- **GTPL—the best cable business is undervalued:** GTPL is the only profit-making MSO in the listed space, thanks to its regional dominance (Gujarat) and efficient operations. GTPL's RoAE was 11% in FY17, and we expect it to reach 16% by FY20. Further, GTPL is generating operating cash flow [OCF] of INR 2bn, and its balance sheet is among the best in the cable sector—net debt post-IPO, stood at c.1x FY17 EBITDA. We forecast GTPL's EBITDA to double, and PAT to triple over the next three years, and believe the stock is undervalued at an EV/EBITDA of 5.7x and a P/E of 16.5x on our FY19 estimates. We initiate with a BUY and Sep-18 TP of INR 200 (34% upside potential). Downside risks: (1) weak BB execution and (2) overhang from a potential stake sell-down by Hathway (>8x leverage in Mar-17).

- **SITI Networks—growth recovery is more than priced in:** Siti is one of India's biggest MSOs, with 13.2mn gross video subs (11.6mn digital subs). The medium-term revenue growth

Exhibit 1. Media ratings and target prices

Company	Rating	Sh Price (INR) [a]	Sep-18 TP (INR)
Zee	HOLD	529	550
Sun TV	HOLD	836	760
SITI	**SELL**	**25**	**20**
GTPL	**BUY**	**149**	**200**
Dish TV	Not Covered		
Ortel	Not Rated		

Source: JM Financial. [a] Share prices as on the close of 14-Sep-17.

Exhibit 2. Media valuations

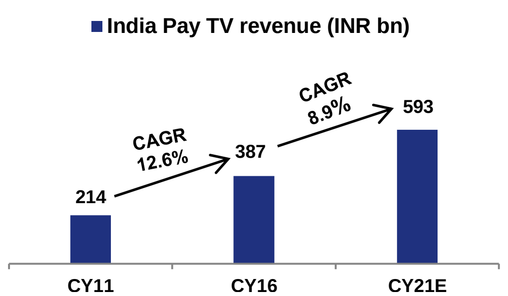
Company	EV/EBITDA (x) FY18E	FY19E	EBITDA CAGR (%) [a]
Zee	22.6	18.9	15.7
Sun TV	18.0	14.5	17.7
SITI	**12.1**	**10.6**	**20.1**
GTPL	**7.3**	**5.7**	**22.0**
Dish TV	10.3	9.2	12.1
	FY16	**FY17**	
Ortel	4.3	5.9	

Source: JM Financial. [a] FY18E-20E.

outlook is robust, as two-third of Siti's digital subscriber base is in Phase-III and IV markets. However, we initiate with a Sell, and Sep-18 TP of INR 20, since despite our projected EBITDA CAGR of 36% for FY18/19: (1) valuations are expensive at 10.6x FY19E EV/EBITDA; and (2) Siti will remain loss-making with negative FCF over the next 2-3 years. Further (3) Siti lacks market dominance in any major geography (barring West Bengal to some extent) and (4) Siti has high balance sheet leverage—net debt was c.6x FY17 EBITDA as on Mar-17. Key upside risks to our view and TP are implementation of TTO, and higher Carriage & Placement [C&P] income from Phase III and IV markets.

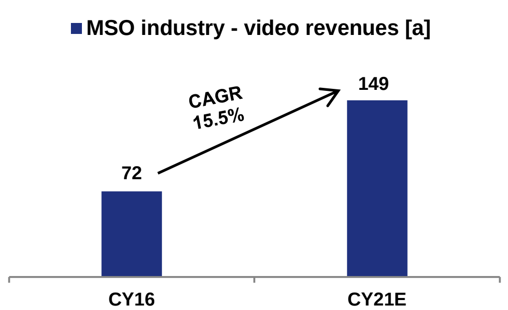
- **Ortel [Not Rated]—a unique and differentiated business:** Ortel is market leader in Odisha (50% share of cable TV subs) with an emerging presence in five nearby states. It is a B2C MSO with ownership and control of the last mile—90% of its video subs are primary, i.e. directly owned, allowing it to capture the entire video ARPU. However, Ortel's inorganic growth will barely yield break-even returns, as the overall cost of LCO-acquisitions appears high relative to the prevailing low ARPUs. Thus, Ortel needs to pursue more organic LM growth, along with tighter cost-control, in our view. Its share price has declined by over 80% from its Oct-15 peak, due to earnings cuts and debt-rollover concerns.

Exhibit 3. India Pay TV revenue (INR bn)



Source: Companies, JM Financial.

Exhibit 4. MSO industry—video revenues [a] (INR bn)



Source: Companies, JM Financial. Note: [a] Comprises video subscription revenue (incl. share of BC) + C&P revenue.

Investment summary—robust growth amid structural hurdles

We forecast near double-digit growth (9% CAGR) in pay TV revenues in India over the next five years [CY16-CY21] led by ARPUs (6.0%), as digitisation or implementation of Digital Addressable Systems [DAS] would continue to drive better monetisation of TV content. Cable subscription revenues will likely grow slower (c.7%) vis-à-vis DTH (c.12%); nonetheless, within cable, we forecast MSO subscription revenues (inclusive of the broadcasters' share) to witness c.19% CAGR, thanks to transparency in subscriber declarations under DAS. However, despite improving ARPU distribution, we do not expect MSOs to attain their fair share (25% net) given structural hurdles, such as: (1) continued dependence on LCOs, who own the last mile and control access to customers; (2) fragmented MSO industry given low entry-barriers; and (3) concentrated supplier (broadcasting) industry, having oligopoly characteristics.

Positive topline drivers for MSOs are: Digitisation/Monetisation, HD adoption, TTO implementation, and GST implementation (over a longer horizon)

Nonetheless, we believe that under-penetration in fixed or wired BB presents a significant growth opportunity for MSOs; however, our optimism is tempered by: (1) stretched balance sheets of major MSOs; (2) their limited execution experience in what is essentially a technology and service intensive B2C business; and (3) impending Jio entry—may limit BB ARPUs and profitability over the medium-term. **We therefore have a Neutral view on the Cable MSO sector.**

We initiate on GTPL with a BUY [Sep-18 TP of INR 200], and on SITI Networks [Sep-18 TP of INR 20] with a SELL. We also discuss Ortel's business model and financials in this report; however, we do not have a Rating on the stock.

Positive investment drivers

- **Under-penetration of TV and broadband—subscriber growth:** With TV penetration at 64% of total households [HHs] as of end-2016, India has the highest number of non-TV HHs (around 100 mn) in the world. Nonetheless, pay TV penetration is high (81% of TV HHs; c.52% of total HHs) thanks to low ARPUs (INR 220; USD 3.3). We forecast a 3.0% CAGR in the number of pay TV HHs over CY16-CY21, driven by 2.0% CAGR in total HHs and 1.0% CAGR in pay TV penetration. Yet, our forecasts imply a mere 5 mn reduction in the number of non-TV HHs, to 95 mn by 2021, suggesting room for upside. Separately, with merely 18.25mn wired BB connections or subs as of Mar-17, India's BB penetration at 6.5% of HHs, is similar to that of Indonesia (c.4%), but significantly below that of other developing nations, such as Philippines (around 20%), Vietnam/Thailand (30%), Brazil (40%) and Russia/China (50%). As of Mar-17, telcos controlled 73% of India's wired BB market (77% in Mar-16), but the cable MSOs are well-placed in our view, to capture higher incremental growth, given their significant intra-city fiber-ownership (albeit mostly overhead or aerial fiber), and their existing LCO-relationships, which come in handy for deployment and maintenance of the BB network.

Pay TV HHs exclude FTA DTH HHs, FTA terrestrial TV HHs and OTT video (SVOD) subscriptions

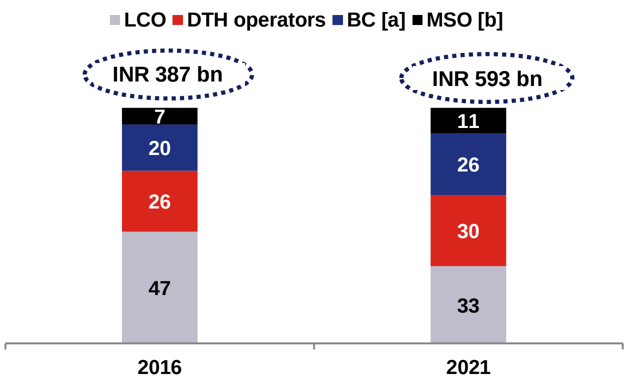
- **Under-monetisation of TV content—ARPU growth:** India has one of the lowest pay TV ARPUs in the world, even in terms of PPP-dollars, despite a large number of pay channels (295 of a total of 888). In fact, the pay TV ARPU is merely 10% higher than the average price of a multiplex cinema ticket. Low pay TV ARPU is a result of historical predominance of analog cable (limited channel carrying capacity), absence of last-mile control, lack of content exclusivity (because of 'must provide' regulations), and intense competition among DPOs (distribution platform operators) since the advent of Satellite TV (DTH). Nonetheless, pay TV ARPUs have seen a CAGR of 5.6% over the last 5 years [CY11-16] and we forecast a 6.0% CAGR over the next 5 years [CY16-CY21] driven by digitisation in Phase-III (recently concluded) and Phase-IV markets (ongoing), as well as increase in HD adoption—currently 9-10% of total digital or DAS HHs (excluding Free Dish).

Indian households pay far less for TV content vis-à-vis consumers in other developing countries

- **Under-declaration of pay TV subs by LCOs—ARPU redistribution:** Given the historical lack of 'addressability', bulk of the pay revenues (>85%) in cable TV were cornered by the LCO, leaving a rather meagre share (10-15%) for MSOs and broadcasters. However, post digitisation in P-I and P-II areas (2012-14), the combined share of MSOs and BCs in pay TV ARPU has increased to c.25% (blended across phases; estimated for 2016), driven by a 35-40% share in the P-I and II areas. Post realisation of full digitisation benefits across India, we forecast MSOs and BCs to capture 40% of cable pay revenues by 2021, still lower than the 55% level recommended by TRAI. Including carriage & placement fee (C&P) earned by MSOs from the BCs, we expect the net share of MSOs in cable subscription revenues to increase to 20% by 2021 from an estimated c.12% in 2016. Net-net, this translates to a projected 15-16% CAGR in video revenues of MSOs, which are made up of gross subscription revenue (i.e. inclusive of BCs' share) and C&P income.

Going by the monetisation trends in Phase-I and II markets so far, a 40% share of retail ARPU for MSOs + BCs can be considered a 'fair' share under the circumstances

Exhibit 5. Distribution of pay TV revenues in India (%)



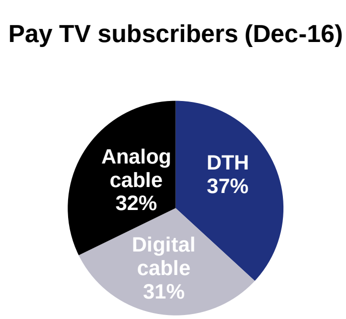
Source: FICCI-KPMG 2017 report, JM Financial estimates. Note: [a] Net of C&P payments. [b] Includes C&P receipts.

Negative investment drivers

- **LCO dependence—lack of last mile control:** This has historically resulted in poor monetisation (i.e. secondary ARPUs), large receivables (>120 debtor days) and bad debts for the MSOs. Even after cable digitisation in over 50mn HHs and implementation of consumer packaging by leading MSOs in their DAS areas, there is B2B LCO billing by MSOs (albeit on a CPS or cost per subscriber basis), and no direct consumer billing except for primary/direct subscribers. We forecast that monetisation (including share of BCs) would reach 40% of retail or consumer ARPU over the next 5 years, from the 24-25% level in 2016; however, it would remain well below the 55% level recommended by TRAI.

- **High competition within and without:** While the Top-5 MSOs service around 50% of India's Cable TV base (total c.93mn HHs as of end-CY16), there are over 5,000 MSOs in the country, of which 1,457 have been given a provisional DAS license as of 31-Jul-17 [Source: MIB]. Such high industry-fragmentation due to low entry-barriers, has further constrained MSOs ability to drive higher monetisation from LCOs. Furthermore, many leading MSOs (such as Siti and DEN) have formed dozens of JVs with other smaller MSOs to expand their footprints; this has resulted in sub-optimal operational control, potential conflicts of interest and sometimes revenue leakages. Finally, intense competition from DTH operators has also prevented faster growth in pay TV ARPUs. As of Dec-16, DTH segment accounted for 37% of India's total pay TV subs, and 54% of digital pay TV or DAS subs.

Exhibit 6. Distribution of pay TV subscribers [100%=147mn subs]



Source: Industry sources, JM Financial.

- **Weak balance sheets—may constrain pace of BB ramp up:** As of Mar-17, net debt of listed MSOs ranged between 1x-8x FY17 EBITDA. This may constrain their ability to quickly scale-up broadband business, which entails a higher capex per subscriber (INR 8,000-12,000) vis-à-vis the video business (INR 800-1000 for B2B MSOs), as well as higher capital intensity i.e. a lower asset turnover ratio. Nonetheless, leverage ratio may gradually decline for MSOs, as: (1) increase in secondary ARPUs i.e. monetisation levels in Phase III and IV are set to boost EBITDA generation over the next 2-3 years; and (2) capex cycle in video business is coming to an end in FY18, post completion of cable digitisation (essentially seeding of boxes) in the P-IV DAS areas.

Upside risks

- **Faster growth in TV penetration:** We forecast TV penetration at 69% of total HHs by CY21 (vs. 64% in CY16), which translates to a 3.5% CAGR in the number of TV HHs to 215mn. Yet, the number of non-TV HHs (>90% in rural India) comes down by merely 5mn, to 95mn in CY21 from 100mn in CY16. Improving rural electrification, power availability and growth in GDP per capita, may result in a faster decline in the number of non-TV HHs.

- **Implementation of TRAI's TV tariff order:** TRAI's latest TTO (currently stuck in litigation), is aimed at boosting customer-choice, by making a-la-carte selection of pay channels more viable, and by ensuring availability of FTA-only bouquets (other than the BST) . Implementation of TTO may drive increase in retail ARPUs in our view, benefiting the entire value chain. Even without any increase in ARPU, MSOs may be able to improve their 'net' share of ARPU (inclusive of C&P), despite a likely decrease in C&P income. Further, content cost risk would come down, as TRAI has mandated that content cost (PC cost) would essentially become a pass-through for MSOs; this would also result in fewer disputes and litigations between MSOs and BCs. Finally, industry may also see a decline in subscriber churn caused by LCO-poaching (bulk STB-swapping), as a variable revenue and cost model would deter rival MSOs from giving high STB subsidy for weaning away digital customers.

TRAI's latest tariff order is at worst, neutral for MSOs, and at best neutral for BCs (in the near term), in our view. Longer-term, even the BCs would benefit from the TTO, in our view

- **Greater unity and pricing discipline among MSOs:** LCOs have historically taken advantage of a fragmented MSO industry, by frequently churning over to those MSOs who were willing to provide TV signals at a lower cost (i.e. lower monetisation). This perennial dis-unity among MSOs is also a result of their varying cost structures (cheaper content deals, lower overheads, tax avoidance etc.), as well as revenue models—e.g. an MSO earning higher C&P may settle for lower ARPUs from the LCOs. Nonetheless, major Phase-I and II markets have seen better discipline among MSOs, as reflected in higher secondary ARPUs (around INR 100 in P-I and INR 80 in P-II), even though there have been some instances of 'box swapping' or LCO-churn post digitisation (since switching costs remain low for LCOs).

According to Siti, there are around 20 MSOs in Delhi alone, and this has a resulted in a rather fragile unity among MSOs against the LCOs

- **MSO industry consolidation:** We believe the industry 'tail' would continue to consolidate gradually in our view, as smaller MSOs find it more and more difficult to earn meaningful C&P revenues, finance the STB subsidy, and lose some of their cost advantages in the post-demonetisation/DAS/GST era. However, for consolidation to meaningfully boost bargaining power of MSOs vis-à-vis LCOs and BCs, the industry needs to see larger deals and fewer scale-players eventually, in our view.

Downside risks

- **Competition from free-to-air DTH**: While competition between MSO and DTH segments would continue to remain vigorous, pay TV as a category faces risk from faster growth in FTA television—total FTA subscriber base was 22mn on DTH platform [Free Dish] and an estimated 12mn on Terrestrial TV platform, as of end-CY16. The Free Dish DTH service operated by state-controlled Prasar Bharti (Doordarshan) provides 128 TV channels currently vs. 64 channels in Aug-15; subscribers do not incur a monthly cost or rental, but only a one-time cost of around INR 1000. Free Dish saw a surge in its subscriber base to 22mn as of end-CY16 from 10mn in CY14 [FICCI-KPMG 2017 report]. Such rapid scale up has been mainly driven by the launch of new FTA movie channels, and broadcasters making relatively fresh content available on their FTA GECs, i.e. reduced time-lag or windowing vis-à-vis initial run on pay GECs. We forecast 11mn FTA additions over

CY17/CY18, but a faster uptake of FTA services may result in higher subscriber churn in the cable segment, and/or put pressure on pay TV ARPUs at the margin.

- **Faster-than-expected growth in pay channel expenses:** Before digitisation got underway in late 2012, MSOs were earning a negative spread on video subscription revenues, i.e. MSOs were paying more to broadcasters (by way of pay channel costs) than they were collecting from the LCOs (as VSR). Thus, MSOs were generating their entire EBITDA from C&P income. After 2012, VSS has turned positive, as VSR has grown faster than PC costs. However, gross margin (SGM) on subscription revenues remains rather small (10-15%), as PC costs in cable have also seen a robust c.15% CAGR (estimated) over the last 5 years. It is vital for the health of the video business that SGM expands to 30-35% in the next 3-4 years. We forecast 19-20% CAGR in VSR compared with 13-14% CAGR in PC costs. A faster growth in PC costs therefore, is the key downside risk to our Neutral view on the Cable MSO sector.

- **Jio entry in fixed broadband:** Reliance Jio currently has an MSO license but it is unlikely to enter a B2B cable TV business, in our view. Even a foray into broadband (a B2C business) may require signing up thousands of LCOs, and obtaining the approval of resident associations and local authorities—for access into the buildings (multi-dwelling units) and customer homes, and for deploying the last mile overhead as well as in-building cables. Given these structural hurdles, we do not think Jio would be able to ramp up wired BB fast enough, to pose a meaningful risk to the subscriber growth of MSOs. We highlight wired BB market itself is under-penetrated, and there is room for everyone to grow. Furthermore, we believe MSOs and Jio would drive their BB growth by attracting a share from the 11mn DSL user base currently held by BSNL and MTNL. However, a Jio entry is likely to force its rivals to upgrade their product profile, i.e. provide higher speeds through either DOCSIS 3.0 or FTTX (more capex) and also increase the data allowance, including unlimited data plans (possibly more opex). We believe a large-scale Jio entry in BB would also bring down monthly BB ARPUs on higher-speed plans to around INR 600-700 levels [USD 10-11 per month] from INR 900-1000 currently.

- **Poor broadband execution:** MSOs continue to run a largely B2B video business even after digitisation in most of India. In general, they lack the experience in running a technology + service intensive B2C business, and have faced teething problems, ever since they forayed into broadband. Poor execution in BB may result in higher customer churn, lower EBITDA margins or higher-than-expected capex, in our view.

GTPL—the best listed cable business is undervalued; Buy

We initiate on GTPL with a Buy rating, and Sep-18 TP of INR 200 derived from a DCF valuation. We believe GTPL has the best cable business among listed MSOs, thanks to its dominant leadership position in Gujarat and its efficient operations.

GTPL has the best cable business in the listed MSO space

GTPL is the only profit-making MSO among listed cable peers. Its video business is likely to grow strongly over the next three years (c.22% revenue CAGR), as one-third (=2.5mn) of its 7.5mn active customer base was under-monetised as of Mar-17. Further, BB under-penetration presents a secular growth opportunity; GTPL's BB revenue has grown >7x in the past three years, and we forecast it to double in the next three. We forecast GTPL's consolidated EBITDA to double, and PAT to more than triple over the next three years (by FY20). Further, GTPL's under-leveraged balance sheet and growing OCFs indicate it has the potential to deliver around 3% dividend yield (at CMP), which can provide share price upside beyond our target price. We believe GTPL's stock is undervalued at FY19E EV/EBITDA of 5.7x, and P/E of 16.5x on our forecasts.

Investment positives:

1. GTPL is the only profit-making company among listed cable MSOs
2. Regional MSO—dominant in Gujarat (>65% share of CATV HHs), and has a significant #2 position in the Kolkata region
3. Good HSM coverage—Gujarat accounts for over 8% of the HSM universe. Higher HSM coverage drives higher C&P income from the broadcasters. Top-4 broadcasters produce maximum content in Hindi language, as HSM accounts for the highest share of viewership and ad spend in India. In fact, share of HSM viewership and ad-spend are similar to the combined share of four southern (regional) languages
4. Has one of the highest C&P ARPUs among MSO peers
5. Strong LCO relationships in Gujarat and Kolkata, thanks to early market entry. Consumer packaging largely implemented in the Phase-I and II markets
6. High exposure to Phase III and IV markets that are yet to be monetised properly—62% of the STBs seeded and 65% of active digital subs were from P-III and P-IV markets as of June 2017
7. Strong operating cash flows + low leverage (c.1x EBITDA) post the IPO
8. Well-run and profitable broadband business; home-pass penetration is one of the highest (>20%), and EBITDA margins are already >25%
9. 32% EBITDA CAGR projected by us for the next 2 years (FY17-19E), and 27% for the next 3 years
10. Announced its maiden dividend of INR 1.0 recently (28% pay out excluding DDT). Has potential to pay a lot more—around 3% yield at a target debt-to-EBITDA of 1x

Investment negatives:

1. Industry dynamics remain challenging given the structural issues
2. Broadband network runs on MEN technology (2-10 Mbps) and needs to be upgraded quickly to ensure retention of top-end customers
3. Broadband execution risk—BB is a B2C business that is both technology-intensive and service-intensive. MSOs like GTPL have expertise in running B2B wholesale operations
4. Risk of stock overhang from Hathway Cable [co-promoter] after expiry of lock-in next year. Hathway may consider partially selling down its 37.2% equity stake in GTPL, as its own balance sheet is highly geared at >8x debt to EBITDA [Mar-17]
5. Key person dependency

SITI—growth recovery is more than priced in; Sell

SITI Networks [Siti] is one of India's largest MSOs, with 13.2mn gross CATV or video subs, of which 11.6mn were digitised as of Jun-17. Siti's revenue growth outlook is robust for the next 2-3 years, as more than two-thirds of its digital subs are in the 'under monetised' Phase-III and IV markets. We initiate on Siti with a Sell rating, since despite our projected EBITDA CAGR of 36% for FY18/19: (1) valuations are expensive at 10.6x FY19E EV/EBITDA; and (2) Siti will remain loss-making with negative FCF over the next 2-3 years. Further: (3) Siti lacks market dominance in any major geography (barring West Bengal to some extent); and (4) Siti has high balance sheet leverage—net debt was 5.9x FY17 EBITDA as on Mar-17.

Our Sep-18 target price of INR 20 is DCF-derived. Key upside risks to our view and TP are: implementation of the TRAI Tariff Order and higher C&P income from Phase III/IV markets. Downside risks are: slower pace of monetisation (i.e. ARPU increase) in Phase III and IV markets, and lower growth than projected by us (33% CAGR) in broadband revenues.

Investment negatives:

1. Cable MSO industry is highly competitive given low entry barriers; competition also from DTH and FTA satellite TV (Free Dish)
2. Lack of market dominance in any geography—appears to be spread thin with CATV presence in 580+ locations; this may explain Siti's lowest adjusted EBITDA margin among peers
3. Lagging in broadband scale—execution challenges are not trivial, since BB is a technology-intensive B2C business—a high tech and high touch business
4. Despite strong projected EBITDA growth, PAT losses to continue for next 2-3 years
5. FCF to remain negative for another two years, resulting in further increase in the net debt—leverage ratio to remain high at 4-5x ND/EBITDA over FY18/19
6. Valuations are expensive at 10.6x FY19E EV/EBITDA
7. Total investment level (i.e. gross capital invested) is materially higher vis-à-vis peers, despite a similar scale of business—this suggests capex inefficiency. Net debt has gone up by INR 2.8bn [+31%] since Mar-14, despite INR 9.1bn of equity raising via QIP, and preferential allotment of equity/warrants to Promoters
8. Recent CEO and CFO churn is a cause of concern—could result in perception issues

Investment positives:

1. One of India's biggest cable MSOs in terms of video subscriber base
2. Strong subscription revenue growth outlook given Siti's high exposure to Phase III and IV DAS markets, which are currently under-monetised—these account for 66% of STBs seeded by Siti, and nearly 75% of its overall video subs (including analog). We reckon Siti is currently capturing 15-25% of the customer/retail ARPU in Phase-III and IV areas, as against 35-40% in Phase-I and II
3. Margin expansion driven by increase in video subscription gross margin, increase in share of broadband revenues, and operating leverage—significant level of fixed opex is already built up in the Phase-III and IV locations
4. 36% EBITDA CAGR projected by us for the next 2 years (FY17-19E), and 28% for the next 3 years
5. Relatively strong systems and processes—LCO management is through formal agreements; initiatives also under way for prepaid-migration of around 2000 LCOs (out of a total of 24,000) in 97 locations to control receivables and bad debts
6. Backed by Essel Group—has a dominant presence in the media sector
7. Stock has been part of the MSCI India domestic small-cap index since May 2016

Ortel [Not Rated]—a unique B2C MSO business

Ortel is a regional cable MSO, dominant in Odisha, with a growing presence in five adjoining states. Ortel has a unique direct-to-consumer (B2C) business that involves ownership and control of the last mile network—90% of its video subs are primary i.e. directly owned. The company is also a provider of fixed or wired broadband, which accounted for 9% of its total subscribers (RGUs) as of end-FY17, and 18% of adjusted revenues in FY17.

Positives:

1. A unique B2C video business—market leader in Odisha with around 50% share of cable TV subscribers
2. Attractive broadband economics even at relatively lower ARPUs, thanks to ownership and control of last mile network
3. Significant headroom for long-term growth, both in video and in broadband
4. Trading at 5.7x FY17 EV/EBITDA
5. M&A potential—could be a valuable asset for telcos, as also for MSOs that may be looking to expand into Odisha and adjoining markets

Negatives:

1. Cable MSO industry is highly competitive because of low entry barriers; competition also from DTH
2. Smaller scale (<1mn video subs) relative to peers, and presence in low-ARPU markets
3. Cost of LCO-acquisitions is high, relative to the ARPU potential; this has a limiting effect on financial returns, unless the acquisition model is fine-tuned, and/or growth-mix is changed in favour of more organic RGU additions
4. Decline in cash generation, led by a drop in EBITDA and surge in receivables in FY17, constrains debt-servicing ability, especially debt repayments
5. Free cash flow [FCF] is negative

Cable monetisation and broadband are key industry drivers

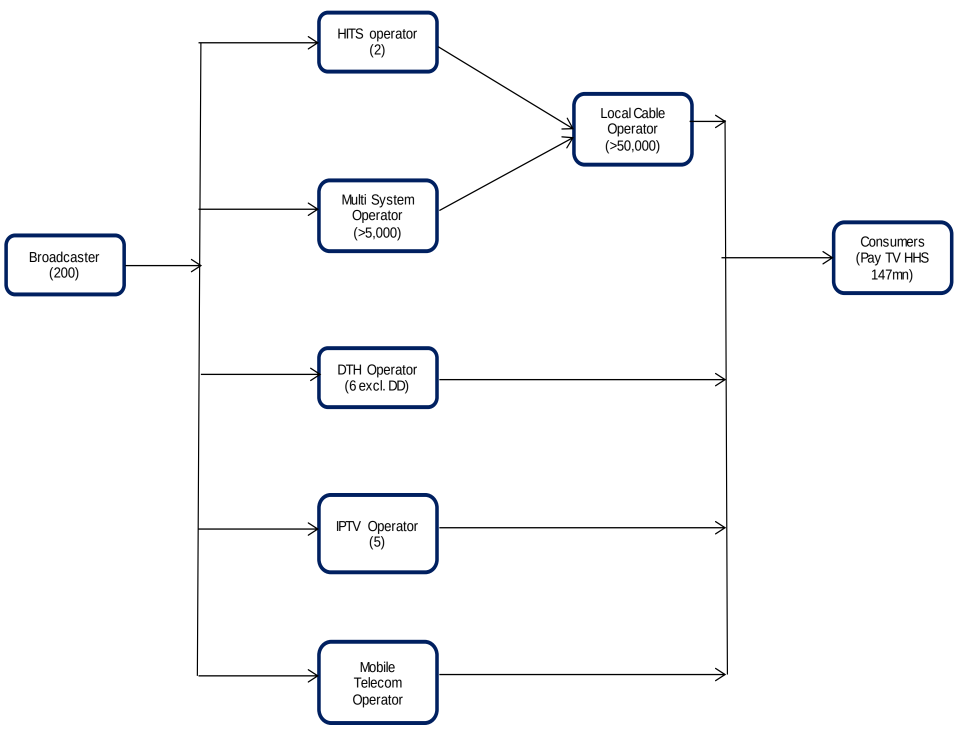
With cable digitisation largely coming to an end in FY18, MSOs can focus on driving higher monetisation, not just in Phase-III and IV markets, but also in P-I and II. This should transform their video business into a cash cow over the next 2-3 years in our view, producing surplus cash that can be used to pay down debt or re-invested into fixed broadband—a secular, long-term growth opportunity. Further, opportunities for buying out minority partners in MSO JVs, horizontal M&A (MSO consolidation), vertical integration (LCO JVs/buyouts) may also arise, but these may require equity issuance, in our view.

TV distribution is dominated by Cable and DTH

TV distribution in India is mostly cable-and-satellite (C&S) based, with cable TV and DTH being the dominant delivery platforms. Alternate platforms like HITS (headend-in-the-key), IPTV (internet protocol TV), and mobile (broadband) continue to be fairly nascent. DTH (direct-to-home) as the name indicates, is a B2C business, whereas cable TV distribution in India, unlike in other countries, remains largely a B2B business, because of the involvement of local cable operators (LCOs), who act as franchisees of MSOs, and invest in the last mile, and therefore control access to customer homes. As such, MSOs in India mostly operate secondary points, i.e. they provide signals to their franchisee LCOs. At present, approximately 95% of cable TV subs in India are serviced as secondary points, while the remaining are serviced directly (primary points) over a last mile that is owned by the MSOs.

HITS platform is similar to DTH, but is essentially a B2B business, where the end-user is an LCO that downlinks the signals using a dish antenna and delivers them to the end-customers.

Exhibit 7. India—pay TV value chain



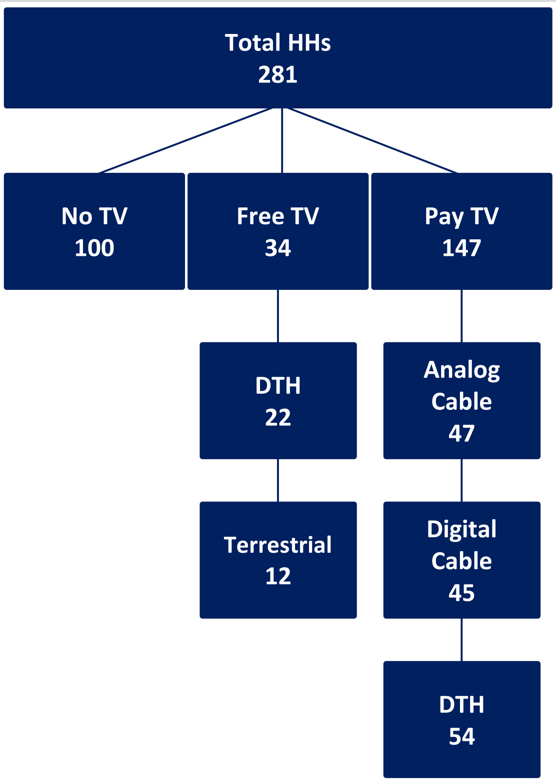
Source: The KPMG-FICCI Report, TRAI's pre-consultation paper on Infrastructure Sharing in Broadcasting & TV Distribution [23rd May 2016], TRAI's Consultation Paper on Tariff Issues Related to TV Services [29th January 2016].

Exhibit 8. India market profile [Dec-16]

	mn
Total households	281
TV HHs	181
Non TV HHs	100
TV penetration (%)	64.4
C&S HHs	169
FTA [Free Dish DTH]	22
Pay TV HHs	147
Pay TV penetration in TV HHs (%)	81.2
Pay TV penetration in total HHs (%)	52
DTH pay HHs	54
Cable pay HHs	93
- Analog cable HHs	47
- Digital cable HHs	45
Broadband subs [a]	236
Wireless BB	218
Wired BB	18
Wired BB penetration of total HHs (%)	6.5

Source: FICCI KPMG 2017 report, TRAI, JM Financial. [a] TRAI definition: internet connection with minimum 512 Kbps download speed.

Exhibit 9. India—TV distribution market (million households)



Source: FICCI-KPMG 2017 Report, TRAI, JM Financial.

Digital cable TV distribution systems have clear advantages over DTH such as:

- Higher channel capacity
- No signal quality degradation during rains
- Ability to offer local TV channels, and
- Ability to offer wired broadband, through development of and investment in a separate last mile network that has a return or a reverse path

Exhibit 10. Digital cable versus DTH

	Digital Cable	DTH
Channel capacity	Most MSOs have the capability to offer 800+ channels	Channel capacity limited by the number of transponders
Regional/local offerings	Carry host of regional channels in addition to local channels	Limited regional offerings but no local channel offerings
Weather proof signals	Signals are not interrupted on account of rains	Operates on Ku-band making signals vulnerable to rains
Broadband	'Return-path' allows cross selling broadband to the last mile	Limited monetisation through add on service as it lacks return path capability
Government levy	No license fee on cable revenues	10% license fee on revenues

Source: JM Financial.

Nearly double-digit growth in pay TV revenues

India's pay TV industry generated INR 387bn in revenues in CY16, a growth of 7.3% YoY. This is the slowest growth rate in recent years, driven by delays in Phase-III and P-IV digitisation, impact of the 'note ban' or demonetisation, and a sharp increase in FTA customer base (DD Free Dish). Nonetheless, we expect revenue growth to pick up in CY17 and forecast a CAGR of 9% over the next 5 years (CY16-CY21), driven by a CAGR of 2.7% in pay TV HHs and 6.0% in ARPU.

We expect growth in pay TV HHs to be driven entirely by the increase in TV HHs. Pay TV penetration in the TV HH base is likely to erode marginally to 79% by CY21 from 81% in CY16. Further, we forecast blended pay TV ARPU to increase to INR 296 in CY21 from INR 221 in CY16, driven by digitisation in P-III and IV areas, increase in HD adoption, and underlying cost-inflation.

Over the last 5 years (CY11-CY16), TV subscription revenues recorded a c.13% CAGR vs. a c.12% CAGR in TV ad spends. However, we do not expect TV subscription revenues to outpace ad revenue growth in future.

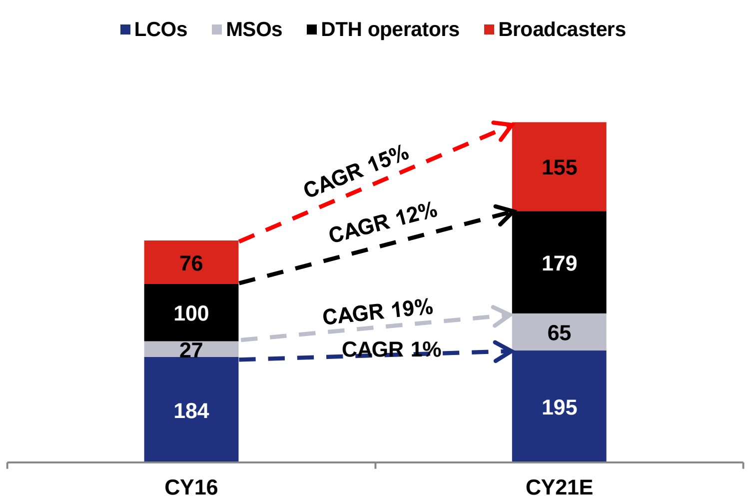
Exhibit 11. India pay TV—digitisation to drive ARPU growth and ARPU-redistribution

INR bn

	CY11	CY16 (%)	CY16	CY21E (%)	CY21E	5-year CAGR (%)
TV ad revenues	**116**		**201**		**354**	**12.0**
Pay TV HHs (mn)	106		146		166.8	**2.7**
ARPU (INR/month)	168		221		296	6.0
C&S subscription revenues [a]	**214**		**387**		**593**	**8.9**
Of which share of cable (%)	*71*		*61*		*55*	
Avg. Cable TV subs (mn)	77		97		94.8	**(0.5)**
Cable ARPU (INR/month)	166		204		286	**7.0**
Cable pay revenues	**152**		**237**		**325**	**6.5**
Avg. DTH subs (mn)	30		49		72	8.0
DTH ARPU (INR/month)	175		255		310	**4.0**
DTH pay revenues	**62**		**150**		**268**	**12.3**
Cable revenue distribution		**(%)**	**(INR bn)**	**(%)**	**(INR bn)**	
LCOs		*77.5*	184	*60.0*	195	1.2
MSOs [b]		*3.5*	8	*14.0*	45	40.5
Broadcasters [A]		*19.0*	45	*26.0*	84	13.4
DTH revenue distribution						
DTH operators		***66.7***	**100**	***66.7***	**179**	**12.3**
Broadcasters [B]		*33.3*	50	*33.3*	89	12.3
Broadcasters revenues			**296**		**528**	**12.3**
Ad			201		354	12.0
Subscription [A] + [B] [b]			95		174	12.8
Share of subscription revenues (%)			*32*		*33*	
Share in subscription spend (%)			***24.5***		***29.3***	
MSO - video revenues			**72**		**149**	**15.5**
Subscription			53		130	19.5
Carriage & Placement			19		19	**0.0**

Source: FICCI-KPMG 2017 report for historical data, JM Financial estimates. [a] Excluding taxes, such as service tax and state entertainment taxes; these have now been replaced by an 18% GST. [b] [b] This is before payment of C&P fee to MSOs [=INR 19bn].

Exhibit 12. Distribution of overall pay TV revenues (INR bn)

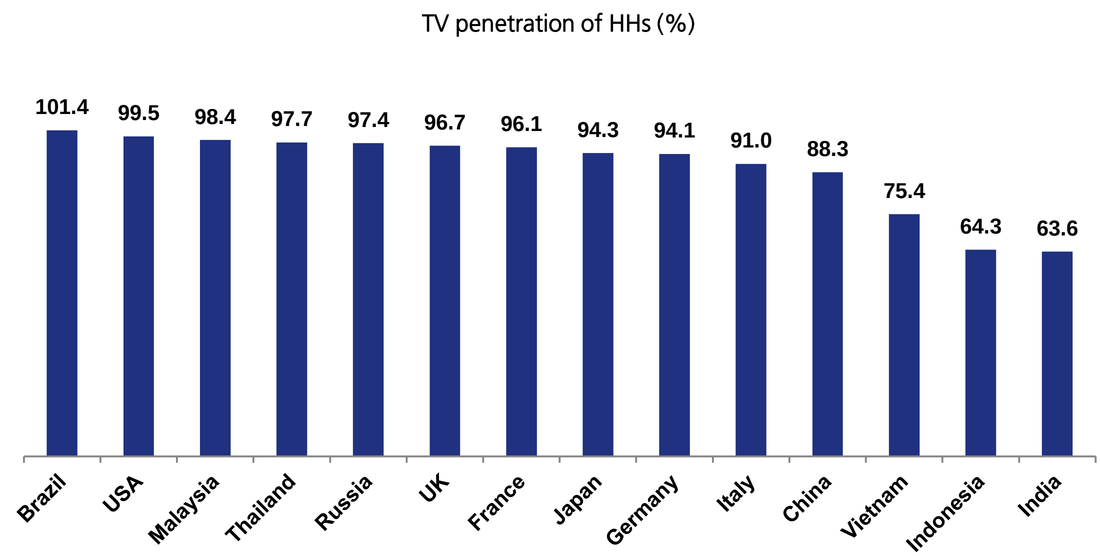


Source: JM Financial. Note: Revenues of Broadcasters are net of C&P payments. Therefore, revenues of MSOs are net of the broadcasters' share but inclusive of C&P income.

Highest number of non-TV households in the world

With 181mn TV HHs (2016), India is the world's second largest TV market after China. However, TV penetration in India is merely 64%, the lowest among major economies, and on a total base of approximately 281mn HHs, translates to around 100mn non-TV HHs (>90% of them are in rural India). Such a large number of non-TV HHs is due to acute rural poverty in India and lack of electricity in about 25% of rural HHs (Source: garv.gov.in).

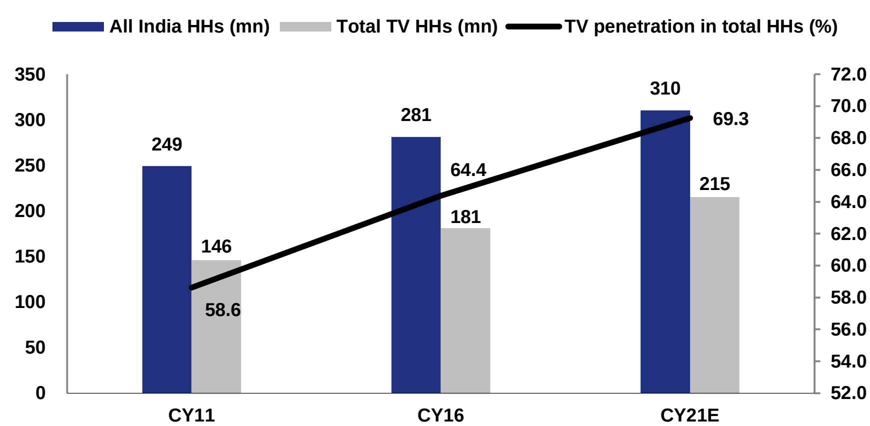
Exhibit 13. TV penetration of households [2015]



Source: JM Financial.

We forecast a 2% CAGR in total number of HHs and a 1.5% CAGR in TV penetration, which increases to 69% in 2021E vs. c.64% in 2016; this would still imply 95mn non-TV HHs in 2021, indicating the scope for upside in the pay TV market.

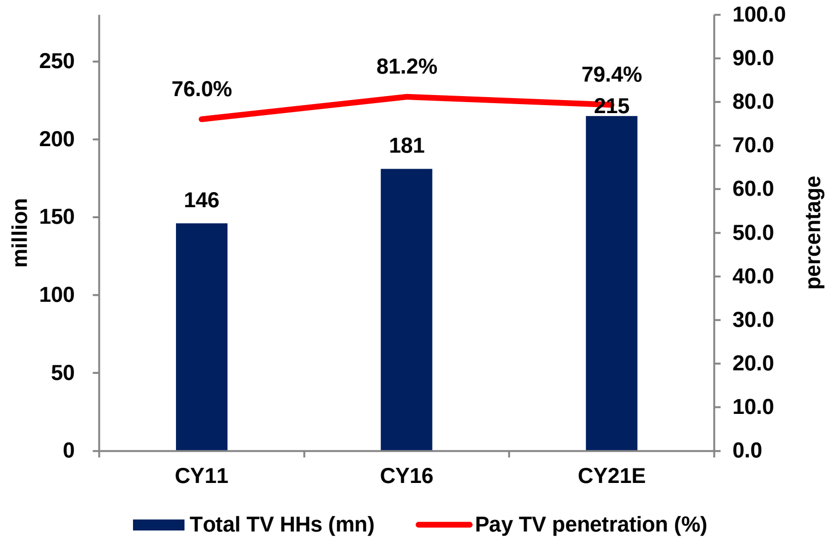
Exhibit 14. Steady increase in the number of TV HHs in India



Source: JM Financial.

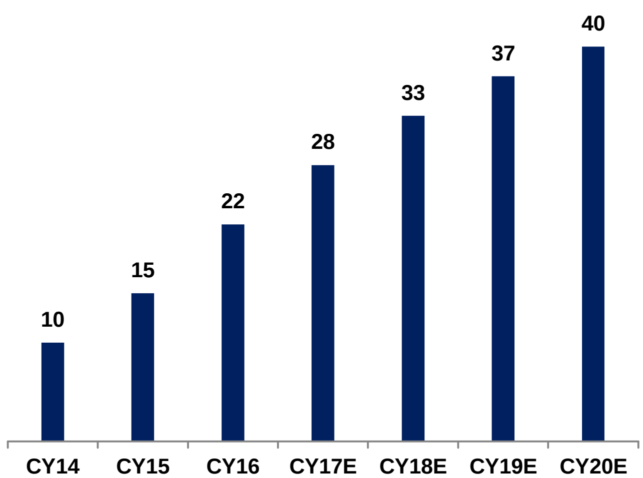
We forecast 215mn TV HHs by 2021, and with a projected Pay TV penetration of c.79%, the number of Pay TV HHs is expected to grow to 171mn from 147mn in 2016, implying a CAGR of 3.0%.

Exhibit 15. Pay TV penetration may see some erosion due to growing FTA attractiveness, and rising ARPUs in the economically weaker Phase III and IV DAS markets



Source: JM Financial.

Exhibit 16. Free Dish subscribers (mn)



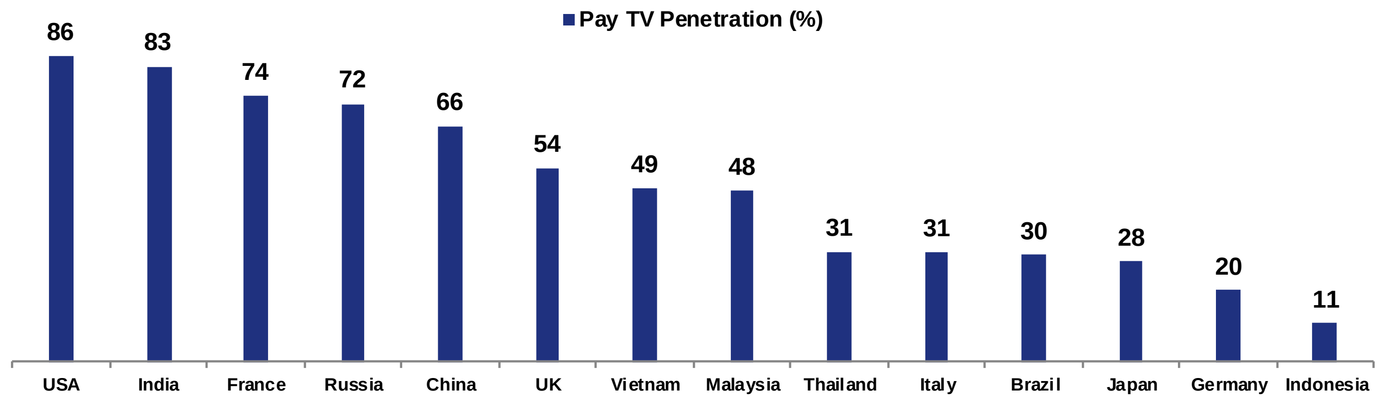
Source: Historical data from FICCI KPMG reports, JM Financial.

Low pay TV ARPU reflects under-monetisation of TV content

India's pay TV ARPU is among the lowest, even on a purchasing-power-parity [PPP] basis. Furthermore, while pay TV ARPU is 5-10x the average price of a multiplex movie ticket in other countries, in India the ARPU is merely 10% higher; China comes close, as its monthly ARPU is similar to the price of a movie ticket. Russia has the lowest pay TV ARPU (<USD 2.5) among major countries, which appears to be an outcome of local regulations that require pay TV operators to provide 20 popular channels free of charge.

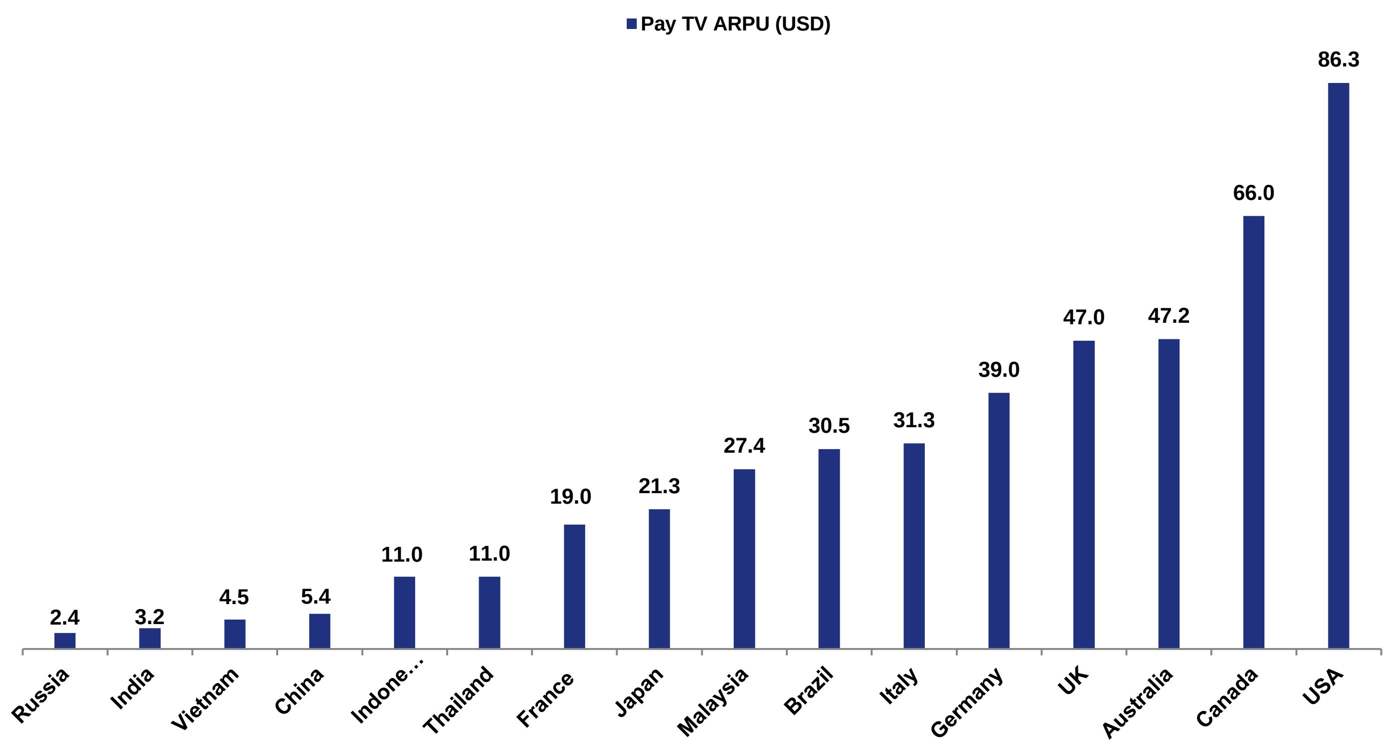
Lower ARPUs drive higher pay TV penetration

Exhibit 17. India's pay TV penetration is among the highest in the world…



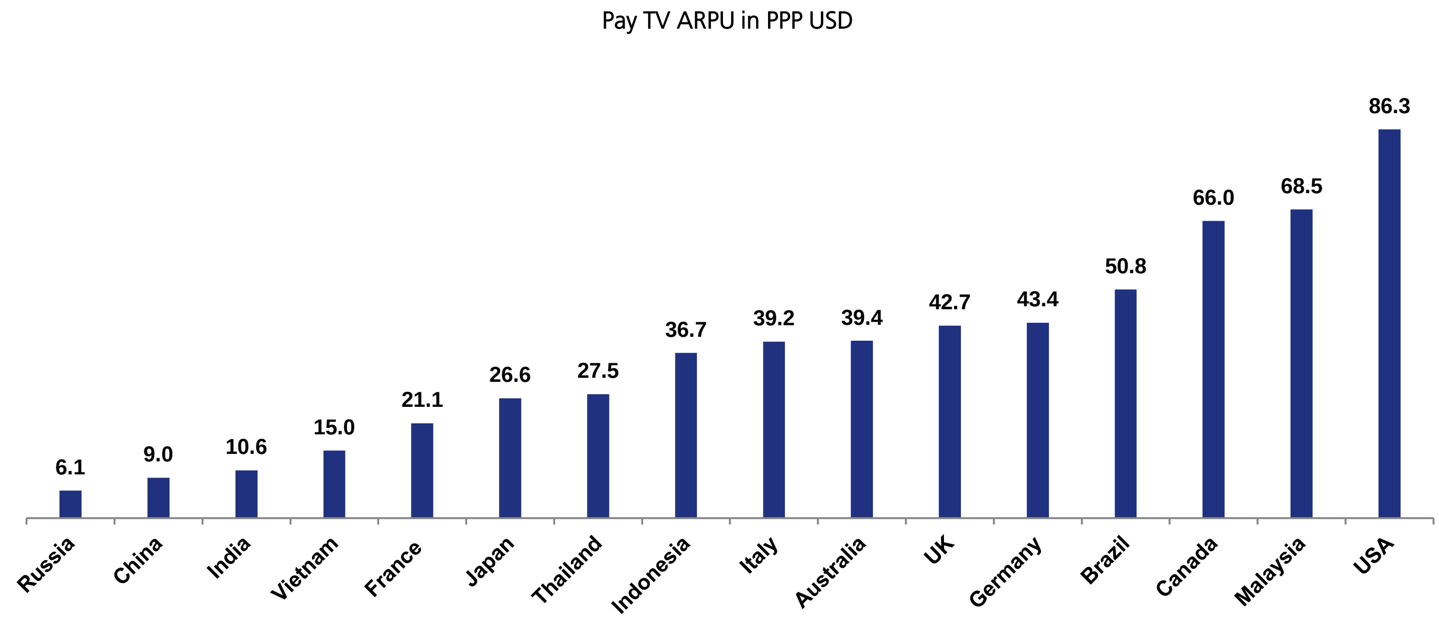
Source: JM Financial. Data pertains to end 2015.

Exhibit 18. …thanks to ARPU being one of the lowest



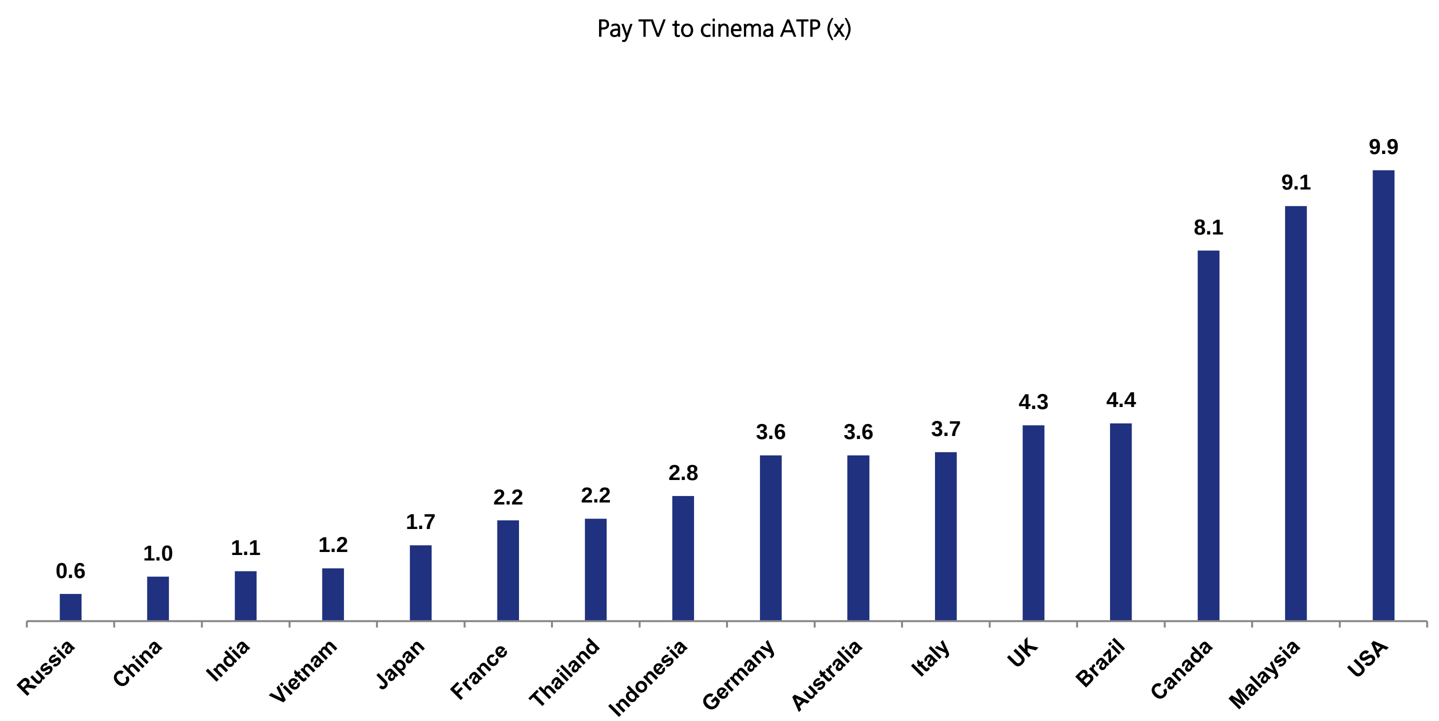
Source: JM Financial.

Exhibit 19. Monthly pay TV ARPUs—PPP USD



Source: JM Financial.

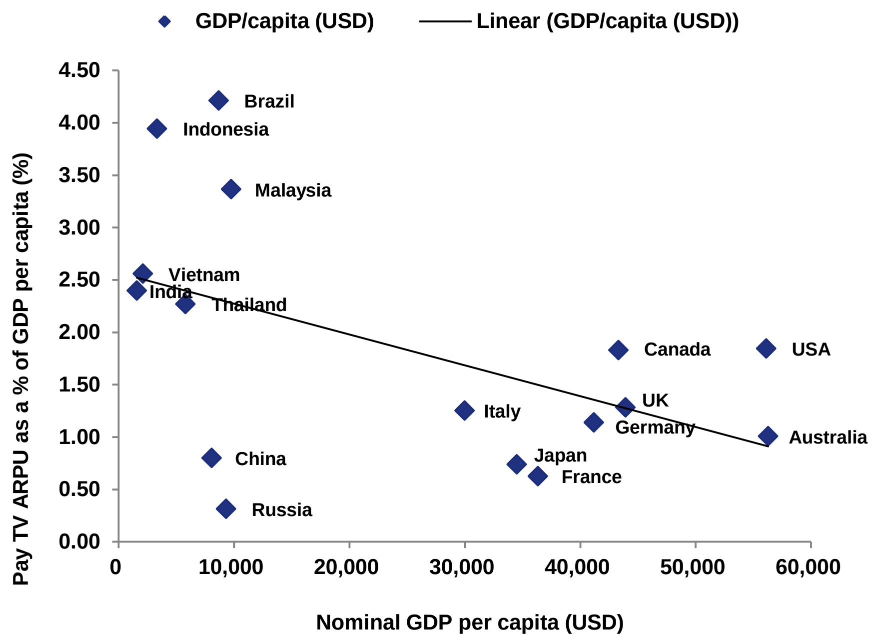
Exhibit 20. Monthly pay TV ARPU in India is similar to the average price of a cinema ticket in a multiplex



Source: JM Financial. ATP is Average Ticket Price.

We also look at ARPUs relative to the GDP/capita, and on this metric, India is not among the cheapest. However, this particular metric may not be very relevant or useful for cross-country comparisons in our view, given: (1) India's lower TV penetration, or rather lower pay TV penetration [c.53%] in total HHs; and (2) varying levels of Reach and Quality of FTA television in different countries; higher quality/reach of FTA TV would tend to result in lower spending on pay TV relative to the GDP/capita.

Exhibit 21. Relative to GDP per capita, India's pay TV ARPU is not among the lowest



Source: JM Financial.

Digitisation with addressability—a transformational driver of pay TV

In 2011, the Indian government announced mandatory digitisation of India's predominantly-analog cable TV networks, to achieve multiple objectives such as: (1) improve customer experience—more channels, better viewing experience, better quality of service; (2) improve transparency—make the sector more investible and boost tax revenues; and (3) boost sector ARPUs and revenues, as well as enable a more fair distribution of pay TV ARPU among LCOs, MSOs and broadcasters.

Digitisation was mandated to be completed in four phases. Phase-I and II were completed with minor delays, and the Phase-III rollout was completed recently, based on the extended deadline of 31Jan'17 vs. Dec'15 previously. However, Phase-IV digitisation is still ongoing, despite the notified deadline of 31Mar'17 vs. Dec'16 previously. We expect P-IV to be largely completed by end-FY18.

Exhibit 22. Cable digitisation—phase wise deadlines

	Original	Revised-1	Revised-2	Revised-3	Technical completion
I [Metros]	31-Mar-11	31-Oct-12			Nov'12
II [38 cities, >1mn pop]	31-Dec-11	31-Mar-13			Jan'14
III [remaining urban]	31-Dec-12	30-Sep-14	31-Dec-15	31-Jan-17	
IV [rural]	31-Dec-13	31-Dec-14	31-Dec-16	31-Mar-17	Likely Mar-18

Source: Industry sources, JM Financial.

Exhibit 23. Phase-wise C&S household data as of Dec-16 (mn)

Digitisation Phase	C&S HHs	Analog	DAS	Digital cable	DTH [incl. FTA]	DTH share in total (%)
I	14	0.2	13	10	4	28
II	28	0.3	28	17	11	38
III	44	5.0	39	11	28	63
IV	83	41.9	41	7	34	41
Total	169	47.4	122	45	76	45

Source: FICCI KPMG 2017 report, industry sources, JM Financial.

Digitisation is driving ARPUs and redistribution of revenues

Implementation of a Digital Addressable Systems [DAS] is positive for all stakeholders, and not necessarily a negative for the LCOs. While the percentage share of LCOs in cable ARPUs continues to decline, their absolute revenues have grown, thanks to increase in the number of cable TV HHs and pay TV ARPUs. According to various industry participants, increase in the number of TV channels and quality of viewing experience, post seeding of digital STBs, tends to drive a INR 30-50 per month increase in ARPU vis-à-vis the previous analog levels.

Further, the combined share of MSOs and BCs in cable ARPU has grown from c.10% five years ago [in 2011], to an estimated 22.5% in 2016, driven by digitisation in Phase I and II markets, where their combined share has already reached 35-40% of ARPU. We forecast the combined pan-India share to reach 40% of ARPU by 2021, as monetisation in P-III and P-IV DAS markets has only just begun in earnest. These two areas accounted for around 65mn or 70% of the c.93mn cable TV HHs in India as of Dec-16.

We forecast cable subscription revenues of MSOs (including share of BCs i.e. content cost), to witness a c.19% CAGR over the next five years (CY16-CY21E). Adding carriage & placement income (assuming it remains flat at INR 19bn), the 'video revenues' of MSOs are projected to witness a c.16% CAGR over the same period.

Exhibit 24. Video revenues of MSOs to see 15-16% CAGR over next five years

INR bn

	2016	2021E	CAGR (%)
MSO subscription revenues [A]	53	130	19.5
C&P income [B]	19	19	0.0
MSO video revenues [A + B]	**72**	**149**	**15.5**

Source: Companies, JM Financial. Note: MSO subscription revenues includes content costs, i.e. the share of BCs.

Carriage & Placement revenues—resilient, despite migration to DAS

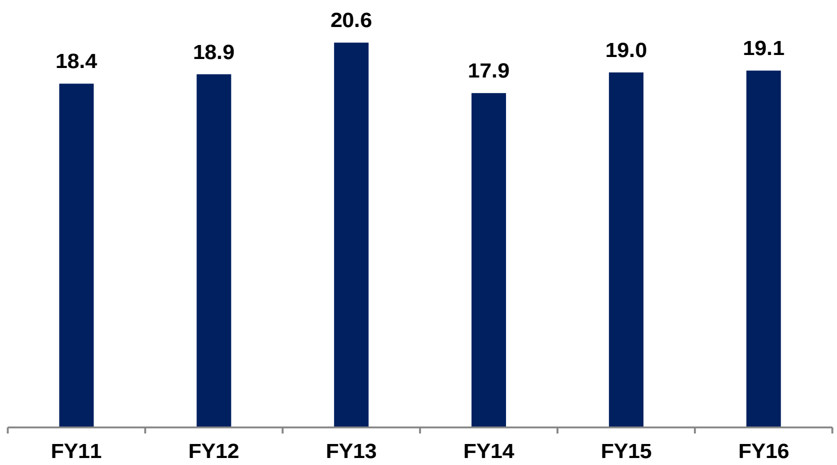
Carriage fee is proposed to be harshly regulated under TTO, and thus may completely disappear over time

The carriage fee corresponds to the charges paid by broadcasters to MSOs to carry their channels on their preferred signal and frequency band. Since MSOs' channel capacity was limited during the analog era, they were charging BCs high carriage fee to carry their channels. Given higher capacity of digital systems, carriage income per channel has dropped since DAS implementation, improving the channel distribution economics for BCs. Nonetheless, aggregate C&P revenues have remained resilient, thanks to increase in the number of channels, need for proper channel placement and LCN within the EPG [Electronic Programme Guide], buoyancy in TV ad spends, and expansion of TV audience measurement in rural areas by BARC [Broadcast Audience Research Council].

Placement fee is sought to be partly disallowed, and regulated under the TTO; nonetheless, placement fee along with marketing fee, may help reduce the loss in carriage income

While carriage is now less of a bottleneck for BCs in the digital era, MSOs are able to charge placement fees, based on: (1) placement of channel in the appropriate genre-group in the electronic programme guide or EPG; (2) ensuring proximity of channel to the genre-leaders; (3) special, easily recalled logical channel numbers or LCNs; and (4) placement of channel in the base pack or the most popular pack to drive reach and subscription uptake. Growth in C&P revenues has flattened out, and we expect this trend to continue in future.

Exhibit 25. Carriage and placement income in Cable TV (fiscal-ending March, INR bn)



Source: GTPL RHP document [The MPA Report].

The DTH segment also generates C&P income, of which a lion's share goes to Free Dish, as it is an FTA platform that provides broadcasters/advertisers a significant reach to the rural audiences.

Excluding INR 2.64bn earned by Free Dish in FY17, the C&P i`me in the DTH segment is a fairly small fraction (10-15%) of the C&P fee generated in Cable TV, as:

1. Cable TV allows for better audience targeting, thanks to the use of multiple head-ends that serve specific geographies and regional/local markets
2. Channel selection in cable is influenced by 'push' from the MSOs—inclusion in base pack can drive uptake and sampling of channels
3. Channel numbers [LCN] and placement of channel on cable can be different in different regions, due to multiplicity of head-ends
4. Cable has greater dominance compared to DTH, in the more lucrative Phase I and II markets. These markets generate about 80% of C&P income for MSOs

MSO industry—low attractiveness based on Porter's Five Forces framework

Indian cable MSO industry scores poorly on attractiveness, as all the five forces based on Porter's model are strong.

1. **Threat of new entrants**—low entry barriers, given low capex requirements and the fact that broadcasters are willing to support new MSOs/entrants in the same market by doing low-cost content deals (fixed fee). MSOs continue to be mostly B2B wholesale intermediaries, even in a post-DAS era.
2. **High buyer power**—LCOs are fragmented and run small-scale operations, but their LM ownership gives them access to and control over the end customers. Thus, MSOs are unable to improve monetisation or get their fair share of the retail ARPU.
3. **High supplier power**—India's TV broadcasting industry is relatively concentrated and has oligopoly characteristics. The 4-5 major broadcasters produce and own majority of the popular content (GEC), own vast movie libraries, and account for a fairly dominant share of the audience relevant for advertisers. MSOs procuring content from them continue to face ever-increasing pay channel costs that are not aligned with MSOs collections from LCOs and their current financial situation.

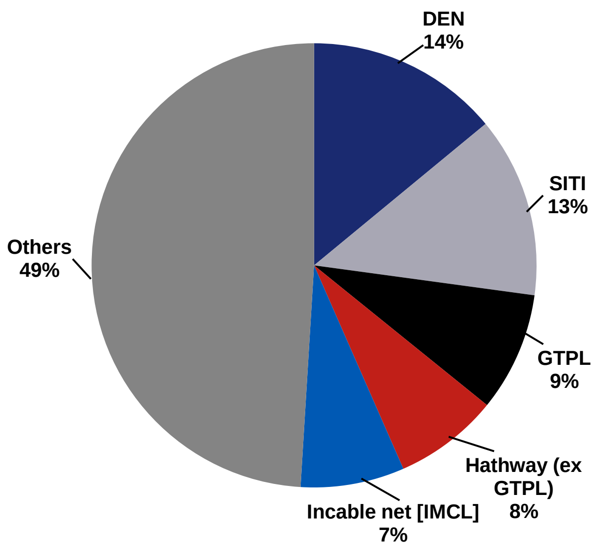
4. **Threat of substitutes**—significant competition from DTH and FTA TV has prevented faster ARPU growth in cable. HITS could have been a competitor too, but has not taken off due to lack of support from broadcasters (as they also have stakes in MSO/DTH assets). Digital distribution (OTT/SVOD) is emerging as a new substitute, but we do not see it impacting pay TV revenue growth in a significant way.

80% of India's TV ad spend, as well as pay TV revenues, go to the Top-5 broadcasters

5. **Intra-industry competition**—The MSO industry is highly fragmented with 5,000-6,000 entities operating all over India. Although 50% of cable subscribers are serviced by the top-5 MSOs (c.60% by Top-9), the industry suffers from intense competition among the top-5, and also from the long tail of smaller MSOs that are either regional, or tend to service 1-2 smaller towns (ISO/ICOs).

MSOs need to focus on improving video profitability and rapidly scale up broadband business, in our view

Exhibit 26. Top MSOs and their video subscriber base [Total: 93mn HHs as of Dec-16]



Source: Companies, JM Financial

In our view, the best MSOs are those that have a high proportion of primary or direct subs (B2C business) and a dominant market share in a region or state that has good HSM coverage; the latter drives higher C&P income (most profitable revenue stream), and also leads to better control over the LCOs—this may sometimes be aided by state government patronage.

MSO business model in transition—slow repair after initial setbacks

For most MSOs, the video business is loss-making currently but continues to see repair, albeit at a slow pace. However, we do not see video (on its own) earning more than the cost of capital over the long term, without higher retail ARPUs and better monetisation (led by HD penetration), and some regulatory control over content cost escalations.

Historically, in the analog cable era, the MSO business model was based on getting carriage & placement income (C&P) from the broadcasters, and whatever subscription income MSOs managed to get from the LCOs was always less than the content cost they had to pay to the BCs. It was expected that digitisation would transform the MSO model to a subscription-led business (more of B2C) from a C&P-led pure B2B business. Even after 4-5 years since the start of DAS implementation, a typical MSO earns much less by way of 'subscription spread' (subscription revenue less PC expense) compared to C&P income. Thus, the expected revenue transition has been quite slow, and in the meantime, MSO financials continue to struggle due to surge in investment levels (network digitisation, STBs) and non-content opex [NCO].

How to analyse the video business of an MSO

Key drivers of MSO economics are:

- Subscription ARPU—this is the secondary ARPU, collected from LCO. LCOs collect the retail ARPU or primary ARPU directly from end customers or HHs
- Subscription gross margin or SGM—this is the spread of subscription revenue over pay channel cost, divided by ARPU
- C&P income
- Non-content operating expenditure
- Capex per sub—earlier, bulk of the investment was in analog head ends and overhead fibre network; post DAS, it comprises digital head-ends and net STB subsidy [i.e. STB cost less activation income]

We illustrate below how the profitability (in terms of years of payback) has changed with change in the above key parameters since analog-era. The exhibit shows that a higher video subscription spread [VSS] is key to achieving breakeven i.e. earning a cost of capital of 11-12%. This equates to a payback period of about four years in video business, where payback is capex divided by annual EBITDA.

VSS is ARPU minus the PC cost, also computed as ARPU X SGM. For break-even, we estimate MSOs need to reach a subscription ARPU of INR 75/month (blended across phases), and a 30% gross margin, which would yield a subscription spread of c.INR 23 per sub.

Exhibit 27. Video business economics for a B2B MSO [a]

INR/sub/month		Post-DAS	
	Pre-DAS [b]	Current	Projected [c]
Video subscription revenue [VSR]	10	40	75
PC cost-to-VSR (%)	175	85	70
PC cost	18	34	53
Video subscription spread [VSS]	**(8)**	**6**	**23**
C&P income	25	20	20
Non content opex	15	20	25
EBITDA per sub	**3**	**6**	**18**
Annualised EBITDA	30	72	210
Capex	**400**	**1,000**	**800**
Payback (years)	**13.3**	**13.9**	**3.8**
Other key stats			
Video gross margin or VGM (%)	**(75)**	**15**	**30**
Subscription spread-to-C&P (x)	**(0.30)**	**0.30**	**1.13**
NCC per sub	(8)	14	33
NCC to VSR (%)	(75)	35	43

Source: Companies, JM Financial. Note: [a] Parameters are blended across Phase I/II/III and IV. [b] Before FY12. [c] Projected break-even.

The analysis shows that video business remains unprofitable post DAS, despite VSS turning positive, from negative previously. While the EBITDA per sub (ex-activation) has grown, the capex levels have also increased post DAS. Therefore, a higher VSS (ARPU X SGM) is needed to earn the cost of capital on higher investments and opex levels. A successful [profitable] transition to DAS would be complete for MSOs, when they start making more by way of subscription spread or VSS, than from C&P income. This aspect is also clearly brought out in the above analysis. Companies and investors also look at net content cost [NCC], which is PC cost less C&P income. However, MSOs have indicated that C&P income is not necessarily received from the same set of BCs that are being paid pay channel charges. In fact, 50-60% of the C&P income is earned from FTA channels that are mainly in the News, Music and Regional language genres.

Over the last 2-3 years, the subscription ARPUs have continued to grow (albeit slowly), thanks to improving Phase-II monetisation, and start of P-III monetisation; however, the content costs have grown robustly too, because of which the SGM is stuck at the 10-15% level. In addition to driving higher monetisation (especially in Phase III/IV), MSOs need to fight hard to ensure that PC costs grow at a slower pace than their subscription revenues. Without a sustained improvement in the SGM, the MSO business model will remain broken, in our view.

New tariff order and interconnect regulations—neutral to positive for MSOs

In addition to the Telecoms sector, the TRAI also regulates Broadcasting and Carriage for the Media sector, but not Content

In March 2017, Telecoms and Media regulator TRAI came out with a tariff order for DAS, and also with a revised set of interconnect regulations, to revamp the pricing and packaging of TV channels, and also the regulations governing revenue share/flows among various members of the TV distribution chain. The TV tariff order has been stayed by the Supreme Court, based on the pleas of Star India, and is also being challenged separately in both the Madras and the Delhi High Courts respectively, by Star India and Tata Sky / Airtel Digital.

New tariff order would help sort out the 'content side' for MSOs, but not necessarily the 'collection side' involving LCOs

The TV tariff order is primarily aimed at: (a) making a-la-carte channel selection viable for customers; (b) ensuring availability of FTA-only bouquets for customers [other than BST]; and (c) ensuring transparency and non-discrimination in channel pricing by broadcasters across different distribution platforms. Assuming these new rules get past the litigation hurdle, the implementation of a-la-carte channel selection would be fairly challenging, and likely to happen over a protracted time-frame in our view, especially in cable systems. In most of the Phase-I and II markets, MSOs have been unable to fully implement even channel packaging or tiering; there are 'per subscriber' [or CPS] deals with LCOs, but not necessarily customer-wise LCO billing or monetisation based on actual bouquets or packages subscribed to by individual customers.

New regulations require fairly complicated channel packaging and data management on the part of DPOs

The TV tariff order has envisaged essentially a two-part tariff scheme, whereby:

Subscribers would pay a monthly charge or 'network capacity fee' [NCF] based on the number of channels in their total package. NCF is capped at INR 130 (excl. taxes) for an initial block of up to 100 SD channels, and at INR 20 for each additional block of up to 25 SD channels. Each HD channel is treated as equivalent to two SD channels for charging NCF. The caps on NCF are Phase-independent.

The INR 19 MRP cap is aimed at preventing BCs or DPOs from indirectly pushing high-priced channels into a bouquet

Subscribers would pay 'content charges' separately, only for the pay channels, based on their individual/bespoke selection and channel prices (DRPs) declared by DPOs or distributors. DRP or distributor retail price declared by MSOs is not to exceed the MRP or maximum retail price declared by the BCs. TRAI has specified an MRP cap of INR 19 for any pay channel that is part of a bouquet, and separately a condition that MRP of a bouquet cannot be less than 85% of the sum of a-la-carte channel prices. Further, pay and FTA channels cannot be mixed in the same bouquet (i.e. separate pay and FTA bouquets to be offered); similar restriction is there for SD and HD variants of the same channel.

Thus, content cost for MSOs would essentially become a 'pass through', and would need to be remitted to the MSO by the LCO, based on each subscriber's selection of pay channels.

The new tariff order has potential to benefit MSOs in the following ways:

1. De-risking of content costs—any increase will be passed on to subscribers. Content costs will get aligned with actual monetisation, whereas currently, annual escalations demanded by the BCs are rather sticky (15% or higher) irrespective of the monetisation achieved on the ground
2. Reduced negotiation effort and fewer litigations between MSOs and BCs
3. Guaranteed (net) revenue of up to 35% of pay channel charges recovered from customers via LCOs, based on: (a) maximum 15% discount allowed on declared a-la-carte MRPs; and (b) minimum 20% distribution fee [DF] mandated to be paid to MSOs by the BCs for collection and remittance of pay channel revenues

4. MSOs may also get a portion of NCF from LCOs; however, this may be offset by TRAI requirement for MSOs to share the DF with LCOs as they are the ones who do on-ground collection

5. Increase in retail or customer ARPUs driven by pay channel charges—TRAI has declared an MRP-cap of INR 19 for a pay channel if it is included in a bouquet. There is no price or MRP cap, if a channel is offered only on a-la-carte basis

6. Reduction in STB subsidy and subscriber churn—a variable revenue and cost model for MSOs is a deterrent to STB-subsidy and to box-swapping

However, a major downside from new interconnect regulations is that C&P revenues of MSOs would decline significantly, as: (a) carriage fee is being regulated [capped]—it may even disappear completely over time, in our view; (b) the logic of charging placement fee is being largely whittled down—it would become mandatory for DPOs to place/display each channel in the Electronic Programme Guide [EPG], within its proper genre and language group. Further, BCs cannot incentivise the DPOs for including their channels in a DPO bouquet (e.g. the base pack). Nonetheless, subject to transparent disclosures, DPOs would be allowed to charge placement fees to BCs, for placing a channel at a 'specific' position within the genre (e.g. top of the genre, proximity to genre leader), and for assigning the channel a specific channel number (or LCN). Finally, TRAI has maintained its forbearance on marketing fees paid by BCs to DPOs toward advertisements and promotions.

Under proposed interconnect regulations, DPOs cannot charge any fee for placing a channel in its proper genre or language group or in their base pack. Placement fee would be allowed for things like proximity and LCN

Net-net, C&P revenues will decline (not disappear) in the new regime, but the net content cost [NCC] may not increase materially at the time of transition, in our view.

Even with a decline in C&P income and no increase in customer ARPU, MSOs may end up benefiting from the tariff order, thanks to a potential increase in subscription spread [VSS]. We illustrate the potential upside vis-à-vis current ARPU distribution in CATV across India.

Of the INR 200/month video ARPU currently, LCOs are capturing roughly INR 150 (75%), and the balance gets shared roughly 50:50 between MSOs and BCs, after accounting for the C&P flows.

After the tariff order, we assume cable ARPU would remain unchanged at INR 200, of which INR 130 (NCF) would be retained by the LCO, and the remaining INR 70 (pay channel revenue) would be passed on to the MSO, for further distribution among BC/MSO/LCO. The key underlying assumption is that LCOs would remit the entire pay channel revenue to the MSOs—this should be made compulsory by TRAI, in our view. We assume MSOs retain 15% (maximum allowed) of PC revenue as wholesale discount, and further 20% as distribution fee. The DF can be shared with LCOs up to a maximum of 45% as per TRAI regulations.

In scenario A, we assume C&P ARPU declines by 1/3rd and MSOs share 45% of the DF with the LCO. This translates into MSOs getting 12-13% higher revenues than currently.

In scenario B, we assume C&P ARPU declines by 2/3rd, and MSOs retain the entire DF. This translates into MSOs getting 18% higher revenues than currently.

The broadcasters also benefit in the above scenarios, even more than the MSOs. The magnitude of BCs overall gain would depend on savings in C&P fees.

Exhibit 28. Video ARPU distribution—cable segment (INR/month)

		Distribution		
Currently	ARPU	LCO	MSO	BC
Subscription fee	200	150	10	40
Carriage & Placement [C&P]			15	(15)
Total/net	**200**	**150**	**25**	**25**
Distribution (%)	**100**	**75.0**	**12.5**	**12.5**

Post tariff order [A]	ARPU	LCO	MSO	BC
Subscription fee				
Network capacity fee [NCF]	130	130	0	
Pay channel charges	70	6	18	46
Carriage & Placement [C&P]			10	(10)
Total/net	**200**	**136**	**28**	**36**
Distribution (%)	**100**	**68.2**	**14.1**	**17.8**

Post tariff order [B]	ARPU	LCO	MSO	BC
Subscription fee				
Network capacity fee [NCF]	130	130	0	
Pay channel charges	70	0	25	46
Carriage & Placement [C&P]			5	(5)
Total/net	**200**	**130**	**30**	**41**
Distribution (%)	**100**	**65.0**	**14.8**	**20.3**

Source: Companies, JM Financial.

Clearly, an ARPU-increase, driven by higher pay channel revenues would be a bonus, and cannot be ruled out. In our view, after implementation of the tariff order, the risk to cable ARPUs would on the upside, and to DTH ARPUs may be on the downside. ARPUs in DTH segment are currently higher vs. Cable by around 20%, more so in the major cities that are seeing adoption of streaming content via OTT and SVOD. Furthermore, a-la-carte channel selection is relatively easier to implement in DTH than in Cable.

Impact of GST—can be transformative over long term

GST implementation (effective 1st July) may have a marginal negative impact on (secondary) video ARPUs of MSOs in the short term—till such time LCOs start sharing more with the MSOs to compensate them for the additional 300bps tax incidence. Nonetheless, the net impact on the EBITDA or the bottom line is unlikely to be material, thanks to additional input tax credits [ITCs], allowed under the GST regime. More significantly, over the longer term, GST should force greater tax compliance among the LCOs, reducing their profit margins and making the business less attractive. This may lead to positive outcomes for the MSOs, as LCOs may consider:

- Exiting the business completely—acquisition opportunity for MSOs
- Form JVs with MSOs, with the latter as majority partners
- Transfer the management (not ownership) of LM network to MSOs, in return for a revenue share (typically 15-20%). These are Right-to-Use [RTU] deals that MSOs such as GTPL have signed with some of the LCOs in Gujarat

In the most optimistic case, faced with growing compliance-burden post GST (such as, GST payment at source, need for proper invoices from MSOs for claiming ITCs), many LCOs may transfer the billing function to MSOs, thus allowing the latter to engage in segmentation, and implement consumer-packaging in the real sense. This may help MSOs drive higher retail ARPUs, and also eliminate some of the leakages and short-payments that are the bane of the current system. All these outcomes would be positive for MSOs, allowing them greater control over the end customers. Finally, the ease of tax compliance for MSOs would improve, leading to fewer disputes with the tax authorities.

One risk is potential levy of entertainment tax by local bodies or panchayats. Entertainment tax was previously levied by State Governments, but now has been subsumed in the GST rate. However, the GST Act allows local bodies (municipality, district council) the freedom to levy entertainment tax.

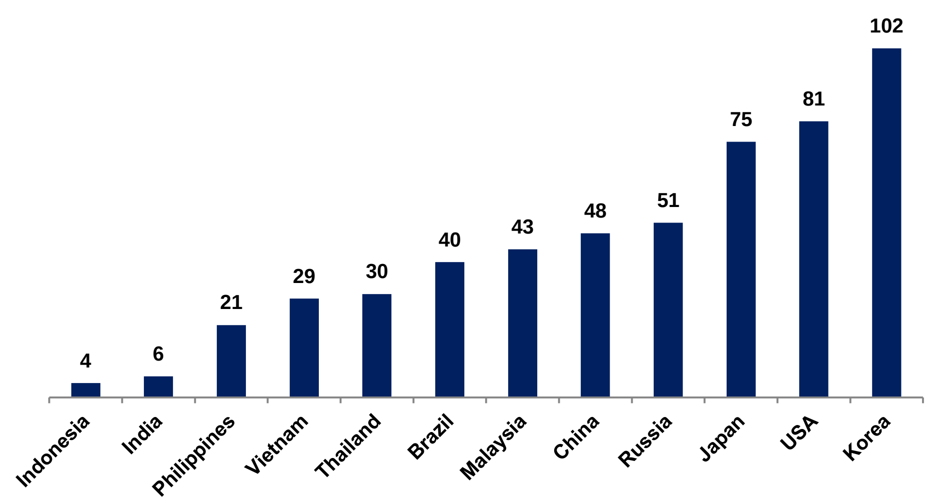
Fixed BB is a supply-constrained market in India, with huge latent demand at affordable price-points (INR 500-600) in the cities

Fixed broadband—secular, B2C growth opportunity in an underpenetrated market

India is among the least penetrated markets in fixed broadband, which is essentially wired residential BB. As of end-2015, fixed BB penetration was merely 6% of total households, compared with approximately 20%/30% in Philippines/Thailand, 40% in Brazil and Malaysia, and around 50% in China and Russia.

Fixed wireless BB also exists (e.g. Tikona Outdoor Wi-Fi) but it has a minuscule market share of total BB customers in India

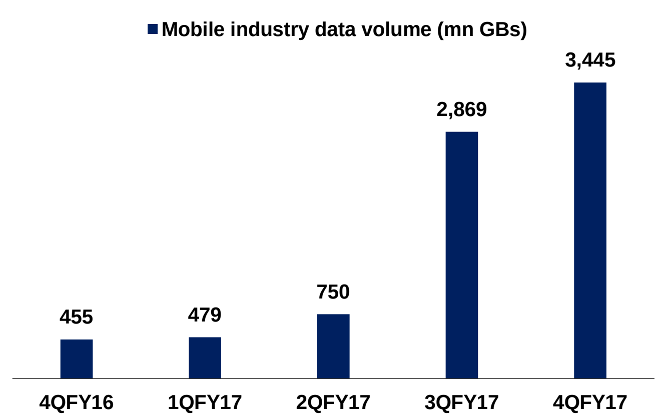
Exhibit 29. Fixed broadband penetration in major countries (% of HHs, Dec-15)



Source: ITU, Helgilibrary, JM Financial estimates.

India is essentially a mobile broadband nation—as of Jun-17, 94% or c.283mn of the total 301mn BB subs in India were on mobile, i.e. on 3G or 4G networks. Data consumption on mobile BB networks has soared, thanks to free/discounted/unlimited 4G service by new entrant Reliance Jio; we believe this is helping build the data-consumption habit, and will ultimately drive further adoption of fixed BB, which is faster, more reliable, and more affordable (INR 5-10 per GB) than cellular mobile BB can ever be, in our view.

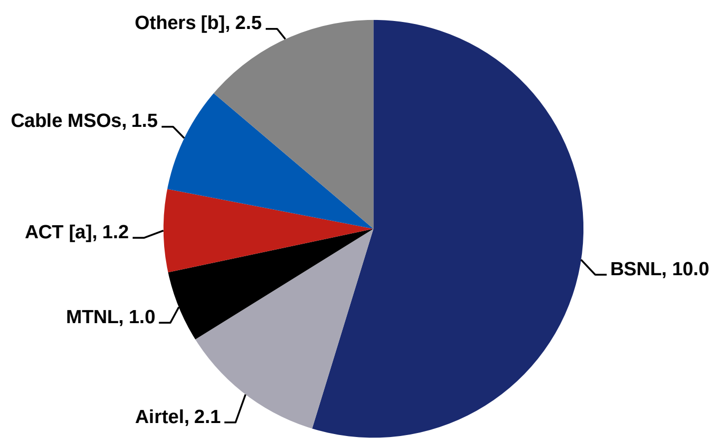
Exhibit 30. India mobile sector—data consumption (mn GBs)



Source: TRAI, JM Financial.

We believe MSOs are in a good position to drive BB penetration growth, as well as gain market share from the telcos (especially BSNL/MTNL). MSOs already have some important ingredients for BB-success, such as: intra-city fibre infrastructure (mostly overhead), LCO relationships (for deploying/maintaining LM network), and existing back-end infrastructure. However, generally weaker balance sheets of MSOs and their lack of B2C experience are key hurdles to the faster ramp-up of fixed BB businesses.

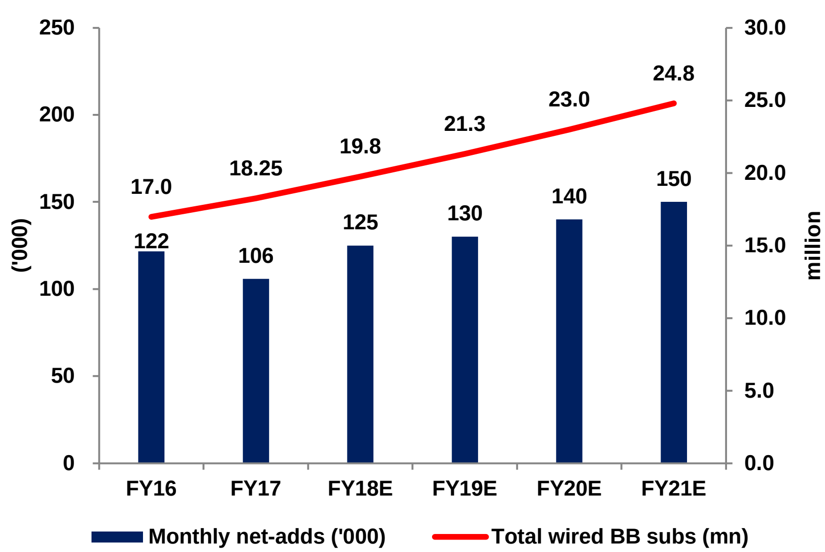
Exhibit 31. Wired BB subs as of Mar-17 (mn)



Source: Companies, JM Financial. Note: [a] ACT uses Ethernet and GPON. [b] Ethernet LAN, FTTH and leased lines.

Fixed BB market is seeing annual additions of around 1.25mn subscribers, and we forecast a gradual pick-up in sub-additions over the next 3-4 years. We forecast the fixed BB market to have about 25mn subs by end-FY21 compared with 17mn in FY16.

Exhibit 32. India wired broadband subscribers and net additions

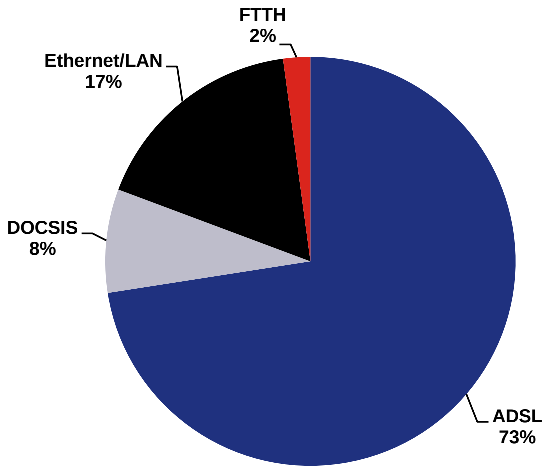


Source: TRAI, JM Financial estimates.

Broadband technologies—EOC to DOCSIS to GPON/FTTH

While market expansion itself presents a solid growth opportunity, we believe the bigger opportunity for MSOs and other new entrants such as ACT or Jio, lies in taking share from the telcos (especially BSNL and MTNL) by upgrading their DSL customers to higher speeds, through DOCSIS, FTTB/ FTTC [Ethernet-GPON], or FTTH/GPON technologies. Unlike developed countries where Cable/DOCSIS has the lion's share of BB connections, India's fixed BB market is dominated by DSL. Note: Ethernet/LAN includes the FTTB deployments.

Exhibit 33. Wired BB subs by technology, as of Mar-17 (%)



Source: TRAI Performance Indicator Report Jan-Mar 2017, JM Financial.

Historically, MSOs and LCOs have provided BB using EoC technology [Ethernet over Coaxial], in which Ethernet cable (CAT 5/6) is used inside customer homes (through a modem), with HFC network as backhaul. However, in recent years, larger MSOs moved first to DOCSIS 2.0 deployments, and later to DOCSIS 3.0 in the new areas (non-EOC areas), to provide speeds of 10-50 Mbps. DOCSIS runs on existing HFC cable networks, comprising fibre in the backhaul [sometimes up to the node], and co-axial cable in the last mile. These larger MSOs are now shifting to GPON technology or Gigabit Passive Optical Networks, with FTTX deployments [X is Curb/Building/Home] because of the challenges associated with DOCSIS deployments and the changing market dynamics. Key factors driving this DOCSIS to GPON shift are discussed below.

- Lack of last mile ownership in cable—MSOs are forced to deploy a new, parallel, last mile coaxial cable network, which is 'reverse path' enabled
- Operational difficulties in deploying the 'reverse path' in coax cable, including the need to power up the last mile through two-way amplifiers. GPON does not require powering up, except at the back-end [NOC] and the CPE.
- Limited availability of power/electricity sources in the last mile, and difficulty in getting approvals from Residential and Housing associations.
- Faster decline in the cost of GPON equipment vis-à-vis DOCSIS.
- Competition from ACT has also been pushing the market towards 50-100 Mbps speeds and now 100 GB+ data allowance per month.
- Impending Jio entry in fixed BB—will likely be through state of the art GPON/FTTH, with robust and extensive underground intra-city fibre as backhaul.

In our view, GPON-based FTTB/FTTC (with Ethernet drop cable) and FTTH (fibre drop + CPE), deployments are the future of fixed BB in India. These networks are capable of data-throughput speeds ranging from 50 Mbps to 1 Gbps, and are therefore largely future-proof. The reason residential FTTB/FTTH deployments can be viable in India at an ARPU of USD 10 is lower capex per sub, thanks to the use of overhead/aerial fibre in the access and metro loops, as against underground intra-city fibre deployed in most other countries. In India, the GPON-Ethernet deployment at scale was pioneered by ACT [Atria Convergence Technologies] headquartered in Bangalore. ACT has a strong and growing presence in the major cities of South India, and has recently entered the highly lucrative but competitive Delhi/NCR market.

Exhibit 34. Overview of fixed BB technologies, including wireless BB

Application	FTTH	FTTN	FTTH	FTTN	FTT C/B	FTTN	Wireless BB
Technology	GPON	VDSL	GPON	DOCSIS 3.0	MEN/PON	EoC	Wi-Fi / LTE
Distribution network	Underground	Underground	Overhead	Overhead	Overhead	Overhead	OFC, MW
Network elements							
CPE (excl. WiFi router)	ONT/ONU	VDSL modem	ONT/ONU	Cable Modem	None	None	None
In-building connectivity	Fiber	Copper	Fiber	Coaxial	Ethernet	Coax/Ethernet	Ethernet
Rooftop/Hub equipment	Fiber splitter	None	Fiber splitter	Amplifiers, Splitters	ONU, Fiber switch	Amplifiers, Splitters	Rooftop CPE
Node/Central Office	OLT	DSLAM	OLT	CMTS	OLT	OLT	BTS

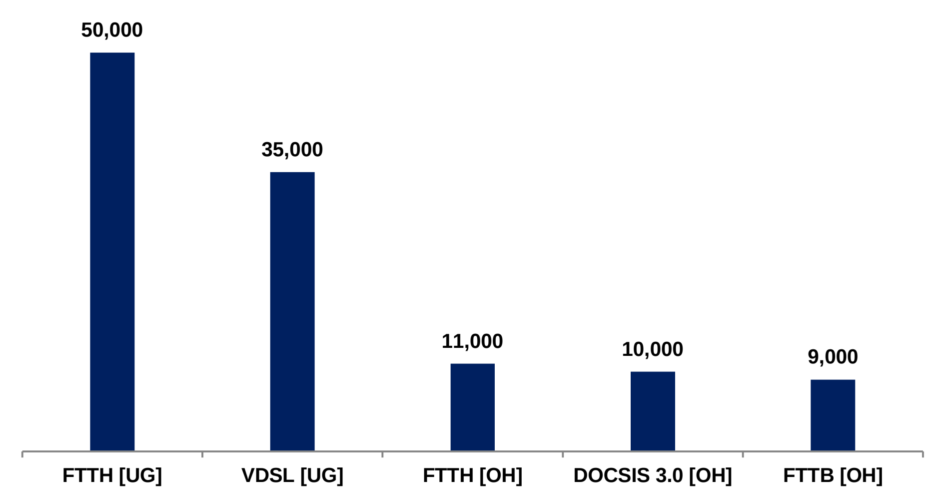
Source: Industry sources, JM Financial.

Exhibit 35. Key broadband technologies and prominent users in India

			Common name	Access loop or Drop cable	Prominent users	Download speed (Mbps)
ADSL			ADSL	Twisted pair copper	Airtel	8-16
DOCSIS			DOCSIS	Co-axial cable	MSOs	40-100
Metro Ethernet Network			MEN	Coaxial/Ethernet	GTPL	2-10
	X stands for					
GPON for FTTX application	Node	FTTN	VDSL 2	Twisted pair copper	Airtel [V-Fiber]	16-40
	Node	FTTN	DOCSIS 3.0	Co-axial cable	MSOs	40-1000
	Curb/Building	FTTC/FTTB	GPON	Ethernet	ACT Fibernet. GTPL	50-1000
	Home	FTTH	GPON	Fibre	Hathway, Jio	1000+

Source: Companies, JM Financial.

Exhibit 36. Fixed broadband capex per connected home (INR)



Source: Industry sources, JM Financial. Note: Based on assumption of a 20% home pass penetration rate or fill rate. UG refers to underground fiber in distribution and backhaul network, and OH refers to overhead or aerial fibre.

BB economics—more attractive than video

A rapid scale-up of BB investments would make sense for the cable MSOs in our view, as BB has superior unit-economics (at scale), vis-à-vis the bread and butter video business. While BB requires much higher unit capex (>10x) than video, and is more capital-intensive (asset turnover is lower), its overall RoIC potential (estimated at 15%), is much better than the barely break-even potential (11%) of video, thanks to superior margins (EBITDA, EBIT). Further, BB business is fundamentally more robust given its B2C nature.

Superior return potential of BB is also reflected in the lower payback period [EBITDA/Capex], of less than 3 years, as against a 3.5-4.0 year payback period estimated for video after full DAS monetisation.

Exhibit 37. Broadband vs. Video—unit economics

INR/sub/month

	Video B2B MSO	Broadband GPON/FTTB
ARPU (net of taxes)	75	750
Total opex	(57)	(450)
EBITDA	18	300
EBITDA margin (%)	24	40
Annual financials		
EBITDA	218	3,600
Depreciation	(80)	(1,300)
EBIT	138	2,300
EBIT margin (%)	15	26
RoIC (%)	11.2	15.0
Payback period (years)	3.7	2.8
Capex per sub	800	10,000
Average depn rate (%)	10.0	13.0
Asset turnover (x)	1.13	0.90

Source: Industry sources, JM Financial.

Limited risk to traditional pay TV from growing OTT adoption

Monthly cost of BB access is >3x pay TV ARPU. We do not see this ratio falling below 2x in the next few years

We see fairly limited risk to traditional pay TV revenues (on Cable, DTH) from growing adoption of subscription-based streaming services [SVOD], owing to the following reasons:

1. Poor fixed BB penetration—around c.6% of HHs, as against 52% penetration of pay TV. There is a lot of room for pay TV itself to grow on the back of the expected increase in TV penetration.
2. Significantly higher cost of broadband access, relative to pay TV ARPU—cost of fixed BB access (>10Mbps speed and 100 GB/month data) has been declining, yet at around USD 11/month (INR 700), it is >3x pay TV ARPU (USD 3.3; INR 210). In contrast, BB access in the US at USD 40/month is roughly 50% of the pay TV ARPU, and in Singapore/Australia cost of BB access is similar to pay TV ARPUs.
3. Lack of availability of a premium content library in Indian languages—TV broadcasters have historically been heavily dependent on ad revenues, due to problems in the subscription value chain. This has hampered the development of premium-only or subscription-only content for the TV audience. This 'library build up' by SVOD platform-owners will take a few years, and requires an expansion of the ecosystem involved in production of premium-original-exclusive content in Indian languages.
4. Indian consumers' lack of willingness to pay for premium content is also a hurdle—this is partly due to availability of large volume and wide variety of content on pay TV platforms at very affordable prices, as well as content piracy. In fact, at the lower end of the pay TV market, we are seeing growing preference for FTA content that is available on DD Free Dish.

For streaming HD content on Netflix, a minimum of 4 Mbps data throughput is required. Assuming a daily viewing time of 1.5 hours, we compute daily consumption of 2.7 GB, implying monthly consumption of 81 GB.

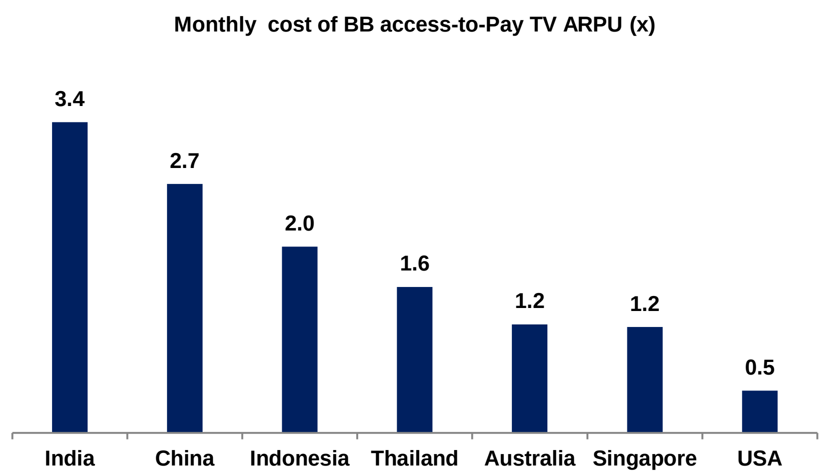
Exhibit 38. Monthly data consumption in streaming Netflix (GB)

	SD [480p]	HD [1080p]	Ultra HD
Data speed required for Netflix (Mbps)	2.0	4.0	16.0
Data consumed per minute (MB)	15	30	120
Data consumed per hour (GB)	0.9	1.8	7.2
Daily viewing hours	1.5	1.5	1.5
Daily consumption (GB)	1.4	2.7	10.8
Monthly data consumption (GB)	41	81	324

Source: Lifewire.com, Netflix, JM Financial.

We therefore select the cheapest fixed BB plan in India that gives 100 GB of data each month at a minimum 5 Mbps speed, and compare that with similar plans in other major countries.

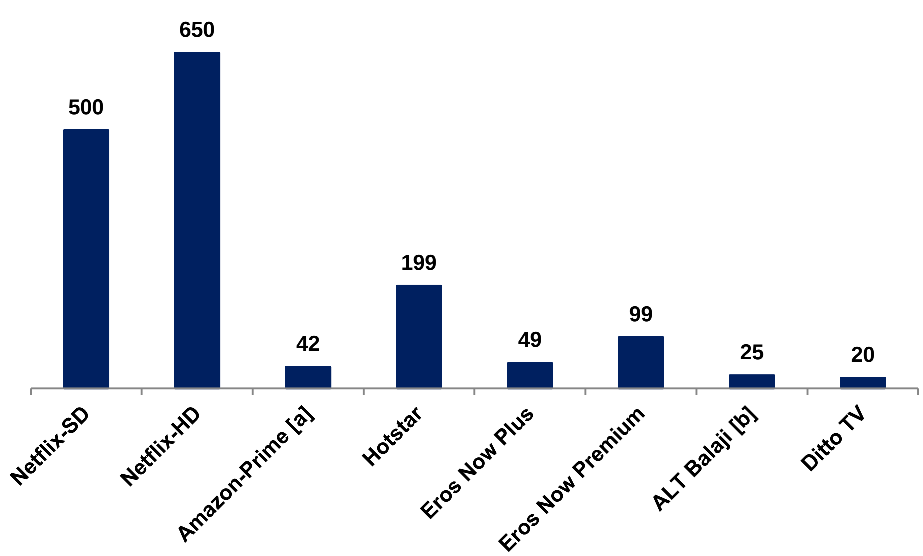
Exhibit 39. Monthly broadband cost as a multiple of Pay TV ARPU [a]



Source: Company websites, JM Financial. [a] Based on cheapest monthly BB plan that gives 100 GB data, at a minimum 5 Mbps speed.

The cost of any OTT subscription (streaming service) will be in addition to the monthly cost of BB access, and that would be a major hurdle to significant SVOD-adoption levels in India. At present, the most downloaded TV streaming app (Hotstar) has a monthly subscription price of INR 199 or USD 3 [including taxes] for access to live sports and other premium content. Hotstar is a 'freemium' service; it has some exclusive content, but very little original content.

Exhibit 40. Monthly cost of subscription VOD in India (INR/month)



Source: Companies, JM Financial. Note: [a] Based on introductory price of INR 499/year. Regular price is INR 999/year. [b] Based on introductory price of INR 300/year; regular price is INR 90/month.

Net-net, we see S-VOD adoption growing in the top-bracket households, driven by the likes of Amazon Prime Video, Hotstar and Netflix, but do not expect it to drive any material cord-cutting in India. In our view, SVOD would complement traditional pay TV, and over the next 3-4 years, we expect more HHs with both SVOD and pay TV subscription than SVOD-only HHs; we reckon SVOD-only HHs would not exceed 4-5mn by 2020.

Other issues—MSOs need to improve the quality of KPI reporting

Most listed MSOs share a good quantity of disclosures in their quarterly reports, investor presentations and earnings conference calls. However, the quality of disclosures especially KPIs is somewhat deficient. Many a times, the KPIs are neither well-defined, nor consistent over time, nor comparable with that of peers. We believe the MSOs need to report the following in a consistent manner:

- Define 'active' digital video subscriber and broadband subscriber. This would also lead to proper measurement of churn
- Total installed STB base, excluding ones that have been lost/deleted or recovered
- Phase-wise reporting of active video subs based on a consistent definition
- Phase-wise ARPU for the quarter derived from actual subscription revenues and the average active sub base
- Phase-wise exit-ARPU based on actual subscription revenues in the last month and the average sub base
- Formal disclosure of accounting policy w.r.t. recognition of activation income under IND AS
- Activation income during the quarter based on Indian GAAP
- Reporting of STB inventory for end of the quarter
- Bad debt expense and level of receivables each quarter
- Capex reported on the basis of gross addition to the balance sheet before disposals or deletion

Exhibit 41. FDI limits in key media sub sectors in India

Segment	Previous Limits / Approval Route	Revised Limits [from 2016]
Teleport / DTH / HITS / IPTV / Mobile TV	Up to 49% - Automatic route Beyond 49% and upto 74%- FIPB route	**100%** Up to 49% - Automatic route Beyond 49% and up to 100% - approval needed
Cable Networks (MSOs operating at National or State or District level and undertaking upgradation of networks towards DAS)	Up to 49% - Automatic route Beyond 49% and upto 74%- FIPB route	**100%** Up to 49% - Automatic route Beyond 49% and up to 100% - approval needed
Uplinking of 'News & Current Affairs' TV Channels	Up to 26% - FIPB route	49%
Uplinking of Non-News & Current Affairs TV Channels	Up to 100% - FIPB route	100% - Automatic Route
FM Radio	Up to 26% - FIPB route	49%
Print media: Publishing of newspapers and periodicals dealing with news and current affairs	Up to 26% - FIPB route	26% - approval needed
Print media: Publication of Indian editions of foreign magazines dealing with news and current affairs	Up to 26% - FIPB route	26% - approval needed

Source: Department of Industrial Policy & Promotion website.

Exhibit 42. GTPL and SITI—peer and global valuation comps

		CMP	M-cap	EV/EBITDA (x)		EBITDA CAGR (%)
	LCY	[LCY]	(USD bn)	FY18E	FY19E	FY18E-20E
Siti Networks	INR	25.0	0.34	12.1	10.6	20.1
GTPL Hathway	INR	148.9	0.26	7.3	5.7	22.0
Dish TV	INR	78.7	1.3	10.3	9.2	12.1
ZEEL	INR	529.3	7.9	22.6	18.9	15.7
Sun TV Network	INR	836.4	5.1	18.0	14.5	17.7
				CY17E	CY18E	CY17E-19E
Comcast Corp	USD	37.6	176.9	8.4	7.9	5.2
Charter Communications Inc	USD	376.0	97.0	10.4	9.6	7.6

Source: Bloomberg, JM Financial. Note: Multiples for Dish TV, Comcast Corp and Charter Communications are based on data from Bloomberg.

GTPL Hathway | BUY

JM FINANCIAL

The best listed cable business is undervalued; initiating with BUY

Sanjay Chawla
sanjay.chawla@jmfl.com | Tel: (+91 22) 66303155
Shilpa Pattnaik
shilpa.pattnaik@jmfl.com | Tel: (+91 22) 6630 3134

GTPL Hathway [GTPL] is a leading regional MSO with a dominant #1 market position in Gujarat, and a significant #2 position in Kolkata. GTPL's cable [video] footprint also includes adjoining states—Maharashtra and Rajasthan, and several states in Eastern India. We forecast a 22% CAGR in video subscription revenues [VSR] for FY17-20E, as 1/3rd [=2.5mn] of GTPL's active video subscriber base was under-monetised (un-billed) as of Mar-17. Further, broadband is a large, long-term opportunity for GTPL; revenues have grown >7x in the past three years (off a low base), and we expect them to double over the next three years.

Thanks to its regional dominance and well-run operations, GTPL has been consistently profitable over the past few years—IND AS RoAE was 11% in FY17. Further, GTPL is generating operating cash flow [OCF] of INR 2bn annually, and its balance sheet is among the best in cable sector—net debt post-IPO, stood at c.1x FY17 EBITDA. We forecast GTPL's EBITDA to double, and PAT to triple over the next three years, and believe the stock is undervalued at an EV/EBITDA of 5.7x and a P/E of 16.5x on our FY19 estimates. We initiate with a BUY and a Sep-18 TP of INR 200. Downside risks are: (1) weak broadband execution; and (2) overhang from a potential sell-down by Hathway (>8x leverage ratio in Mar-17).

- Good company in a tough sector—available at attractive valuations: GTPL stands out among B2B cable peers, ticking all the right boxes: (1) regionally dominant with >65% share of cable subs in Gujarat; (2) strong HSM coverage—Gujarat accounts for >8% of all-India HSM universe; and (3) strong LCO relationships and exclusive local content. Thanks to the combined weight of these factors, GTPL has the highest subscription gross margin and one of the highest C&P ARPUs among peers. Further, GTPL has the lowest ratio of non-content opex to revenues, indicating well-run and efficient operations. As a result, GTPL reported the highest adj. EBITDA margin [16%] in FY17 among cable peers.
- Consistently profitable—a rarity among MSOs: GTPL is the only profit-making MSO in the listed space. In fact, GTPL has generated I-GAAP profits consistently since FY12; even on IND AS basis, GTPL was PAT positive in FY16 and FY17. Further, GTPL generated the best RoIC (c.11% pre-tax) among peers in FY17. We forecast its RoAE to reach 16% in FY20 from 11% in FY17, as the PAT is likely to more than triple over the same period.
- Low debt and leverage—faster BB ramp up and higher pay out feasible: After the IPO, GTPL's net debt declined to 1x FY17 EBITDA (from 2.1x), which compares with the 1x-8x leverage ratio of peers (average 5x). Assuming no dividends, net debt is likely to be below INR 2.5bn in FY20, as our projected INR 8.5bn capex over the next 3 years can be funded entirely out of OCF. Therefore, if GTPL were to target minimum 1x leverage, it would be able to pay out >80% of profits, translating to FY19E dividend yield of 5% at CMP.
- Valuations and key risks: Our Sep-18 DCF TP of INR 200 implies a target EV of 6.8x forward EBITDA, a modest 6% re-rating from the current 6.4x multiple. We do not see a large risk from Jio's likely BB foray, as GTPL is upgrading its network to FTTB speeds, in order to ring-fence its top-end customer base. Moreover, our BB forecasts for GTPL are not aggressive—80,000-100,000 annual subscriber additions and <INR 500 ARPU. However, there may be execution risks in BB, as it is a B2C business. Hathway may also look at partly selling-down its 37.2% GTPL stake to reduce leverage, creating overhang.

Recommendation and Price Target	
Current Reco.	BUY
Previous Reco.	NR
Current Price Target (12M)	200
Upside/(Downside)	34.4%
Previous Price Target	NA
Change	NA

Key Data – GTPL IN	
Current Market Price	INR149
Market cap (bn)	INR16.7/US$0.3
Free Float	26.15%
Shares in issue (mn)	112.5
Diluted share (mn)	112.5
20 days avg daily val (mn)	INR29.5/US$0.5
52-week range	190.3/126.6
Sensex/Nifty	32,273/10,085
INR/US$	64.1

Price Performance

%	1M	6M	12M
Absolute	9.5	NA	NA
Relative*	6.7	NA	NA

* To the BSE Sensex

Exhibit 43. GTPL—key consolidated financials [IND AS]

Fiscal-end March, INR mn	FY16	FY17	FY18E	FY19E	FY20E
Revenues	7,364	9,090	11,053	12,998	15,008
Revenue growth (%)	NA	23.4	21.6	17.6	15.5
EBITDA	1,517	2,077	2,854	3,611	4,250
EBITDA margin (%)	20.6	22.9	25.8	27.8	28.3
Adjusted EBITDA [a]	1,108	1,326	1,871	2,519	3,135
EBITDA growth (%)	NA	37.0	37.4	26.5	17.7
Adj. PAT	74	403	703	1,015	1,274
EPS (INR)	0.7	4.1	6.5	9.0	11.3
EV/EBITDA (x)	12.9	9.8	7.3	5.7	5.0
P/E (x)	198.6	36.3	23.1	16.5	13.1
Dividend yield (%)		0.7	1.3	1.7	2.0
RoAE (%)	2.2	11.1	13.2	14.2	16.0

Source: Company, JM Financial. [a] excl. Activation revenues.

The best cable business is undervalued

We initiate on GTPL with a Buy rating, and a Sep-18 TP of INR 200 derived from DCF valuation. We believe GTPL has the best cable business among listed MSOs, thanks to its dominant leadership position in Gujarat and its efficient operations.

GTPL is the only profit-making MSO among listed cable peers. Its video business is likely to grow strongly over the next three years (22% revenue CAGR), as one-third (2.5mn) of its 7.5mn active customer base was under-monetised as of Mar-17. Further, broadband under-penetration presents a secular growth opportunity; GTPL's BB revenue has grown >7x in the last three years, and we forecast it to double over the next three. We forecast GTPL's consolidated EBITDA to double and PAT to more than triple over the next three years (by FY20). Further, GTPL's under-leveraged balance sheet and growing OCFs indicate that it has potential to deliver around 5% dividend yield (for FY19E at CMP), which can drive higher stock rerating. We believe GTPL's stock is undervalued at FY19E EV/EBITDA of 5.7x, and P/E of 16.5x on our forecasts. We initiate with a BUY rating and target price of INR 200.

GTPL has the best cable business in the listed MSO space

Video business—dominant and efficient

GTPL's video business stands out among B2B peers, as it ticks all the right boxes. GTPL is regionally dominant (>65% share of video subs in Gujarat), has good HSM-coverage (Gujarat accounts for >8% of HSM universe as per MPA), a balanced rural-urban mix, and relatively better control over LCOs (since long standing relationships, control over MSO JVs). We rate the listed MSOs on these major dimensions [5 is the best or highest rating, 1 is the lowest], and add up their ratings, assuming same/equal weightage for each parameter. GTPL emerges as the best cable MSO among its peers, followed by Ortel Communications [Not Rated]. We note both these companies are regionally dominant MSOs.

Gujarat accounted for 53% of GTPL's STBs seeded as of end-June 2017

Exhibit 44. Drivers of video business and relative scores for listed MSOs

	GTPL	SITI	Ortel	DEN	Hathway
Regionally dominant position	5	2	4	3	1
HSM mix	4	3	1	5	2
Rural mix	3	2	5	4	1
Control over subscribers [a]	4	3	5	1	2
Total score [b]	16	10	15	13	6

Source: Companies, JM Financial. Note: Higher score correlates with a stronger business model and higher profitability potential. [a] Higher proportion of subs in standalone company + subsidiaries, with no separate/independent headend. [b] Assuming equal weights for each of the four parameters.

GTPL is the only profit-making MSO among B2B cable peers, as it has some of the best operational and financial metrics in the sector. GTPL's consistent profits and highest return-ratio (RoIC pre-tax) are a result of its higher EBITDA margins, lower financial leverage, and higher capital efficiency (i.e. asset turnover) relative to peers.

Video accounted for 85% of GTPL's adjusted revenues (ex-activation) in FY17, while broadband accounted for the rest

Exhibit 45. Key financials of leading Indian cable MSOs for FY17 [IND AS, except Ortel]

INR mn, FY-ending March

Revenues	GTPL	Hathway	SITI	DEN	Ortel [I-GAAP]
Video subscription					
Carriage & Placement	2,375	2,725	3,001	3,506	296
Broadband subscription	1,289	4,955	969	810	338
Activation	751	825	1,701	859	153
Other revenues (incl. ad, devices)	182	211	421	954	85
Total revenues [a]	**9,090**	**13,444**	**11,774**	**11,573**	**2,034**
Operating costs					
Pay channel cost	(3,821)	(4,717)	(5,070)	(4,733)	(384)
Other opex	(1,144)	(2,565)	(1,822)	(1,545)	(170)
SG&A	(964)	(3,259)	(2,022)	(2,273)	(721)
Employee costs	(1,084)	(932)	(833)	(1,234)	(246)
Total operating costs	**(7,013)**	**(11,472)**	**(9,746)**	**(9,785)**	**(1,521)**
EBITDA	**2,077**	**1,972**	**2,028**	**1,788**	**513**
EBITDA margin (%)	23	15	17	15	25
EBITDA (ex-activation)	**1,326**	**1,147**	**327**	**929**	**360**
Adjusted EBITDA margin (%)	16	9	3	9	19
PAT	**403**	**(1,925)**	**(1,885)**	**(2,102)**	**14**
Cash profits	**1,643**	**1,102**	**909**	**1,225**	**271**
Net debt	**4,378**	**16,160**	**11,931**	**1,823**	**1,672**
GFA turnover (%)	**57**	**43**	**40**	**50**	**40**
RoIC pre-tax (%)	**10.8**	**(3.4)**	**(1.1)**	**(5.1)**	**8.7**
Net debt-to-EBITDA (x)	**2.1**	**8.2**	**5.9**	**1.0**	**3.3**
Interest coverage (x) [b]	4.5	2.0	1.9	3.4	2.1

Source: Companies, JM Financial. Notes: [a] Revenues are net of any LCO share or pass through in CATV business. [b] Interest coverage defined as: [EBITDA + Other income] divided by Net Finance Cost.

GTPL's best-in-class EBITDA margin is driven by:

1. Highest gross margin on video subscription revenues (or the lowest PC cost-to-VSR ratio)
2. One of the highest C&P ARPUs
3. Lowest non-content opex-to-overall revenue ratio

Exhibit 46. Comparison of revenue mix and cost structure [FY17, IND AS]

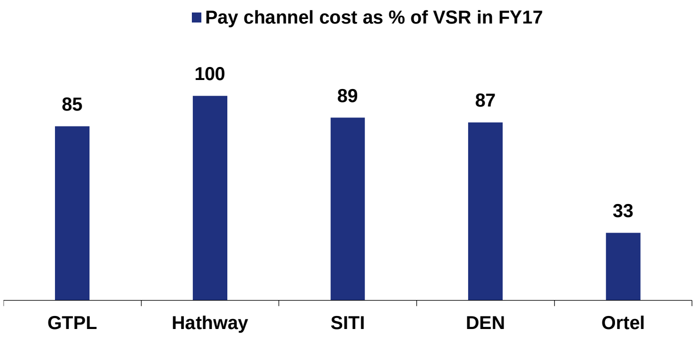
INR mn, FY-ending March	GTPL	Hathway	SITI	DEN	Ortel [I-GAAP]
Adjusted revenues [ex-activation]	8,339	12,619	10,073	10,714	1,881
Revenue mix (%)					
Video subscription	54	37	56	51	62
Carriage & Placement	28	22	30	33	16
Broadband subscription	15	39	10	8	18
Other revenues (incl. ad, devices)	2	2	4	9	5
Opex-to-adjusted revenues (%)					
Pay channel cost	46	37	50	44	20
SG&A & other expenses	25	46	38	36	47
Employee costs	13	7	8	12	13
Total	84	91	97	91	81
Adjusted EBITDA margin (%)	16	9	3	9	19

Source: Companies, JM Financial. [a] Ortel has 90% primary points/customers in video, which partly explains its higher margins versus peers.

Regional dominance tends to result in higher video SGM (i.e. lower pay channel costs), as well as higher C&P ARPU. C&P income is highly profitable, and it accounted for 28% of GTPL's adjusted revenues in FY17. In fact, while GTPL has less than 10% share of all-India cable TV subscribers, it managed to garner a 14% share of cable C&P income in FY16 [Source: MPA report in GTPL RHP].

GTPL reported the highest SGM among peers in FY17, which means it has the lowest content cost as a percentage of video subscription revenues. Note: Ortel's content cost-to-revenue ratio is even lower, because of its B2C business model, which strictly speaking, is more comparable to the DTH business than to B2B cable MSOs.

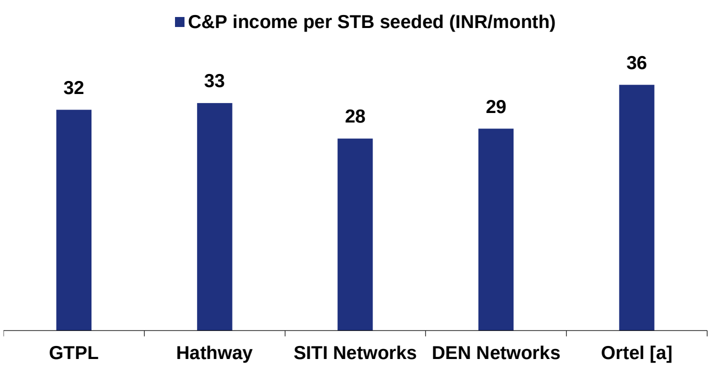
Exhibit 47. Pay channel cost as a % of VSR [FY17]



Source: Companies, JM Financial.

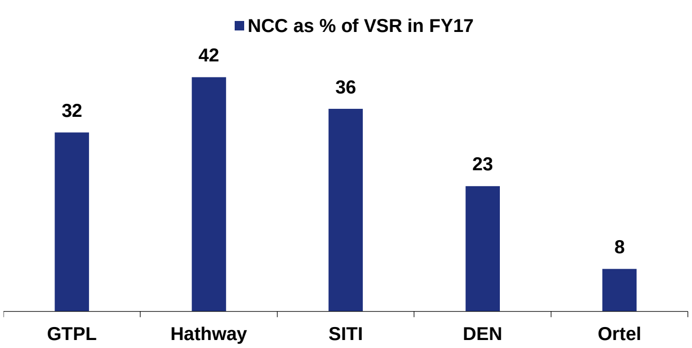
Further, GTPL's carriage income per average STB was among the best, at INR 32 per month in FY17. Another way of appreciating GTPL's dominance, as reflected in the carriage fee, is to look at the company's net content cost or NCC [pay channel cost less C&P income] relative to its subscription revenues. In FY17, GTPL's NCC was 32% of VSR, which was the second-lowest after DEN among B2B MSOs.

Exhibit 48. C&P income per STB seeded [FY17]



Source: Company data, JM Financial. [a] For Ortel, carriage fee is averaged over the entire video subscription base.

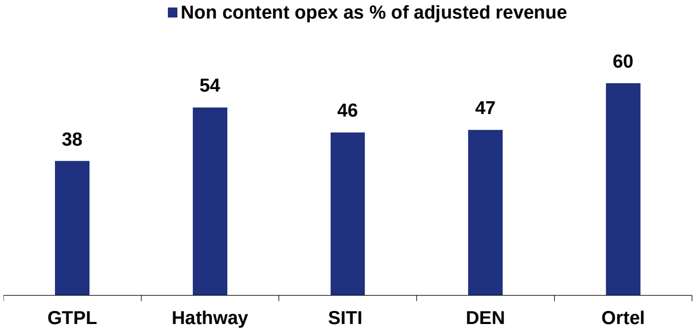
Exhibit 49. NCC as a % of VSR [FY17]



Source: Company data, JM Financial. [a] NCC is net content cost defined as pay channel cost less carriage revenue.

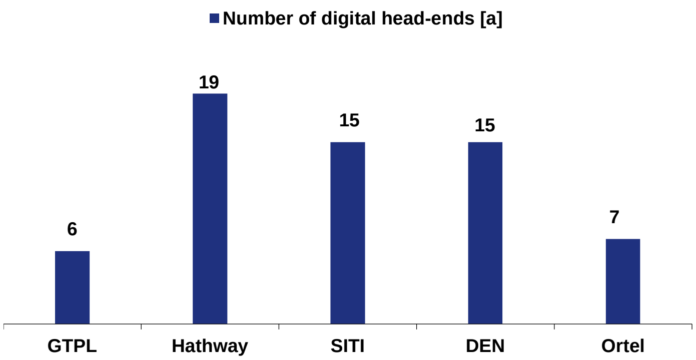
Finally, GTPL's non-content opex [NCO] as a percentage of adjusted revenues is the lowest among peers, demonstrating its operating efficiency, which is driven by: (1) leaner management structure; (2) efficient LCO management; and (3) fewer digital head ends—GTPL has two main head-ends and four supporting head-ends.

Exhibit 50. Non-content opex as a % of adjusted revenue [FY17]



Source: Company data, JM Financial.

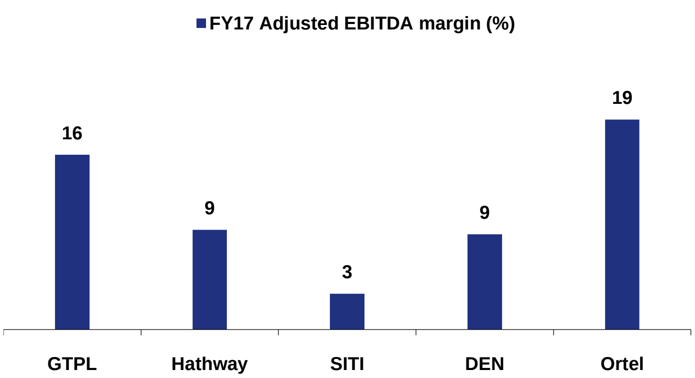
Exhibit 51. Number of digital head-ends



Source: Company data, JM Financial. Note: [a] Digital head-end data is for Mar-17 or Jun-17, except in case of DEN (May-13 QIP document).

Net-net: GTPL's regional dominance and efficiency are key drivers of its higher EBITDA margin and higher return ratios relative to peers.

Exhibit 52. Adjusted EBITDA margins [FY17]



Source: Company data, JM Financial.

Video growth drivers—digitisation, monetisation, gross margins

As of March 2017, we estimate GTPL was yet to digitise around 1.5mn analogue subs in Phase-III and IV areas. Further, of the 6.9mn STBs seeded by GTPL as of Mar-17, about 6.0mn were active [87% of seeded], but only 5.0mn were being billed or 'effectively monetised' via the LCOs on a per subscriber basis. Therefore, of the estimated 7.5mn active subs (including analogue), about 5.0mn were being billed (and generating blended secondary DAS ARPU of approx. INR 70/month), whereas there were 2.5mn subs that were not being billed (generating ARPU of about INR 20/month), and hence were under-monetised. The incremental ARPU of INR 50/month on 2.5mn subs [INR 1.5bn annualised revenue] reflects the near-term growth potential in video subscription revenues for GTPL. Additionally, we expect GTPL to further raise the monetisation levels in P-I and II areas, as well as add/acquire video subs by signing up new LCOs as franchisees.

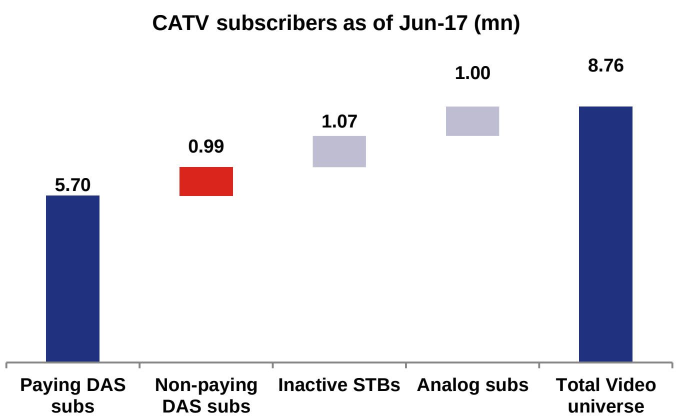
Exhibit 53. GTPL—profile of video business

	FY14	FY15	FY16	FY17	1QFY18
Number of towns serviced (#)	64	74	146	189+	189+
Estimated video universe (mn)	**5.6**	**6.0**	**7.0**	**8.4**	**8.8**
Analog subs (mn) [A]	2.6	2.7	1.6	1.5	1.0
STBs seeded (mn)	3.0	3.4	5.4	6.9	7.8
Active STBs (mn)	**2.7**	**2.8**	**4.7**	**6.0**	**6.7**
Share of inactive STBs (%)	10	15	14	13	14
Billed or paying digital subs (mn)	**2.3**	**2.3**	**3.4**	**5.0**	**5.7**
Billed subs-to-active STBs (%)	87	81	73	83	85
Non-billed digital subs (mn) [B]	**0.3**	**0.6**	**1.3**	**1.0**	**1.0**
Total under-monetised subs (mn) [A] + [B]	**3.0**	**3.2**	**2.9**	**2.5**	**2.0**
Proportion of under-monetised subs (%)	**56**	**58**	**46**	**33**	**26**

Source: Company, JM Financial.

As of Jun-17, the estimated under-monetised subs were around 2.0mn, comprising roughly 1mn analogue subs (to be digitised first), and another 1mn unbilled subs. Further, of the total 6.7mn active STBs as of Jun-17, about 65% or 4.4mn were in the Phase III and IV areas.

Exhibit 54. GTPL—video subscribers as of Jun-17 (mn)



Source: Company, JM Financial.

Exhibit 55. GTPL—phase wise STBs seeded and active digital subs [Jun-17]

	STBs seeded		Active STBs	
	(mn)	(%)	(mn)	(%)
Phase I	0.7	9	0.6	9
Phase II	2.2	29	1.7	26
Phase III	2.5	33	2.3	34
Phase IV	2.3	29	2.1	32
Total	7.76	100	6.69	100
Share of Phase III and IV (%)		62		65

Source: Company, JM Financial.

In FY17, GTPL's implied video ARPU based on its video universe (EOP 8.4mn subs, including inactive STBs) was approx. INR 49. Based on our phase-wise analysis and assumptions, we forecast blended ARPU of around INR 69 per month in FY20 for GTPL, for its average video base (incl. inactive STBs) projected at 9.75mn subs. This implies ARPU CAGR of c.12% over FY17-20E and subscription revenue CAGR of c.22% over the same period.

Exhibit 56. GTPL—blended ARPU forecast for FY20 based on phase-wise analysis

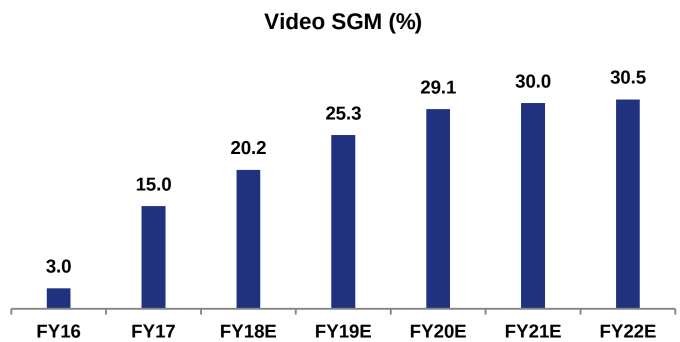
	Gross subs (mn)	Sub mix (%)	FY17 Net ARPU (INR)	Gross subs (mn)	Sub mix (%)	FY20E Net ARPU (INR)
P-I digital	0.7	8	100	0.7	7	110
P-II digital	2.2	26	95	2.2	22	100
P-III digital	2.5	30	48	3.9	39	80
P-IV digital	1.5	17	27	3.2	32	60
Analog	1.5	18	20	0.0	0	20
Total / blended [a]	8.4	100	48.6	10.0	100.0	69
Actual/Forecast ARPU on gross subs			48.6			69

Source: Company, JM Financial. [a] Phase-wise ARPUs are based on net or active subs; however, estimated blended ARPU adjusts for the proportion of inactive STBs (around 14% of the gross STBs seeded).

Our forecasts imply roughly 540bps expansion in GTPL's EBITDA margin from FY17 to FY20E. Of this, about 75% (400bps) is contributed by a decline in the content cost-to-revenue ratio, while the remaining 25% is from mostly operating leverage—a decline in NCO to revenue ratio.

The projected decline in content cost-to-revenue ratio is driven by an underlying expansion in video subscription gross margins, and growing share of broadband in the overall revenue mix (BB does not have content costs). Video SGM surged to 15% in FY17 from 3% in FY16, and we forecast it to increase further to 20% in FY18, reaching >30% in the longer term.

Exhibit 57. GTPL—video subscription gross margin (%)

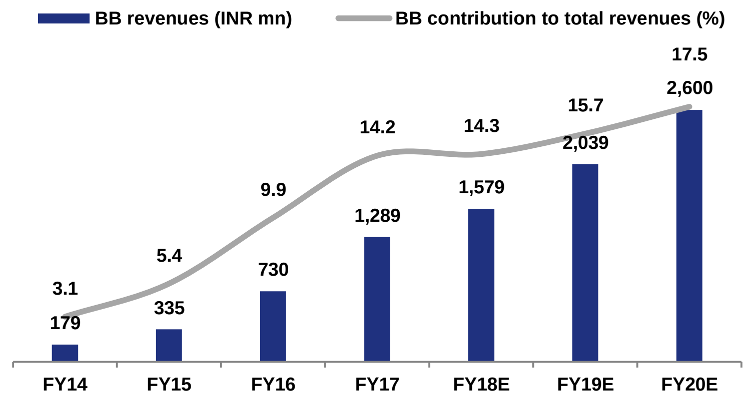


Source: Company, JM Financial.

Broadband—off to a good start, long way to go

GTPL has built a meaningful fixed broadband business in Gujarat over the last 3-4 years, thanks to its optical fibre infrastructure (6,000 kms owned; 90% over-ground) in major cities, strong LCO relationships (>14,000 LCOs), and existing RoW [right of way] approvals from local authorities and residential associations. From a low-base of INR 180mn in FY14, GTPL's BB revenues have seen a 93% CAGR over the last three years [FY14-17], and we model revenues to double over the next three years [by FY20].

Exhibit 58. GTPL—BB revenues and BB contribution to total revenues



Source: Company, JM Financial.

GTPL owns 6,000 kms and has leased 3,500 kms of optical fiber network

GTPL's broadband business has been Gujarat-focussed (Top-20 cities), but in the last 12-18 months, the company has made forays into other states in Western India (Mah, Raj), as well as in Eastern India (WB, AP, Bihar, Jharkhand). From Mar-14 to Jun-17 (over 3.25 years), the number of GTPL's BB subscribers grew 5x, while homes-passed [HPs] grew 3.4x. Thus, HP penetration has improved to 22.5% from 15.2% in Mar-14, indicating an efficient and effective BB roll-out. Further, GTPL's effective BB monthly ARPU has seen a 16% improvement to INR 433 in 1QFY18, from INR 373 in FY14, in spite of robust subscriber additions. As of Jun-17, Gujarat accounted for about 85% of the total BB subscriber base, and Ahmedabad alone accounted for roughly 40% of the total base.

Exhibit 59. GTPL—profile of broadband business

	FY14	FY15	FY16	FY17	1QFY18	Jun-17 over Mar-14 (x)
Homes passed (mn)	0.33	0.50	0.84	1.08	1.11	3.4
BB subs ('000)	50	88	170	240	250	5.0
Home-pass penetration (%)	15.2	17.6	20.2	22.2	22.5	1.5
Effective ARPU (INR/month)	373	405	472	524	433	1.16
BB revenues (INR mn)	179	335	730	1,289		

Source: Company, JM Financial.

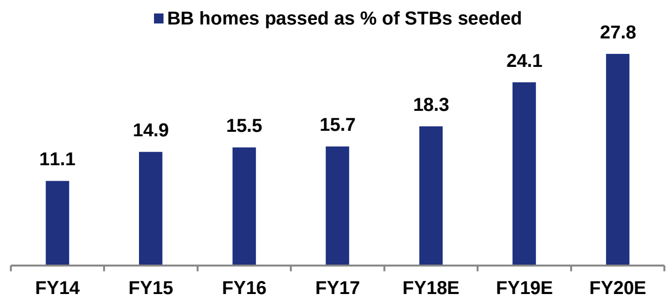
Broadband contributed 14% of reported IND AS revenues in FY17, and 15.5% of adjusted revenues (i.e. ex-activation)

BB business is almost entirely vested with a wholly-owned subsidiary

Broadband is a long term growth opportunity—requires capex and execution

Despite rapid growth in BB HPs and subscribers over the last few years, the scale of GTPL's BB business is rather small relative to video business. As of Mar-17, BB HPs were roughly 1/6th (c.16%) of the STBs seeded by GTPL. Note that a BB subscriber need not be an existing digital video subscriber for MSOs (roughly 50-60% of BB subs overlap with video), but it may be useful to compare the scale of broadband homes passed or subscribers with the scale of the digital video business, since the existing STB base and LCO relationships tend to offer the fastest route to broadband ramp-up.

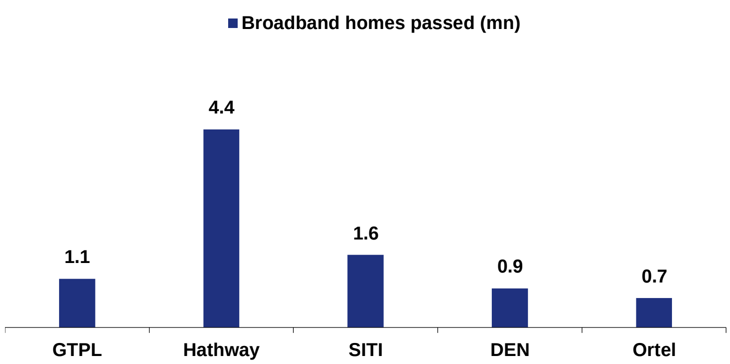
Exhibit 60. GTPL—BB homes passed as a % of STBs seeded



Source: Company, JM Financial.

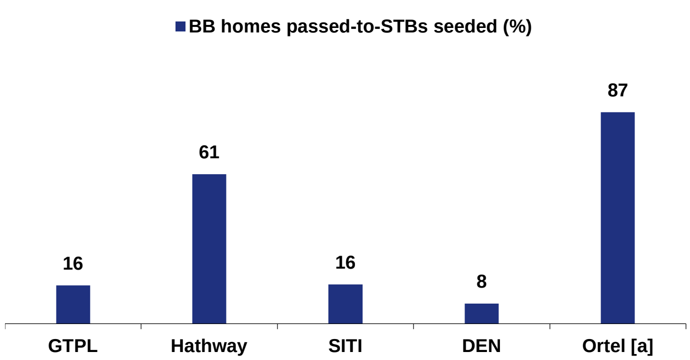
Further, GTPL stacks up well vis-à-vis SITI and DEN in terms of the scale of BB HPs and penetration within the STB base, yet it significantly lags its partner/shareholder Hathway on these parameters. As such, we expect BB subscribers and revenues of GTPL to continue to see above-normal growth rates well beyond FY20.

Exhibit 61. Broadband homes passed (mn) [Mar-17]



Source: Companies, JM Financial.

Exhibit 62. Broadband homes passed as a % of STBs seeded [Mar-17]



Source: Companies, JM Financial. [a] For Ortel, BB homes passed-to-video universe is derived as Ortel can target analogue subs.

Network and technology upgrade—defend existing customer base and boost ARPUs

GTPL currently provides broadband services primarily to residential users, using a combination of optic fibre and Ethernet cables (CAT-5/6 copper cables). Thanks to the use of Ethernet in last mile access and no requirement of customer premise equipment [CPE], this Metro Ethernet Network [MEN] technology is more cost-effective to deploy (INR 4,000-5,000 capex per sub) than the traditional DOCSIS 2.0/3.0 deployments or deployment of GPON technology with FTTX applications. However, the download speeds on GTPL's MEN are limited to a maximum 10 Mbps.

GTPL has started upgrading the last mile of its broadband network with GPON technology, which paves the way for an FTTB/FTTH network. GPON deployment requires higher unit capex, but should also lead to better ARPU, ensuring profitability profile is maintained at a payback-period of less than three years. For GTPL's FTTB roll out, we have modelled capex/sub of INR 8,000 at a normative 20% HP penetration.

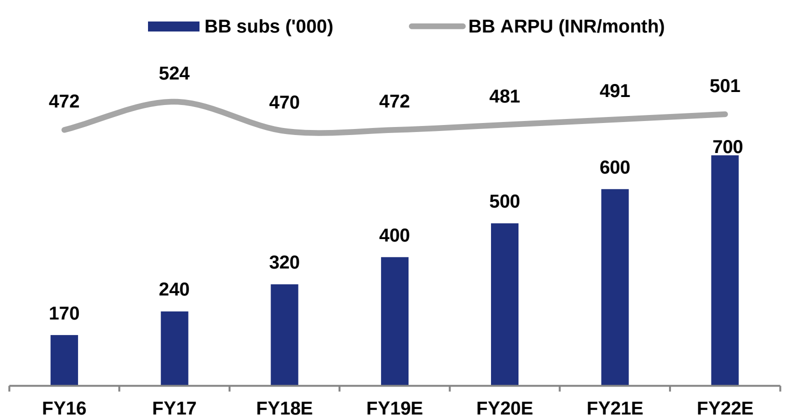
The GPON deployment has the following benefits:

- simplification of broadband network—fewer active or powered network elements
- easier and cheaper to maintain
- higher download speeds [50-100 Mbps]—makes GTPL's broadband offering more competitive and potentially future-proof

GTPL kicked off its planned GPON upgrade in Ahmedabad in Jun-17. This is mainly intended to provide FTTB (i.e. ONU per building or ONU per cluster) with Ethernet as the final drop cable inside customer homes. According to management, FTTB would boost data speeds to 20-50 Mbps. Furthermore, GTPL can provide FTTH based on subscriber demand—incremental cost would be INR 2000-2500 (including INR 1500-2000 CPE cost), but ARPUs would also be higher, and therefore pay for the upgrade. FTTH would boost speeds further to 50-100 Mbps. This GPON upgrade is necessary in our view, for GTPL to safeguard its broadband customer base, ahead of Jio's fixed BB foray. As of now, we understand Jio is doing very limited FTTH trials in Ahmedabad in the newly constructed buildings and apartments that are typically in the outskirts of the city (greenfield areas) with little or no cable/LCO presence.

While the ongoing GPON-FTTB deployment is aimed at upgrading the existing 250,000 BB subs, it would also expand the number of home passes at a marginal cost, allowing new customers to be added in existing coverage areas. However, we conservatively model 80,000-100,000 annual BB additions, and a gradual increase in ARPU towards INR 500/month. We also model an expansion in the number of HPs, and a concomitant decline in the HP penetration ratio.

Exhibit 63. GTPL—broadband subscribers and effective ARPU



Source: Company, JM Financial.

GTPL's BB business generated a healthy EBITDA margin of 25.1% in FY17 (vs. 22.5% margin in video), a significant improvement from 20.8% in FY16. Furthermore, in 1QFY18, GTPL's main BB subsidiary (accounted for 93% of BB revenues in FY17) reported an EBITDA margin of 26.4%, which is a 670 bps improvement YoY basis. In fact, GTPL's BB business generates net profits, with a PAT margin of 12-13%.

GTPL is paying a 10% revenue share to LCOs in broadband. LCOs are custodians and caretakers of the last mile

However, we note that MSOs are currently not paying 8% ISP license fee [LF] on adjusted gross revenues [AGR] in broadband, and are contesting this levy in TDSAT and other forums. BB EBITDA margins would be hit significantly, if MSOs such as GTPL do not get a favourable legal verdict on this issue, and are forced by DoT to fork out LF at 8% of BB AGR. For FY17, GTPL has estimated BB LF of INR 96mn; this has been disclosed as a contingent liability in FY17 annual accounts. Furthermore, the DoT has also raised claims against GTPL in the past, adding up to INR 1.35bn (INR 12/share) towards non-payment of license fees (including penalties) over FY12/13/14. The TDSAT has stayed this demand of the DoT.

Valuation and share price analysis

Our Sep-18 target price for GTPL shares is INR 200, derived from a DCF analysis. We believe DCF is the most appropriate too for valuing cable MSOs as the video monetisation cycle (ARPU evolution) and broadband volume growth would play out over several years.

We have used a 12.0% WACC to discount GTPL's free cash flows, which when combined with our assumed 5.5% terminal FCF growth rate and projected steady state FCF-to-EBITDA ratio (around 40%), yields a 6.5x EV/EBITDA multiple in the terminal year of our forecast [FY26].

Note that we have discounted consolidated cash flows in DCF analysis—a portion of them belongs to minorities in subsidiaries companies. Therefore, to derive the fair value of GTPL shares, we subtract the value attributable to minority interest [MI]. We value MI at FY17 P/B multiple similar to that of GTPL (4.5-5.0x at our TP), which yields INR 1.34bn MI value [Mar-17] and INR 1.5bn as of Mar-18.

Exhibit 64. GTPL—consolidated DCF summary

INR mn, year-end March

	FY16	FY17	FY18E	FY19E	FY20E	FY21E	FY22E	FY23E	FY24E	FY25E	FY26E
Key assumptions (%)											
Revenue growth	19.2	23.4	21.6	17.6	15.5	8.7	6.6	6.5	6.1	5.7	5.6
EBITDA growth	**7.6**	**37.0**	**37.4**	**26.5**	**17.7**	**7.9**	**5.1**	**5.9**	**7.2**	**7.5**	**7.5**
Adj. EBITDA growth ex- activation	**(5.7)**	**19.7**	**41.0**	**34.6**	**24.5**	**12.6**	**11.6**	**11.7**	**10.4**	**8.4**	**8.2**
EBITDA margin	20.6	22.9	25.8	27.8	28.3	28.1	27.8	27.6	27.9	28.4	28.9
FCF growth	(417)	(81)	(42)	(106)	4,001	69	11	14	20	5	6
FCF margin	(50)	(8)	(4)	0	6	10	10	11	12	12	12
FCFF as % of EBITDA	**(242)**	**(34)**	**(14)**	**1**	**22**	**35**	**37**	**39**	**44**	**43**	**42**
RoAIC	5	8	9	11	13	14	15	16	18	21	24
DCF											
EBIT X (1-tax rate)	(1,488)	504	892	1,255	1,556	1,653	1,701	1,791	1,958	2,170	2,400
Depreciation & Amortization	1,073	1,394	1,598	1,848	2,032	2,184	2,310	2,427	2,512	2,576	2,639
Change in net working capital	523	181	520	(529)	(114)	(49)	181	273	212	180	178
Operating FCF	**108**	**2,080**	**3,011**	**2,574**	**3,474**	**3,787**	**4,192**	**4,490**	**4,682**	**4,925**	**5,217**
Capex	**(3,778)**	**(2,778)**	**(3,412)**	**(2,551)**	**(2,534)**	**(2,194)**	**(2,429)**	**(2,473)**	**(2,270)**	**(2,398)**	**(2,533)**
Free cash flows [FCFF]	**(3,670)**	**(698)**	**(402)**	**23**	**941**	**1,593**	**1,763**	**2,017**	**2,412**	**2,527**	**2,684**

DCF for GTPL Hathway	Sep-18E
WACC (%)	**12.0**
Terminal growth (%)	**5.5**
Implied Exit EV/FCF multiple (X)	15.4
Implied Exit EV/EBITDA multiple (X)	**6.5**
PV of cash flows (2018E-2026E)	**8,060**
PV of Terminal value	18,611
Enterprise Value (EV)	**26,671**
Terminal value as % of EV	70
Less: Net debt/(cash)	2,684
Less: Value attributed to minority interest	1,498
Equity value (INR mn)	**22,489**
Equity value (USD mn)	351
Number of shares (mn)	112.5
DCF equity value (INR/share)	**200.0**
Sep-18E TP (INR/share)	**200**

Sensitivity of Sep-18E DCF value to WACC, Terminal Growth

	WACC (%)				
	11.50	11.75	12.00	12.25	12.50
4.5	193	185	177	169	162
5.0	206	197	187	179	171
5.5	221	210	200	190	182
6.0	239	226	215	204	194
6.5	261	246	232	219	208

Sensitivity of EV/EBITDA multiple to WACC, Terminal growth

	WACC (%)				
	11.50	11.75	12.00	12.25	12.50
4.5	6.1	5.8	5.7	5.5	5.3
5.0	6.5	6.3	6.1	5.8	5.7
5.5	7.1	6.8	6.5	6.3	6.1
6.0	7.7	7.4	7.1	6.8	6.5
6.5	8.5	8.1	7.7	7.4	7.1

Source: Company, JM Financial.

GTPL share price went up by c.8% to INR 183 post listing, but later declined by 30% to INR 128. The stock price has been recovering smartly following the recent dividend announcement and the 1QFY18 results, and we expect the upward trajectory to continue, as investors start appreciating the relative strength of GTPL's business vis-à-vis the listed cable MSOs.

Exhibit 65. GTPL--key assumptions for the business

	FY16	FY17	FY18E	FY19E	FY20E	FY21E	FY22E
Video segment							
Video subs (mn)	7.0	8.4	9.0	9.5	10.0	10.1	10.2
STBs seeded (mn)	5.4	6.9	8.8	9.5	10.0	10.1	10.2
Digitised base (%)	77	82	97	100	100	100	100
Active STBs (mn)	4.7	6.0	7.5	8.2	8.6	8.7	8.8
Effective video subscription ARPU (INR)	43.3	48.6	52.8	60.4	69.0	72.4	76.1
ARPU growth (%)	0.6	12.3	8.5	14.5	14.3	5.0	5.0
C&P revenue per sub (INR/month)	34	26	25	25	24	23	23
Activation fee per STB (INR)	712	839	890	536	732	850	856
Video subscription gross margin (%)	3	15	20	25	29	30	30
Pay channel cost per sub (INR/month)	42	41	42	45	49	51	53
Net content cost per sub (INR/month)	8	16	17	20	25	28	30
NCC to VSR (%)	18	32	32	34	37	38	39
Bad debt expense-to-video revenues (%)	3.6	5.2	5.3	5.4	5.4	5.3	5.2
Broadband segment							
Homes passed (mn)	0.8	1.1	1.6	2.3	2.8	3.2	3.7
BB HPs to digital video subs (%)	15	16	18	24	28	32	36
BB subs incl. inactive ('000)	170	240	320	400	500	600	700
Home pass penetration (%)	20.2	22.2	20.0	17.5	18.0	18.5	19.0
Effective ARPU (INR/month)	472	524	470	472	481	491	501
ARPU growth (%)	16.6	11.0	(10.3)	0.0	2.0	2.0	2.0
Revenue growth (%)							
Video subscription	13	33	23	22	20	8	6
C&P income	7	(11)	10	5	1	1	1
Broadband subscription	118	77	23	29	28	25	21
Other forecasts							
Share of BB in adjusted revenues (%)	10	15	16	17	19	21	24
Growth in content or PC costs (%)	12	17	15	14	14	7	5
Growth in net content cost (%)	40	138	23	27	30	12	9
Growth in non-content opex (%)	42	24	19	15	15	11	9
Content cost-to-revenue (%)	44	42	40	39	38	38	37
NCO-to-revenue (%)	35	35	34	34	34	34	35
EBITDA margin (%)	20.6	22.9	25.8	27.8	28.3	28.1	27.8
Adjusted EBITDA margin (%)	15.9	15.9	18.6	21.2	22.6	23.1	23.9
Capex-to-revenue (%)	51.4	29.2	30.9	19.6	16.9	13.5	14.0

Source: Company, JM Financial.

Financials—robust profit growth, improving FCF and returns

We forecast GTPL's EBITDA to double and PAT to more than triple over the next three years [FY17-20E]. This would boost RoAE to 15-16% from 11% in FY17. Further, operating cash flows should increase strongly from INR 2.1bn in FY17, and fully finance our estimated INR 8.5bn capex over FY18/19/20. Our dividend forecasts imply a c.30% payout ratio, which translates to a 2.0% yield in FY20E. Yet, our net debt forecast for Mar-20E is INR 2.9bn, which is merely 0.7x trailing EBITDA. Should GTPL decide to maintain a minimum 1x net debt to EBITDA ratio, we estimate it would have the potential to pay out 80% of profits, translating to FY19E dividend yield of 5% at the CMP and 4% at our target price.

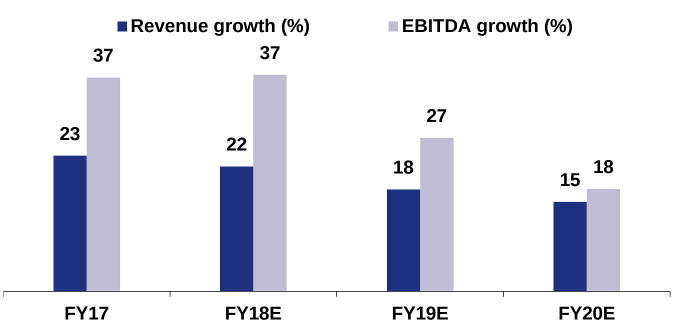
Note: The discussion/analysis of GTPL's financials in this section is based on consolidated IND AS accounts (Indian Accounting Standards). GTPL has made available FY16 and FY17 financials, as per IND AS. Any financials before FY16 pertain to Indian GAAP [I GAAP].

For GTPL and other MSOs, IND AS differs from I GAAP, mainly on account of the treatment of STB activation fees. Whereas IGAAP allows for activation fees to be recognised as upfront revenue in the year of STB activation, the same activation fee under IND AS is recognised by GTPL over a five-year period (straight line), which is aligned with the company's expected customer-retention period. In effect, adoption of IND AS leads to 'normalisation' of financials, resulting in reduced volatility in revenue, EBITDA and PAT, historically induced by upfront recognition of activation fees.

Effective April 2015, GTPL transferred broadband business from standalone entity to a 100% subsidiary. In FY17, GTPL (standalone) accounted for 67%, 84% and 100% of the consolidated revenues, EBITDA and PAT, respectively. Top three subsidiaries, in terms of contribution to consolidated financials are: GTPL Broadband [100%], GTPL Kolkata [KCBPL; 51%] and DL GTPL Cabnet [26%, with management control].

GTPL reported a 37% EBITDA growth in FY17, on back of a 23% revenue growth. Growth in adjusted EBITDA [ex activation] was also strong—20% YoY in FY17. We forecast revenue and EBITDA growth of c.22% and c.37% for FY18.

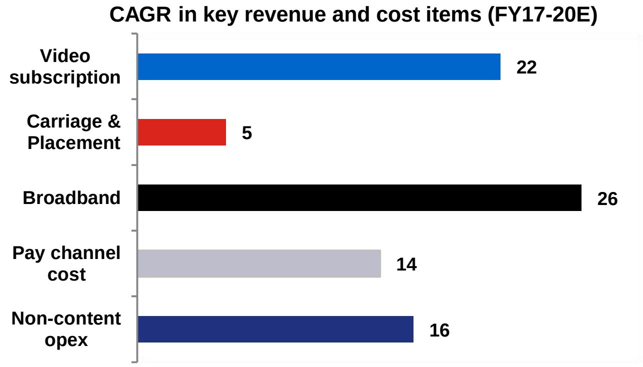
Exhibit 66. GTPL—YoY revenue and EBITDA growth



Source: Company, JM Financial.

For the next three years, we forecast revenue CAGR of 18% and EBITDA CAGR of 27%. Revenue CAGR forecast is driven by our projected c.22% CAGR in video subscription and 26% in broadband subscription revenues. For C&P revenues, we model 10%/5% YoY growth in FY18E/19E and 1% annual growth thereafter; this translates to a CAGR of c.5% for FY17-20E.

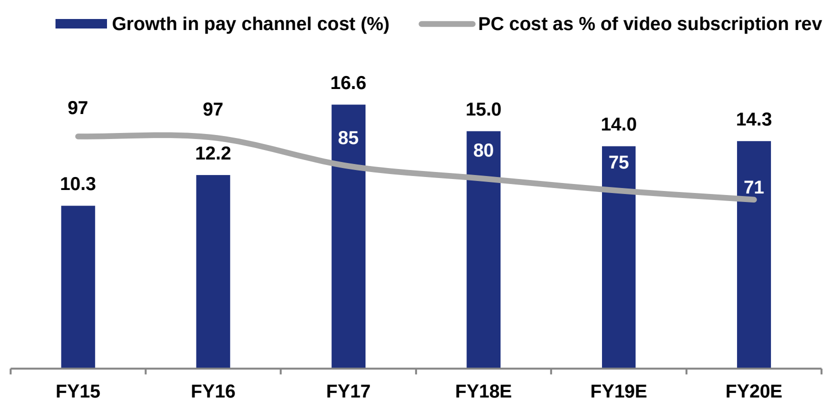
Exhibit 67. GTPL—video subscription revenues to outpace pay channel costs



Source: Company, JM Financial.

Furthermore, pay channel costs, after witnessing a CAGR of 13% over the last three years [FY14-17], were 85% of video subscription revenues in FY17 compared with 113% in FY14; this indicates GTPL's business model is undergoing a shift in the DAS-era, moving towards a greater reliance on video subscription (derived from pay TV ARPU of end customers) and away from C&P income (earned from broadcasters). We model a 14.4% CAGR in pay channel costs for FY17-20E, but expect a faster growth in subscription revenues, resulting in a decline in PC cost-to-VSR ratio, or an expansion in the subscription gross margin.

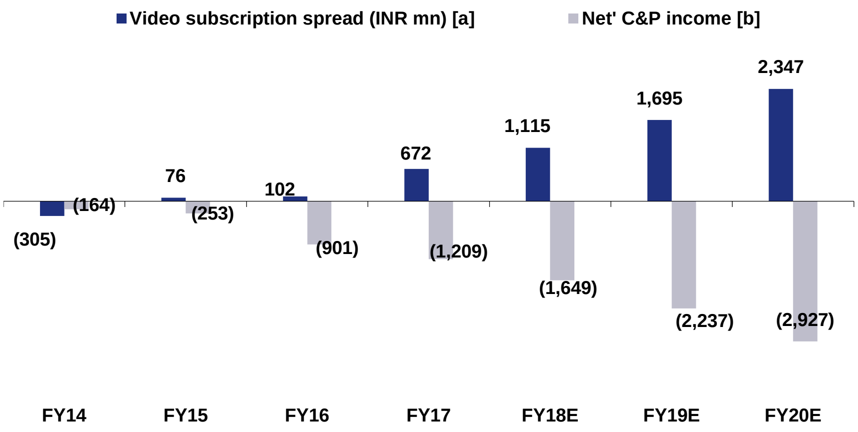
Exhibit 68. GTPL—growth in pay channel costs, pay channel cost as a % of VSR



Source: Company, JM Financial.

In FY14, GTPL earned INR 2.34bn in subscription revenues, but paid approx. INR 2.65bn in pay channel costs or content costs to broadcasters, resulting in a negative gross margin of INR 305mn on subscription revenues. From FY15, GTPL started earning a positive SGM, while it continues to be a 'net' payer of content costs to the broadcasters.

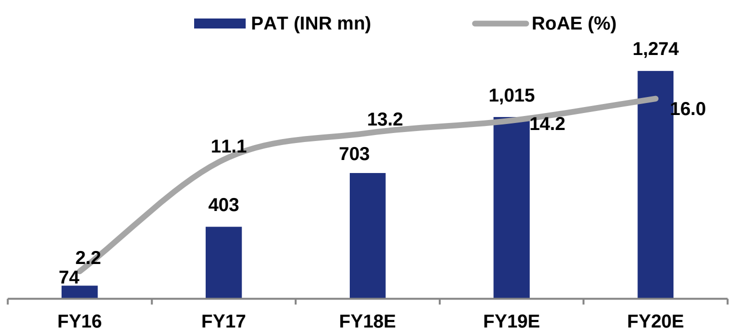
Exhibit 69. GTPL—subscription spread over pay channel costs, 'net' carriage revenue



Source: Company, JM Financial. [a] Subscription revenue less pay channel cost. [b] Carriage revenue less pay channel cost.

GTPL has also been PAT positive in each of the last five fiscal years. Even on an IND AS basis, which tends to result in lower revenue and PAT (during the heavy seeding stage), GTPL has reported net income for FY16 and FY17. PAT jumped >5x in FY17, pushing RoAE into double digit. RoAE progression is likely to continue in coming years, and we model GTPL to earn around 16% RoAE in steady state.

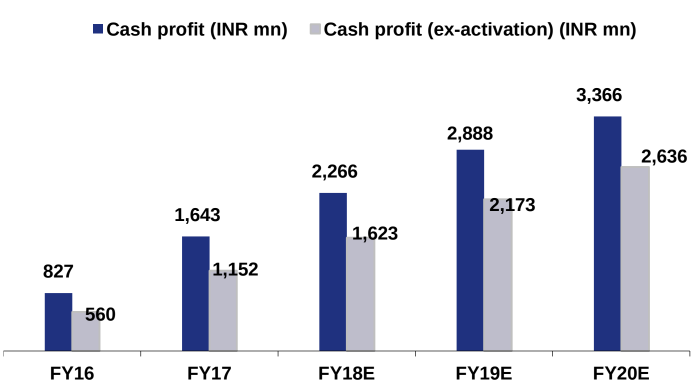
Exhibit 70. GTPL—PAT and RoAE



Source: Company, JM Financial.

Furthermore, GTPL is generating healthy cash profits that doubled YoY to INR 1.64bn in FY17. We forecast cash profits to double again, but over the next three years. Even after removing (after tax) contribution of activation revenue, we note that underlying cash profit is seeing robust growth, and was INR 1.15bn in FY17. Note that cash profit is calculated before minority interest, and is defined as: PAT before MI + D&A + Associate/JV profits + deferred tax.

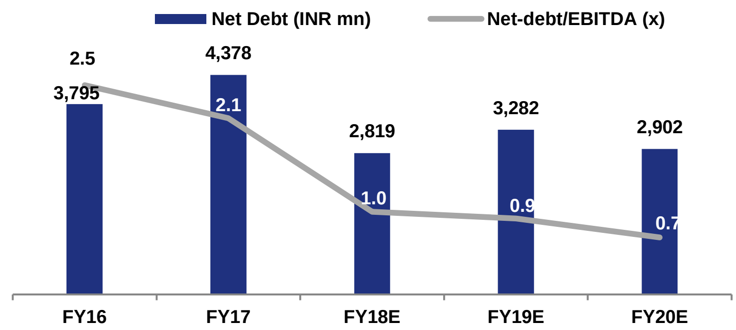
Exhibit 71. GTPL—cash profits likely to see robust growth



Source: Company, JM Financial.

Despite a surge in cash profits in FY17, GTPL was free cash flow negative [FCF here is FCF-to-Equity] on account of the capex incurred on STBs (these are subsidised), digitisation of cable network and investment in the broadband business. This led to an increase in the net-debt level in FY17, which has recently declined after the IPO. GTPL's financial leverage (measured as net debt divided by TTM EBITDA) is fairly comfortable, and gives it the flexibility to ramp-up broadband more aggressively, as well as pay out higher dividends.

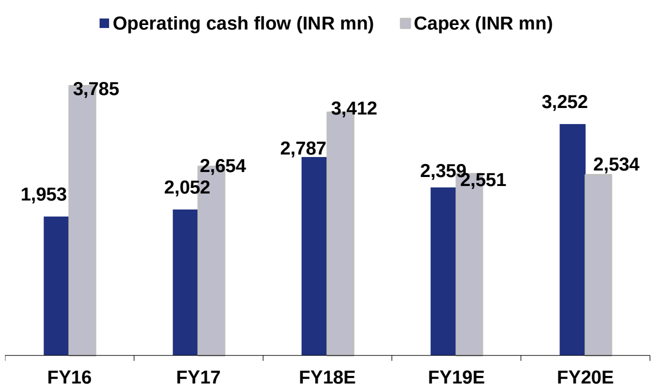
Exhibit 72. GTPL—net debt and financial leverage



Source: Company, JM Financial.

GTPL's operating cash flow [OCF] has lagged its capital expenditure, and we forecast this trend to continue for another couple of years (i.e. through FY19).

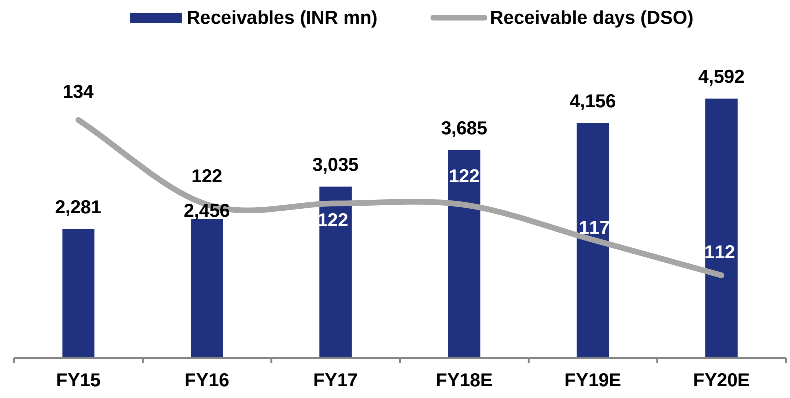
Exhibit 73. GTPL—operating cash flow and capex



Source: Company, JM Financial.

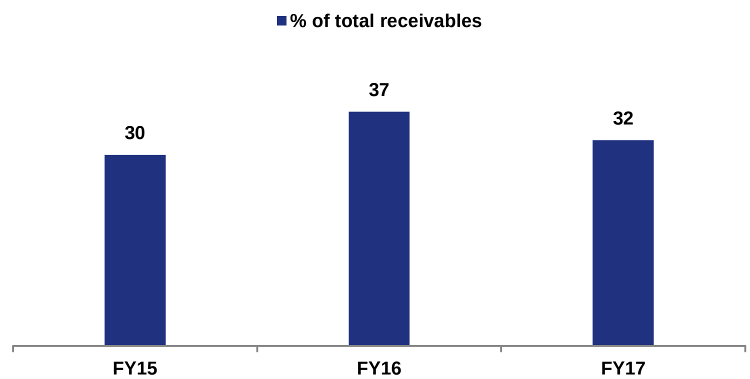
Receivable days came down in FY16, but they still remain rather high at >120, in our view. Collection efficiency in Phase-III and IV is lower than average, since it is still early days there, in terms of monetisation after STB seeding. Nonetheless, we expect receivable days to gradually start coming down from the next fiscal i.e. FY19. Further, the share of receivables outstanding for more than six months came down moderately in FY17, and was 32% of the total receivables as of Mar-17.

Exhibit 74. GTPL—level of receivables and receivable days



Source: Company, JM Financial.

Exhibit 75. GTPL—share of receivables outstanding for more than 180 days



Source: Company, JM Financial.

Potential uses of balance sheet fire-power and operating cash flow

As discussed above, GTPL's capex is likely to be funded entirely from operating cash flows, resulting in an under-leveraged balance sheet with net debt remaining below 1x EBITDA. Thus, GTPL has the flexibility to lever up the B/S, should value-accretive opportunities arise, such as the ones discussed below:

- Accelerated ramp-up in broadband home-passes and subscribers, if GPON equipment prices continues to decline, thereby supporting profitable operations at lower ARPUs
- Buyout of minority partners in MSO JVs, enabling better control over associated LCO franchisees
- Buying out minority partners in LCO JVs, thereby driving conversion of quasi-primary subscribers into primary-point subscribers. GTPL also enters Right to Use deals with the LCOs to manage their network and customers, but these do not require any capex, as GTPL pays the LCO a management fee or a revenue share
- Acquire financially-distressed MSOs or ISOs

In the absence of sizeable investment opportunities, we believe GTPL should consider more generous pay outs in a progressive manner. GTPL announced its maiden dividend of INR 1 per share recently (28% of FY17 EPS excluding tax). We believe GTPL needs to formalise a dividend policy, and then look at increasing pay-out ratio (to >50%) over the next 1-2 years, given that capex cycle in video business is coming to an end in FY18. The announcement of a dividend policy with 25% or higher DPR commitment can drive stock re-rating.

Recent announcement of INR 1 DPS is a good start. A more formal pay out policy can boost perception and aid in stock rerating

Exhibit 76. GTPL—consolidated P&L statement

FY-ending March, INR mn	FY16	FY17	FY18E	FY19E	FY20E	FY21E	FY22E	CAGR (%) FY17-20E
Video subscription	3,378	4,494	5,508	6,703	8,072	8,736	9,265	22
Carriage & Placement	2,668	2,375	2,613	2,743	2,771	2,798	2,826	5
Broadband subscription	730	1,289	1,579	2,039	2,600	3,241	3,907	26
Activation	409	751	984	1,093	1,115	1,058	886	14
Other revenues (incl. ad, devices)	179	182	370	420	450	473	496	35
Revenues	7,364	9,090	11,053	12,998	15,008	16,306	17,380	18
Revenue (ex-activation)	6,955	8,339	10,069	11,905	13,892	15,248	16,494	19
Pay channel cost	(3,277)	(3,821)	(4,393)	(5,008)	(5,725)	(6,118)	(6,440)	14
Other opex	(1,053)	(1,144)	(1,351)	(1,599)	(1,875)	(2,169)	(2,450)	18
SG&A	(709)	(964)	(1,178)	(1,352)	(1,549)	(1,641)	(1,705)	17
Employee costs	(808)	(1,084)	(1,277)	(1,427)	(1,608)	(1,790)	(1,962)	14
Total operating costs	(5,847)	(7,013)	(8,199)	(9,386)	(10,758)	(11,719)	(12,557)	15
EBITDA	1,517	2,077	2,854	3,611	4,250	4,588	4,823	27
EBITDA margin (%)	20.6	22.9	25.8	27.8	28.3	28.1	27.8	
EBITDA (ex-activation)	1,108	1,326	1,871	2,519	3,135	3,530	3,938	33
D&A	(1,073)	(1,394)	(1,598)	(1,848)	(2,032)	(2,184)	(2,310)	
EBIT	444	683	1,256	1,764	2,218	2,404	2,513	48
Share of associate profits	3	(23)	(15)	(10)	(5)	(2)	1	
Other income	55	266	25	30	35	40	45	
Finance income	24	61	41	22	27	44	76	
Finance cost	(445)	(580)	(385)	(345)	(357)	(320)	(270)	
PBT	81	408	923	1,461	1,917	2,166	2,365	68
Current Tax	(324)	(182)	(269)	(431)	(588)	(700)	(793)	
Deferred Tax	279	36	(50)	(75)	(75)	(50)	(25)	
Minority Interest	37	140	100	60	20	0	(20)	
Reported PAT	74	403	703	1,015	1,274	1,416	1,526	47
Shares outstanding (mn)	98.3	98.3	112.5	112.5	112.5	112.5	112.5	
EPS (Rs)	0.7	4.1	6.5	9.0	11.3	12.6	13.6	
Growth rates (%)								
Revenue	19	23	22	18	15	9	7	
EBITDA	8	37	37	27	18	8	5	
Revenue (ex-activation)	18	11	21	18	17	10	8	
EBITDA (ex-activation)	(6)	20	41	35	24	13	12	
EBIT	(32)	54	84	40	26	8	5	
Net profit	(56)	447	75	44	25	11	8	
Cost-to-revenue ratio (%)								
Pay channel cost	44.5	42.0	39.7	38.5	38.1	37.5	37.1	
Other opex	14.3	12.6	12.2	12.3	12.5	13.3	14.1	
SG&A	9.6	10.6	10.7	10.4	10.3	10.1	9.8	
Employee costs	11.0	11.9	11.6	11.0	10.7	11.0	11.3	
Margins (%)								
EBITDA margin	20.6	22.9	25.8	27.8	28.3	28.1	27.8	
EBITDA (ex-activation)	15.9	15.9	18.6	21.2	22.6	23.1	23.9	
EBIT	6.0	7.5	11.4	13.6	14.8	14.7	14.5	
PBT	1.1	4.5	8.3	11.2	12.8	13.3	13.6	
Net profits	1.0	4.4	6.4	7.8	8.5	8.7	8.8	
Effective tax rate (%)	54.6	35.7	34.6	34.6	34.6	34.6	34.6	

Source: Company, JM Financial.

Exhibit 77. GTPL—consolidated balance sheet

FY-ending March, INR mn	FY16	FY17	FY18E	FY19E	FY20E	FY21E	FY22E
Equity							
Share capital	983	983	1,125	1,125	1,125	1,125	1,125
Reserves & surplus	2,395	2,889	5,636	6,380	7,315	8,326	9,378
Total equity	3,378	3,872	6,760	7,505	8,440	9,450	10,503
Minority interest	422	285	185	125	105	105	125
Deferred tax liability	68	124	174	249	324	374	399
Total debt	4,697	5,500	3,200	3,700	3,450	2,950	2,450
Total capital	8,565	9,781	10,319	11,578	12,318	12,879	13,476
Assets							
Cash & cash equivalents	902	1,122	381	418	548	1,050	1,709
Trade Receivables	2,456	3,035	3,685	4,156	4,592	4,647	4,850
Other Current assets	1,203	1,181	1,245	1,307	1,373	1,441	1,514
Total Current assets (ex-cash)	3,658	4,216	4,930	5,464	5,965	6,089	6,363
Currrent liabilities and provisions	4,239	4,782	5,377	5,938	6,733	7,316	8,025
Deferred revenue (STB activation)	2,008	2,648	3,286	2,730	2,323	1,814	1,561
Net Current Assets (ex-cash)	(2,589)	(3,214)	(3,734)	(3,205)	(3,091)	(3,041)	(3,223)
Net fixed assets	9,155	10,638	12,452	13,155	13,656	13,667	13,786
Long term investments	180	175	160	150	145	143	144
Goodwill (on consolidation)	492	498	498	498	498	498	498
Other non-current assets	5	116	116	116	116	116	116
Deferred tax asset	420	447	447	447	447	447	447
Total assets	8,565	9,781	10,319	11,578	12,318	12,879	13,476
Gearing and profitability ratios (%)							
Net debt/(cash)	3,795	4,378	2,819	3,282	2,902	1,899	740
Debt/Equity							
Net-debt/Equity	100	105	41	43	34	20	7
Net-debt/capital	50	51	29	30	25	17	7
Net-debt/EBITDA (x)	2.5	2.1	1.0	0.9	0.7	0.4	0.2
RoE	2.2	10.4	10.4	13.5	15.1	15.0	14.5
RoAE	2.2	11.1	13.2	14.2	16.0	15.8	15.3
RoACE	4.2	6.7	8.4	10.9	12.6	13.0	13.1
RoAIC	4.7	7.5	9.1	11.3	13.1	13.9	14.7

Source: Company, JM Financial.

Exhibit 78. GTPL—consolidated cash flow statement

FY-ending March, INR mn	FY16	FY17	FY18E	FY19E	FY20E	FY21E	FY22E
Profit before tax	81	408	923	1,461	1,917	2,166	2,365
Depreciation & amortisation	1,073	1,394	1,598	1,848	2,032	2,184	2,310
Interest Income	(24)	(67)	(41)	(22)	(27)	(44)	(76)
Interest expense	338	519	385	345	357	320	270
Interest paid	(338)	(519)	(385)	(345)	(357)	(320)	(270)
Other non-cash items	305	340	15	10	5	2	(1)
Taxes paid	(44)	(145)	(269)	(431)	(588)	(700)	(793)
Working capital changes	523	181	520	(529)	(114)	(49)	181
CF from operations	**1,913**	**2,111**	**2,745**	**2,337**	**3,225**	**3,559**	**3,986**
Purchase of Fixed assets	(3,778)	(2,778)	(3,412)	(2,551)	(2,534)	(2,194)	(2,429)
Other investments, JV, minorities	92	1	0	0	0	0	0
Interest/dividend received	24	67	41	22	27	44	76
CF from investments	**(3,662)**	**(2,710)**	**(3,371)**	**(2,529)**	**(2,507)**	**(2,150)**	**(2,354)**
Net proceeds from issue of equity	629	0	2,320	0	0	0	0
Net proceeds from borrowings	1,368	802	(2,300)	500	(250)	(500)	(500)
CF from financing	**1,996**	**802**	**20**	**500**	**(250)**	**(500)**	**(500)**
Net change in cash	**248**	**204**	**(741)**	**37**	**130**	**502**	**659**
Opening cash	611	858	1,062	321	358	488	991
Closing cash	**858**	**1,062**	**321**	**358**	**488**	**991**	**1,650**

Source: Company, JM Financial.

GTPL—company profile

GTPL is a leading regional MSO in India, offering cable television (CATV) and broadband services. GTPL was incorporated in August 2006 by its promoters Mr. Aniruddhasinhji Jadeja and Mr. Kanaksinh Rana, through the consolidation of cable service businesses in Ahmedabad and Vadodara. In October 2007, Hathway Cable and Datacom [Hathway] acquired a 50% equity stake in GTPL, and is one of the designated Promoters of GTPL.

GTPL is a dominant MSO in Gujarat (67% market share) and has a significant #2 position in the Kolkata and Howrah region (24%). As of Jun'17, GTPL's digital cable service reached 189+ towns across 10 States (versus 64 towns in Mar'14), and comprises 7.76mn STBs, of which 6.69mn (86%) were active and 5.70mn were 'paying' (or billed) subs. GTPL offers ~500 national and regional TV channels including 64 HD channels. As of Sep'16, the company had active relationship with 13,775 LCOs (mostly franchisees) versus 7,264 LCOs in Mar-15. GTPL's digital CATV platform is supported by 5,406 kms of 'owned' optical fibre (inter-city plus intra-city) on a consolidated basis, and 3,480 kms of leased fibre on standalone basis.

GTPL also provides broadband services primarily in Gujarat, and as of Jun'17, the company had 0.25mn BB subs, based on 1.12mn home passes. In FY16, GTPL's consol. operating revenue was INR 7.36bn, EBITDA was INR 1.52bn (excl. other income) and PAT was INR 73.7mn, based on IND AS accounts. The revenue breakdown was: CATV subscription [46%], Carriage [36%], Activation [6%], Broadband [10%] and Others [2%]. In FY17, GTPL's consol. operating revenue was INR 9.09bn, EBITDA was INR 2.08bn (excl. other income) and PAT was INR 402.8mn, based on IND AS accounts. The revenue breakdown was: CATV subscription [49%], Carriage [26%], Activation [8%], Broadband [14%] and Others [2%].

Promoters and Management

GTPL's founders and individual Promoters, Mr. Aniruddhasinhji Jadeja and Mr. Kanaksinh Rana have extensive experience in the CATV industry. They are involved in key aspects of the business, including negotiations with broadcasters, technology upgrades and maintaining relationships with LCOs.

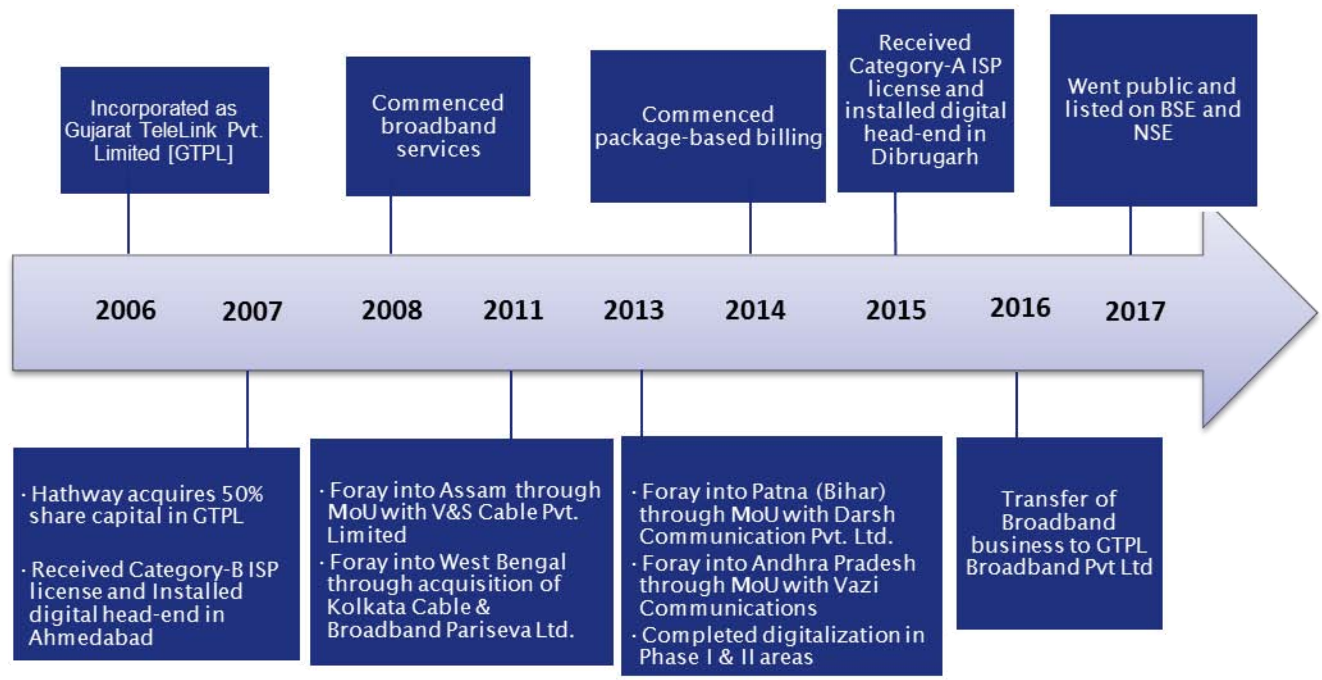
GTPL also benefits from its relationship with Hathway, which is among India's largest cable MSOs (7.2mn consol. digital subs as of Mar'17 ex-GTPL) and also the largest broadband provider over cable (about 0.66mn subs as of Mar'17 ex-GTPL). To reduce cost of operations of GTPL, both the companies have agreed to co-operate to jointly negotiate with broadcasters to obtain favourable deals on content and carriage/placement. GTPL's management team has experience in a variety of industries, including CATV distribution, media operations and finance.

Exhibit 79. GTPL—shareholding pattern

	Before-IPO		OFS [a]	After-IPO	
	(mn)	(%)	(mn)	(mn)	(%)
Hathway Cable & Datacom	49.2	50.0	7.2	42.0	37.32
Gujarat Digi [b]	28.6	29.1	4.2	24.4	21.7
Mr. AS Jadeja	14.4	14.6	2.1	12.3	10.9
Mr. KS Rana	5.1	5.2	0.8	4.4	3.9
Mr. A Shah	1.0	1.1	0.2	0.9	0.8
Public		0.0		28.5	25.4
Total	98.3	100.0	14.4	112.5	100.0

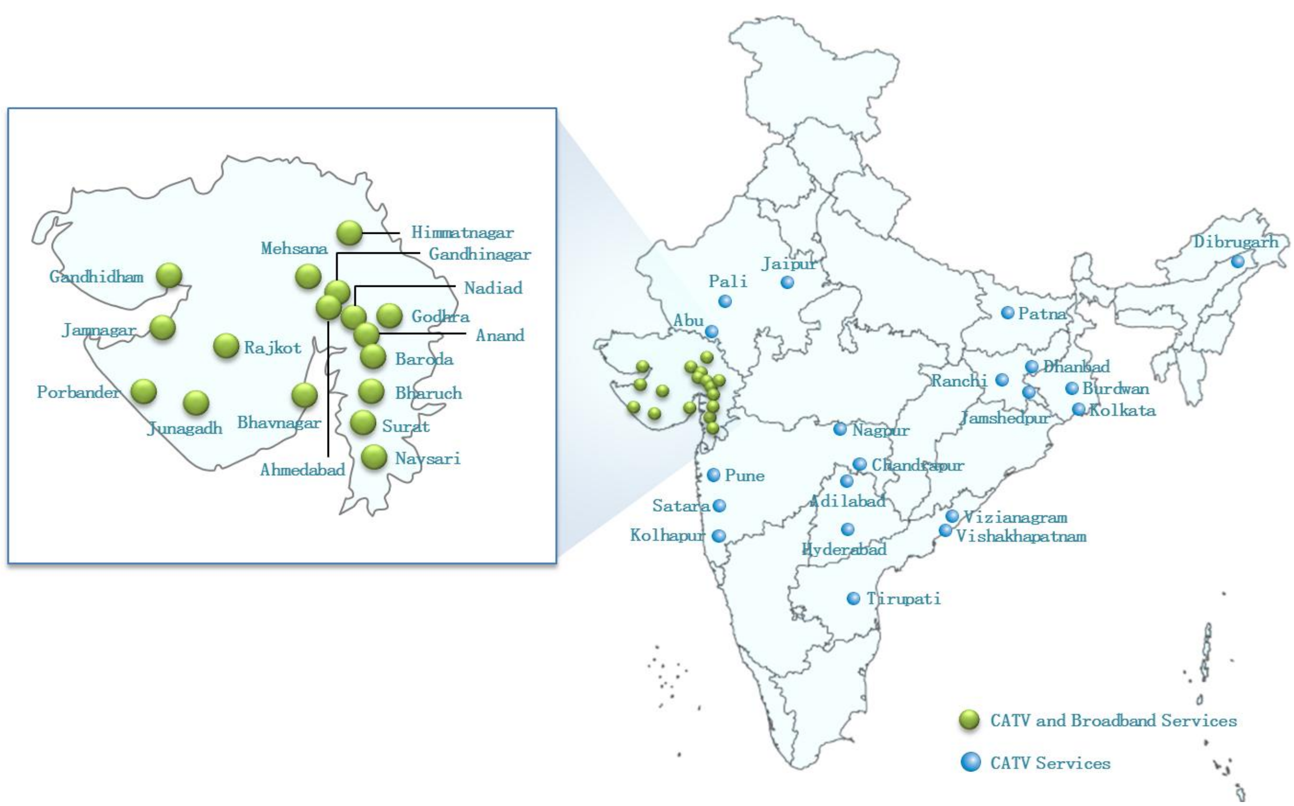
Source: Company, JM Financial. Note: [a] OFS is offer for sale. 14.4mn shares were offered and sold in the IPO by existing shareholders in a pro-rata manner. [b] Gujarat Digi is 75% owned by Mr. AS Jadeja, and 25% by Mr. KS Rana.

Exhibit 80. GTPL—company history and major milestones



Source: Company, JM Financial. Note: The above timeline of events is based on calendar-year (i.e. Jan-Dec).

Exhibit 81. GTPL—key areas of presence across the country (maps are not to scale)



Source: Company.

Exhibit 82. GTPL—Board of Directors

Board Members		
Name	**Designation**	**Profile**
Mr. Rajan Gupta	Chairman and Non-Executive Director	• Board member of GTPL since September 2016 • Managing Director of Hathway Cable and Datacom since November 2016 • Post Graduate in Management from IIM Bangalore • Prior to joining GTPL, he worked at Hindustan Coca Cola Beverages
Mr. Aniruddhasinhji Jadeja	Managing Director	• Core founding member with over 10 years of experience in the cable TV distribution industry • Closely involved in key business operations and strategic initiatives of GTPL
Mr. Amit Shah	Whole Time Director	• Has over 10 years of experience in the cable TV industry
Mr. Ajay Singh	Non-Executive Director	• Holds a bachelor's degree in Science from the University of Calcutta • He is an associate member of the Institute of Company Secretaries of India • He is currently the legal head, company secretary and chief compliance officer of Hathway • Prior to joining the company, he worked with Sunworld Developers and PACL India Limited in various positions
Ms. Parulben Oza	Independent Director	• Holds a bachelor's degree in engineering from the University of Bombay • She is associated with CRMO Pharmatech Pvt. Ltd and CRMO GMP Support Pvt. Ltd.
Mr. Bharat Chovatia	Independent Director	• Holds a bachelor's degree in Commerce from the University of Bombay • Member of the Institute of Chartered Accountants of India, and is a practising Chartered Accountant with an experience of over 30 years
Mr. Kunal Chandra	Independent Director	• Holds a bachelor's degree in law from University of Pune, and is currently a Partner at Trilegal. Has over 10 years of experience practising law
Mr. Falgun Shah	Independent Director	• Is a member of the Institute of Chartered Accountants of India • Prior to joining the Company he was a partner in M/s Khandhar Mehta & Shah, a chartered accountancy firm

Source: Company, JM Financial.

Financial Tables (Consolidated)

Income Statement (INR mn)

Y/E March	FY16A	FY17A	FY18E	FY19E	FY20E
Net Sales	7,364	9,090	11,053	12,998	15,008
Sales Growth	18.2%	23.4%	21.6%	17.6%	15.5%
Other Operating Income	0	0	0	0	0
Total Revenue	**7,364**	**9,090**	**11,053**	**12,998**	**15,008**
Cost of Goods Sold/Op. Exp	3,277	3,821	4,393	5,008	5,725
Personnel Cost	808	1,084	1,277	1,427	1,608
Other Expenses	1,762	2,107	2,529	2,951	3,425
EBITDA	**1,517**	**2,077**	**2,854**	**3,611**	**4,250**
EBITDA Margin	20.6%	22.9%	25.8%	27.8%	28.3%
EBITDA Growth	1.7%	37.0%	37.4%	26.5%	17.7%
Depn. & Amort.	1,073	1,394	1,598	1,848	2,032
EBIT	444	683	1,256	1,764	2,218
Other Income	79	327	66	52	62
Finance Cost	445	580	385	345	357
PBT before Excep. & Forex	79	430	938	1,471	1,922
Excep. & Forex Inc./Loss(-)	0	0	0	0	0
PBT	79	430	938	1,471	1,922
Taxes	44	145	319	506	663
Extraordinary Inc./Loss(-)	0	0	0	0	0
Assoc. Profit/Min. Int.(-)	-34	-163	-115	-70	-25
Reported Net Profit	74	403	703	1,015	1,274
Adjusted Net Profit	**74**	**403**	**703**	**1,015**	**1,274**
Net Margin	1.0%	4.4%	6.4%	7.8%	8.5%
Diluted Share Cap. (mn)	98.3	98.3	112.5	112.5	112.5
Diluted EPS (INR)	**0.7**	**4.1**	**6.3**	**9.0**	**11.3**
Diluted EPS Growth	-63.2%	446.5%	52.7%	44.3%	25.5%
Total Dividend + Tax	0	135	271	338	406
Dividend Per Share (INR)	0.0	1.0	2.0	2.5	3.0

Source: Company, JM Financial

Balance Sheet (INR mn)

Y/E March	FY16A	FY17A	FY18E	FY19E	FY20E
Shareholders' Fund	3,378	3,872	6,760	7,505	8,440
Share Capital	983	983	1,125	1,125	1,125
Reserves & Surplus	2,395	2,889	5,636	6,380	7,315
Preference Share Capital	0	0	0	0	0
Minority Interest	422	285	185	125	105
Total Loans	4,697	5,500	3,200	3,700	3,450
Def. Tax Liab. / Assets (-)	-351	-323	-273	-198	-123
Total - Equity & Liab.	**8,146**	**9,334**	**9,872**	**11,131**	**11,871**
Net Fixed Assets	9,155	10,638	12,452	13,155	13,656
Gross Fixed Assets	10,776	13,324	16,769	19,186	21,574
Intangible Assets	1,298	1,392	1,479	1,561	1,638
Less: Depn. & Amort.	3,525	4,678	6,196	7,942	9,855
Capital WIP	606	599	400	350	300
Investments	224	234	219	209	204
Current Assets	5,014	5,891	5,865	6,436	7,066
Inventories	0	0	0	0	0
Sundry Debtors	2,456	3,035	3,685	4,156	4,592
Cash & Bank Balances	858	1,062	321	358	488
Loans & Advances	765	774	818	859	902
Other Current Assets	935	1,020	1,041	1,062	1,085
Current Liab. & Prov.	6,248	7,429	8,664	8,669	9,055
Current Liabilities	1,236	1,199	1,460	1,672	1,916
Provisions & Others	5,012	6,230	7,204	6,997	7,140
Net Current Assets	-1,233	-1,538	-2,799	-2,233	-1,989
Total – Assets	**8,146**	**9,334**	**9,872**	**11,131**	**11,871**

Source: Company, JM Financial

Cash Flow Statement (INR mn)

Y/E March	FY16A	FY17A	FY18E	FY19E	FY20E
Profit before Tax	81	408	923	1,461	1,917
Depn. & Amort.	1,073	1,394	1,598	1,848	2,032
Net Interest Exp. / Inc. (-)	314	452	344	323	331
Inc (-) / Dec in WCap.	523	181	520	-529	-114
Others	305	340	15	10	5
Taxes Paid	-44	-145	-269	-431	-588
Operating Cash Flow	**2,251**	**2,630**	**3,130**	**2,682**	**3,583**
Capex	-3,769	-2,780	-3,412	-2,551	-2,534
Free Cash Flow	-1,518	-150	-282	131	1,049
Inc (-) / Dec in Investments	84	3	0	0	0
Others	24	67	41	22	27
Investing Cash Flow	**-3,662**	**-2,710**	**-3,371**	**-2,529**	**-2,507**
Inc / Dec (-) in Capital	629	0	2,320	0	0
Dividend + Tax thereon	0	0	-135	-271	-338
Inc / Dec (-) in Loans	1,368	802	-2,300	500	-250
Others	-338	-519	-385	-345	-357
Financing Cash Flow	**1,659**	**284**	**-500**	**-116**	**-946**
Inc / Dec (-) in Cash	**248**	**204**	**-741**	**37**	**130**
Opening Cash Balance	611	858	1,062	321	358
Closing Cash Balance	858	1,062	321	358	488

Source: Company, JM Financial

Dupont Analysis

Y/E March	FY16A	FY17A	FY18E	FY19E	FY20E
Net Margin	1.0%	4.4%	6.4%	7.8%	8.5%
Asset Turnover (x)	0.9	1.0	1.1	1.2	1.3
Leverage Factor (x)	2.4	2.5	1.9	1.5	1.5
RoE	2.2%	11.1%	13.2%	14.2%	16.0%

Key Ratios

Y/E March	FY16A	FY17A	FY18E	FY19E	FY20E
BV/Share (INR)	34.3	39.4	62.1	66.7	75.0
ROIC	2.8%	5.7%	9.2%	11.4%	13.2%
ROE	2.2%	11.1%	13.2%	14.2%	16.0%
Net Debt/Equity (x)	1.1	1.1	0.4	0.4	0.3
P/E (x)	204.1	37.4	24.5	17.0	13.5
P/B (x)	4.5	3.9	2.5	2.3	2.0
EV/EBITDA (x)	14.1	10.5	7.1	5.7	4.7
EV/Sales (x)	2.9	2.4	1.8	1.6	1.3
Debtor days	122	122	122	117	112
Inventory days	0	0	0	0	0
Creditor days	77	62	65	65	65

Source: Company, JM Financial

Siti Networks Ltd | SELL

JM FINANCIAL

Growth recovery is more than priced in—initiate with Sell

Sanjay Chawla
sanjay.chawla@jmfl.com | Tel: (+91 22) 6630 3155
Shilpa Pattnaik
shilpa.pattnaik@jmfl.com | Tel: (+91 22) 6630 3134

SITI Networks [Siti] is one of India's largest MSOs, with 13.2mn gross CATV or video subs, of which 11.6mn were digitised as of Jun-17. Siti's revenue growth outlook is robust for the next 2-3 years, as more than two-thirds of its digital subs are in the 'under monetised' Phase-III and IV markets. However, we initiate on Siti with a Sell rating, since despite our projected EBITDA CAGR of 36% for FY18/19: (1) valuations are expensive at 10.6x FY19E EV/EBITDA; and (2) Siti will remain loss-making with negative FCF over the next 2-3 years. Further: (3) Siti lacks market dominance in any major geography (barring West Bengal to some extent) and (4) Siti has high balance sheet leverage—net debt was 5.9x FY17 EBITDA as on Mar-17.

Our Sep-18 target price of INR 20 is derived using DCF. Key upside risks to our view and TP are: implementation of the TRAI Tariff Order and higher C&P income from Phase III/IV markets. Downside risks are: slower pace of monetisation (i.e. ARPU increase) in Phase III and IV markets, and lower growth than projected by us (33% CAGR) in broadband revenues.

- Industry leading scale, but thinly spread: Siti's video base (incl. analog) of 13.2mn subs is marginally ahead of DEN's 13.0mn. However, Siti reported the lowest EBITDA margin (ex-activation) of 3.2% among peers in FY17, driven by: (1) lack of dominance in any geographic region, comparable to what is enjoyed by GTPL in Gujarat or DEN in Delhi/UP; and (2) presence in 580+ locations, highest among MSOs—has driven opex build-up (incl. content), which has hurt margins due to delayed monetisation. Content costs have seen accelerated growth in the past few years, and Siti needs to bring them under control, either through footprint consolidation or aggressive negotiations, in order to expand its subscription gross margin, which we forecast to reach 31% in FY19 from 11% in FY17.

- Lagging in broadband due to execution issues: Despite scale and early presence in P-I markets such as Kolkata and Delhi, BB accounted for c.10% of Siti's adjusted revs in FY17, ahead of DEN's [8%], but much lower than 15%/39% reported by GTPL/Hathway.

- Strong revenue growth outlook thanks to Phase-III and IV skew and BB base effect: Siti is likely to see faster top-line growth vs. peers, given its higher exposure to Phase III/IV, which are yet under-monetised. We forecast a 26% CAGR in video subscription revenues (on back of 23% CAGR in ARPU), and 33% in BB revenues for the next 3-years. As of Jun-17, 70% of Siti's active digital subs and c.74% of total video subs were in Phase-III/IV.

- EBITDA growth recovery is more than priced in; we initiate with Sell: We forecast a 30% CAGR in EBITDA and >10x increase in adj. EBITDA over FY17-20E. Even after factoring such hyper-growth, Siti stock is trading at 10.6x/9.4x FY19E/FY20E EV/EBITDA, which is expensive, as growth rates are unlikely to sustain in double-digits, after full monetisation in P-III/IV. Our Sep-18 DCF TP of INR 20 implies a forward 1-yr EV/EB of 8.7x, a de-rating of 20% from current 10.9x multiple. Further, our target multiple for Siti [8.7x] is at a 28% premium to GTPL's [6.8x], indicating the greater relative attractiveness of the latter.

Recommendation and Price Target	
Current Reco.	SELL
Previous Reco.	NR
Current Price Target (12M)	20
Upside/(Downside)	-19.8%
Previous Price Target	NA
Change	NA

Key Data – SITINET IN	
Current Market Price	INR25
Market cap (bn)	INR21.8/US$0.3
Free Float	26%
Shares in issue (mn)	872.7
Diluted share (mn)	872.7
3-mon avg daily val (mn)	INR31.4/US$0.5
52-week range	41/23
Sensex/Nifty	32,273/10,085
INR/US$	64.1

Price Performance			
%	1M	6M	12M
Absolute	-2.3	-35.4	-29.0
Relative*	-4.8	-41.2	-37.5

* To the BSE Sensex

Exhibit 83. SITI Networks—key consolidated financials (IND AS)

INR mn, FY-end March	FY16	FY17	FY18E	FY19E	FY20E
Revenues	11,460	11,949	14,187	16,330	18,337
Revenue growth (%)		4.3	18.7	15.1	12.3
EBITDA	2,459	2,028	3,089	3,771	4,455
EBITDA margin (%)	21.5	17.0	21.8	23.1	24.3
EBITDA (ex-activation)	752	327	1,159	2,455	3,464
Adj. EBITDA margin (%)	7.7	3.2	9.5	16.4	20.0
EBITDA growth (%)		(18)	52	22	18
EBIT	805	(331)	262	707	1,264
Adj. PAT	(473)	(1,683)	(1,349)	(599)	(204)
EV/EBITDA (x)	12.4	18.4	12.1	10.6	9.4
U-FCFF yield (%)	(7.8)	(12.9)	(2.7)	(0.1)	4.0
RoAIC (%)	6.8	(2.0)	1.4	3.1	5.1

Source: Company, JM Financial.

Reach and scale, but lacking in geographic dominance

Siti is a national-level MSO, distributing TV signals in 20 Indian states across 580+ locations, through more than 24,000 LCOs as franchisees. As of Mar-17, Siti reported a total of 13.2mn video subs (about 200,000 primary), of which 10mn were digital subs—roughly 90% of them are active (1mn STBs lost over 5 years). Siti had the highest skew towards P-III/IV areas among peers, accounting for 66% of its digital subs (gross), as of end-FY17. Furthermore, as of Jun-17, P-III/IV markets accounted for c.70% of Siti's 'active' digital customer base.

Similar to other national MSOs, Siti has grown organically and inorganically—through the acquisition of majority stakes in regional MSOs and ICOs. Roughly 40-45% of Siti's video subs are in subsidiary companies (25 entities as of end-FY16)—many of them are MSO entities with DAS licenses; nonetheless, not all these entities have their own independent head-ends. In terms of geographic presence, Siti's pockets of strengths are West Bengal, UP, Haryana, AP and Telengana. However, unlike GTPL and DEN, Siti does not dominate any particular geographic region, barring West Bengal to some extent. Kolkata (1.2mn subs) and Delhi (<0.5mn) are the company's major Phase-I markets.

Siti has relatively better system/processes vs. peers and a strong sponsor-backing (Essel Group); however, it is equally constrained by the structural industry issues

Exhibit 84. Siti—profile of video business

	FY16	FY17
Cable TV reach (# of locations)	**312**	**580**
Analog head-ends	36	NA
Digital head-ends	18	15
Video or cable universe (mn)	**12.2**	**13.2**
Analog subs (mn)	4.3	3.2
Digital subs - gross (mn)	**7.9**	**10.0**
Share of primary points (%)	NA	0.20
Digital or DAS penetration (%)	65	76
Blended effective ARPU (INR/month)	**30**	**37**
Break-down of digital subs (mn)		
Phase I and II	3.7	3.4
Phase III and IV	4.2	6.6
Share of DAS subs in P-III/IV (%)	**53**	**66**

Source: Company, JM Financial.

Most of the P-IV coverage of Siti is contiguous to its P-II or III locations

Siti has strong processes and systems in place, to service and manage its 24K LCO franchisees (of the 55-60K LCOs all India) and millions of end-customers. The company has collected Customer Application Forms (CAFs) for a majority of its customers. It runs the LCO relationships through Interconnect Agreements that are in compliance with prevailing regulations. Siti has started implementing prepaid-billing for its LCOs, and currently around 2000 LCOs or 8-10% of the total base has shifted to prepaid mode. This should help control the account receivables that have been running at 110-130 days of revenues in each of the last four fiscal years.

Broadband—lagging peers, needs to ramp up

Siti is also a provider of wired/fixed broadband using EOC (Ethernet over Cable) and DOCSIS 2.0/3.0 (cable modem) technologies. Currently, Siti has a BB presence in Kolkata, Delhi/Noida region and 3-4 towns in Haryana. The company plans to expand BB coverage to select cities of MP and Rajasthan in the medium term.

Despite scale and early presence in P-I markets such as Kolkata and Delhi, BB accounted for c.10% of Siti's adjusted revs in FY17, ahead of DEN's [8%], but significantly lower than 15%/39% reported by GTPL/Hathway.

Siti's Kolkata BB is an EOC business, and follows a last mile LCO capex-driven model with revenue sharing. Siti had a broadband base of 228K gross subs (incl. inactive subs) as of Mar-17, of which approx. 40% were on DOCSIS. The company faced teething execution issues in deploying DOCSIS 3.0 in Delhi, but has managed to iron them out over the last 4-5 quarters. Given its lack of last mile ownership, Siti has had to deploy a parallel coaxial cable network for DOCSIS, and has signed up long-term agreements with the LCOs in those areas, for service support and maintenance of the network.

Effective ARPUs on DOCSIS (INR 500-600) are higher compared with EOC (INR 350-400). Siti's BB revenues doubled in FY17, led by 80% increase in average subscriber base, and 12% increase in effective ARPU.

Exhibit 85. Siti—profile of broadband business

	FY16	FY17
Homes passed (mn)	0.89	1.61
BB subs ('000)	**133**	**228**
EOC subs	104	141
DOCSIS subs (approx.)	29	88
BB home-pass penetration (%)	**14.9**	**14.2**
Blended effective ARPU (INR)	400	448

Source: Company, JM Financial.

In terms of net subs or active subs, the total base was 178,000, of which 25% was on DOCSIS. The churn rate in BB has been high, and moved up to 5.5% per month in 4QFY17 reflecting the impact of Jio's free 4G service, especially on the DOCSIS base in Delhi. Siti does not have advance-rental plans, and has largely a prepaid business in Delhi—these factors have also contributed to high churn rates in BB. Entry of ACT broadband in Delhi (from July 2016), has also been cause of some turmoil in the market, in our view.

Exhibit 86. Siti—DOCSIS 3.0 tariff plans in Delhi

Plan	Download speed (Mbps)	Monthly data allowance (GB)	Tariff incl. tax (INR)	Post FUP speed (Kbps)
Super	5	30	707	512
Express	10	60	766	512
Express	10	Unlimited	1,002	NA
Mega	20	120	884	512
Ultra	50	150	1,297	512
Turbo	100	200	1,769	512

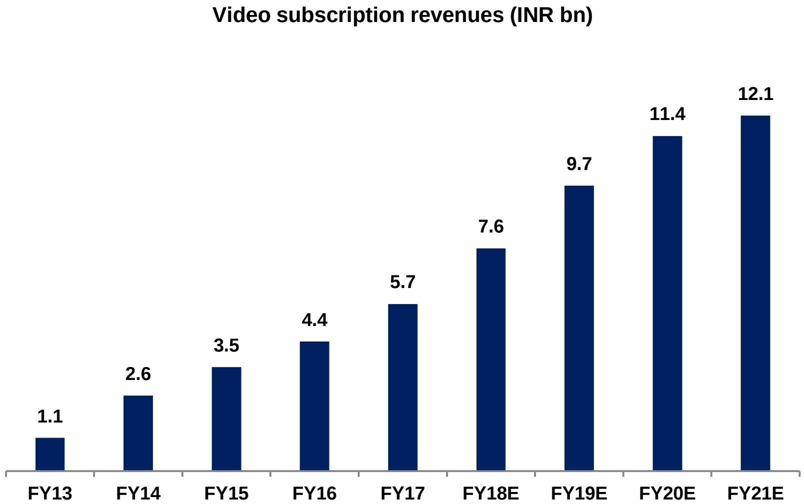
Source: Company, JM Financial.

Siti has also launched FTTH (GPON) on a pilot basis in Noida, and intends to invest only in DOCSIS and FTTH in future; EOC is not competitive, being an outdated technology. We believe Siti needs to work out a strategy to upgrade its EOC customers in Kolkata to higher data speeds, to prevent churn and revenue loss, driven by intensifying competition.

Strong top-line growth in video to continue thanks to Phase III/IV skew

Siti's video subscription revenues, net of LCO charges or LCO pass-through (in gross billing areas), have grown c.5x in the last 4 years (FY13 to FY17), thanks to the surge in secondary ARPUs post-digitisation in Phase-I and II areas, and the start of monetisation in P-III and IV areas in FY17. The company's C&P revenues have also grown significantly (+47%) in the same period, belying fears of a DAS-led erosion. Majority of the C&P fee is received by MSOs operating in the Phase-I and II areas. Nonetheless, with expansion of TV measurement in smaller towns and rural areas (LC1 and rural) courtesy BARC, Siti may benefit from its deeper Phase-III and IV coverage. This may provide upside risk to our C&P revenue forecasts.

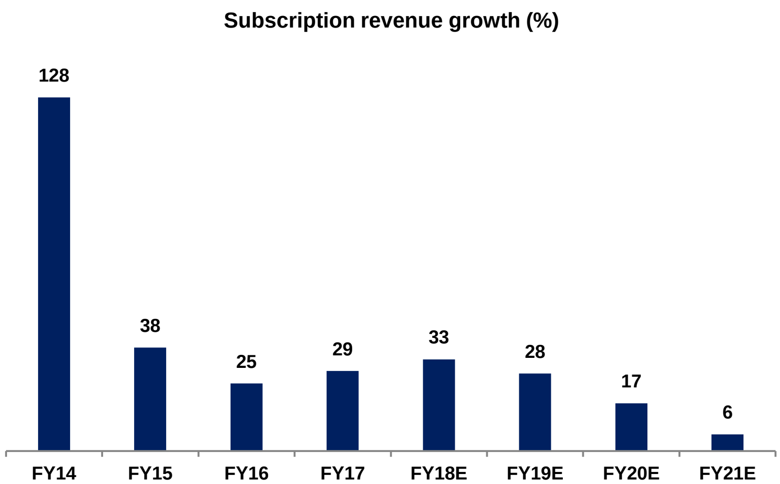
Exhibit 87. Siti—video subscription revenues net of LCO pass-through



Source: Company, JM Financial.

Subscription revenue growth picked up strongly in FY17 to 39% YoY, and we expect the momentum to sustain in FY18 and FY19 driven by improving monetisation in P-III and IV areas. We forecast a 26% CAGR in video subscription revenues over FY18/19/20.

Exhibit 88. Siti—video subscription revenue growth (yoy)



Source: Company, JM Financial.

We expect digitisation to unlock 'fair' monetisation levels in Phase-II, III and IV markets by FY20, and forecast Siti's effective blended ARPU (on overall video base) to increase at a c.23% CAGR to INR 70/month in FY20 from INR 37 reported in FY17. Note that our ARPU derivation assumes a 10% inactive STB-base. We assume average monetisation per active digital sub per month at INR 110/INR 90/INR 75/INR 60 in Phase I/II/III/IV areas respectively, in FY20. Note that Siti has reported net ARPUs of INR 105/INR 82/INR 50/INR 25 for the exit month of FY17.

Exhibit 89. Siti--derivation of blended realised ARPU based on phase-wise subscriber and ARPU mix

	Gross subs (mn)	Sub mix (%)	FY17 Net ARPU (INR)	Gross subs (mn)	Sub mix (%)	FY20E Net ARPU (INR)
P1	1.9	14	105	1.9	14	110
P2	1.6	12	80	1.6	11	90
P3	4.4	33	35	6.5	48	75
P4	2.2	17	22	3.6	27	60
Analog	3.2	24	8	0.0	0	9
Total / blended	13.2	100	37.3	13.5	100	69.8
Actual/Forecast ARPU on gross subs			37.3			70.0

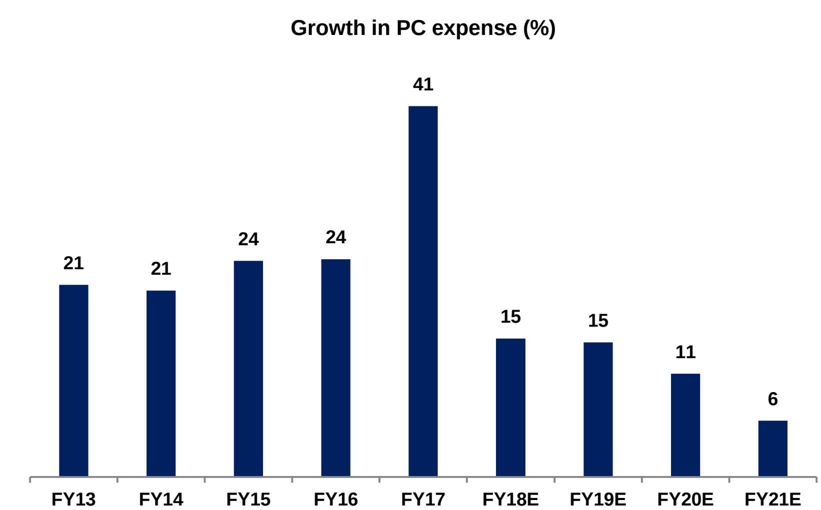
Source: Company, JM Financial.

Content costs have been accelerating—need to be controlled

Despite a pick-up in revenue growth rate, Siti's subscription gross margin [SGM] declined in FY17. Siti's content or pay channel costs have continued to grow robustly, which is a cause for concern. After hitting a high of 18.5% in FY16, Siti's SGM fell to c.11% in FY17. In absolute terms, the video subscription spread [VSS] has been range-bound at INR 600-800mn since FY15. Although subscription revenue was up strongly by 29% YoY, the PC cost surged by 41%, thereby eroding the SGM in FY17. Siti had agreed to higher escalation in fixed-fee pan-India content deals with the broadcasters for FY17, in anticipation of even faster revenue growth. Organic and inorganic expansion in the number of CATV locations, also resulted in higher content cost commitments. However, the delays in P-III digitisation (first due to litigation) and then the subsequent monetisation, adversely impacted the revenue growth, and therefore the VSS/SGM.

Siti has signed fixed-fee pan-India annual content deals with all but 2-3 broadcasters. These deals are typically renewed every 12 months.

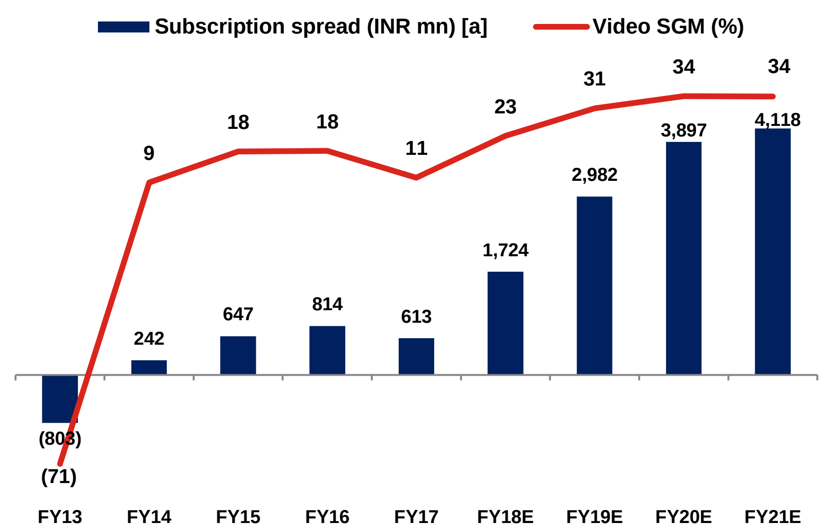
Exhibit 90. Siti—growth in pay channel expense (yoy)



Source: Company, JM Financial.

We believe subscription revenues have to outpace PC costs for Siti to deliver our projected rapid growth in adjusted EBITDA—in other words, the VSS needs to start expanding. This is the most important monitorable for all MSOs, in our view.

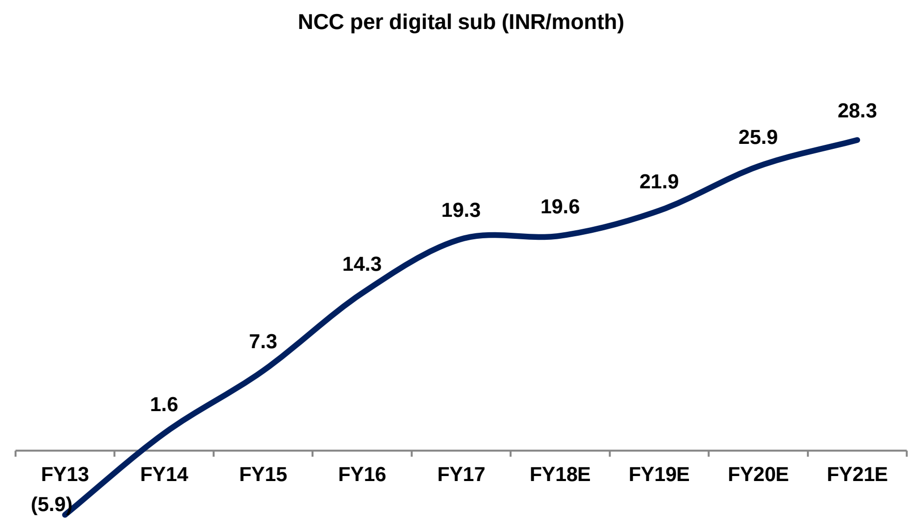
Exhibit 91. Siti—subscription spread over PC cost needs to expand for EBITDA recovery



Source: Company, JM Financial. Note: [a] Subscription spread is: VSR less PC expense.

Siti became a net-payer of content costs to broadcasters from FY14, as PC costs exceeded its C&P income for the first time. In terms of per digital subscriber, the net content cost [NCC] should continue to increase rapidly, in our view. We forecast NCC per sub to increase by nearly 50% over the next 4 years, to around INR 28 in FY21 from INR 19 in FY17.

Exhibit 92. Siti—net content cost per digital subscriber



Source: Company, JM Financial.

Video business may earn its cost of capital at INR 70 subscription ARPU

Almost all MSOs including Siti, are making EBIT losses currently, because of low effective subscription ARPUs (INR 37 for Siti in FY17). This results in a lower video gross margin [Subscription + C&P - PC expense], which is barely enough to cover the mostly fixed opex of roughly INR 25 per sub.

Our unit-economics analysis for B2B MSOs indicates that their video business would start earning the cost of capital (11-12%) at an EBITDA per sub of about INR 20/month. For Siti, this may be achieved at a subscription ARPU of about INR 70, which according to our forecasts, would happen in FY20 and beyond.

Exhibit 93. Siti—per subscriber analysis of video business

INR/sub/month	FY15	FY16	FY17	Break-even
Subscription ARPU	29	32	37	70
NCC	(3)	(8)	(14)	(26)
Subscription spread over NCC	26	24	24	44
Other video revenues	3	8	3	3
Non-content opex [allocated]	(19)	(23)	(23)	(27)
Video EBITDA [ex-activation]	10	9	4	20

Source: Company, JM Financial.

Comparison with DEN—efficient in opex; NCC and capital employed are higher

Comparing Siti with its listed (arch) rival DEN Networks [Not Covered], we note that Siti's adjusted EBITDA margin was 3.2% in FY17 against 8.7% reported by DEN, despite a similar scale of their video and BB subscription revenues. The margin difference appears to be mainly driven by net content costs—Siti paid more to broadcasters for content versus DEN, while earning a lower C&P income. Thus, Siti incurred INR 2.1bn as NCC in FY17, as against DEN's INR 1.2bn expense. In our view, higher NCC of Siti is a consequence of its higher spread in terms of CATV locations, and lack of any particular geographic dominance. DEN's higher C&P income is driven by its greater exposure to Phase-I and P-II markets, and a dominant position in the state of Uttar Pradesh or UP (accounts for roughly 2.5mn or 25% of digital video subs), which also adds to its high market share in Hindi Speaking Markets [HSM] relative to peers. Leading broadcasters pay bulk of their C&P fee to MSOs covering the HSM.

NCC was 36.4% of Siti's video subscription revenues in FY17, compared to 22.5% in case of DEN

Exhibit 94. Siti and DEN—head to head [March-17 or FY17 basis]

	SITI	DEN
Cable TV reach (# of locations)	>580	>400
Video or cable universe (mn)	13.2	13.0
Digital subs - gross (mn)	10.0	10.5
Digital or DAS penetration (%)	76	81
Active or paying DAS subs (mn)	NA	8.2
Digital subs in Phase III/IV (mn)	6.6	5.5
Share of DAS subs in P-III/IV (%)	66.0	52.4
Average digital video subs (mn)	9.0	10.0
Average video subs (mn)	12.7	13.0
Broadband homes passed (mn)	1.61	0.87
Broadband subs - gross ('000)	228	177
BB home-pass penetration (%)	14.2	20.4
P&L items [IND AS]	SITI	DEN
Video subscription revenue	5,683	5,444
C&P revenues	3,001	3,506
BB revenues	969	810
Ad, other revenues	421	954
Adjusted revenues (ex-activation)	10,073	10,714
Pay channel cost	5,070	4,733
Non content opex [NCO]	4,676	5,052
Adjusted EBITDA	327	929
Adjusted EBITDA margin (%)	3.2	8.7
C&P revenue per DAS sub (INR/month)	28	29
PC cost per video sub (INR/month)	33	30
Video subscription margin (%)	10.8	13.1
Net content cost	2,069	1,227
NCC to subscription revenue (%)	36.4	22.5
Opex per sub [excl. content] (INR/month)	30.7	32.4

Source: Company, JM Financial.

Further, SITI's gross capital investment [GCI] in the business is estimated by us at INR 29.8bn, which is c.40% higher than the corresponding figure for DEN (INR 21.4bn). This is despite their similar scale in terms of video subs, digital subs and BB subs. Siti's higher GCI-level can be partly explained by the following factors:

- Siti covers more locations for cable TV than DEN—higher network spread
- Broadband homes passed by Siti are 85% higher vis-à-vis DEN
- Siti has invested in a new office building in Kolkata
- Siti has done some land/property revaluation recently, which is also reflecting in its reserves or net worth

We reckon the above elements would explain <50% of the 'excess' GCI of Siti, and therefore some capital inefficiency cannot be ruled out, in our view. Separately, we also note Siti's significantly high receivable-days vis-à-vis DEN—this may result in higher bad debts in future.

Exhibit 95. Siti and DEN—debt, leverage, capital invested, receivable days [FY17]

INR mn	SITI	DEN
Net debt	11,931	1,823
Equity funding (incl. minorities)	17,879	19,594
Gross Capital Invested [GCI]	**29,810**	**21,417**
GCI per sub (INR) [a]	2,220	1,625
Total EBITDA	2,028	1,788
Net debt-to-EBITDA (x)	**5.9**	**1.0**
Receivable days	111	76

Source: Company, JM Financial. [a] Including broadband subscribers.

Valuation and share price analysis

Sep-18 target price is INR 20; initiating with Sell

Our Sep-18 TP for Siti is INR 20, and is derived from a DCF analysis. We believe DCF is the most appropriate tool to value Indian cable stocks, as DAS monetisation, turnaround of margins, FCFs and RoIC, and their evolution to steady-state profiles, is likely to play out over several years. Further, BB growth opportunity is fairly large, and in our view, an extended phase of above-normal growth rates can be better captured in valuations through DCF.

We have used an 11.5% WACC to discount Siti's free cash flows, which when combined with our assumed 6.0% terminal FCF growth rate, and steady state FCF-to-EBITDA ratio (c.40%), yields a 7.3x EV/EBITDA multiple in the terminal year of our forecast (FY26).

Note that we have discounted the consolidated cash flows—a portion of them belongs to minorities in the subsidiaries companies. Therefore, to derive the fair value of Siti shares, we subtract the value attributable to minority interest [MI]. We value MI at the same P/B multiple as that of Siti (around 4x currently), which yields INR 3.6bn MI value [Mar-17]. Compounding this over 12 months at 11%, we derive Mar-18 MI value of INR 4.0bn. We have added this same value of MI to derive gross EV of the business, in our EV/EBITDA valuations/analysis.

Exhibit 96. Siti Networks—DCF summary and key assumptions

INR mn, year-end March

	FY16	FY17	FY18E	FY19E	FY20E	FY21E	FY22E	FY23E	FY24E	FY25E	FY26E
Key assumptions (%)											
Revenue growth	26.5	4.3	18.7	15.1	12.3	6.8	6.3	7.3	7.3	6.7	6.2
EBITDA growth	**79**	**(18)**	**52**	**22**	**18**	**7.9**	**7.5**	**10.6**	**11.5**	**9.1**	**7.7**
Adj. EBITDA growth ex-activation	**25**	**(65)**	**254**	**112**	**41**	**14.4**	**14.4**	**11.9**	**12.2**	**9.8**	**8.5**
EBITDA margin	21.5	17.0	21.8	23.1	24.3	24.6	24.8	25.6	26.6	27.2	27.5
FCF growth	32	132	(84)	(93)	(3,007)	32	(0)	12	6	8	7
FCF margin	(19)	(43)	(6)	(0)	9	11	11	11	11	11	11
FCFF as % of EBITDA	**(89)**	**(250)**	**(27)**	**(2)**	**37**	**46**	**42**	**43**	**41**	**40**	**40**
RoAIC	7	(2)	1	3	5	6	8	10	13	15	17
DCF											
EBIT X (1-tax rate)	889	(331)	262	601	1,011	1,187	1,451	1,745	2,077	2,328	2,630
Depreciation & Amortization	1,655	2,412	2,967	3,209	3,341	3,381	3,395	3,387	3,464	3,545	3,622
Change in net working capital	4,679	(2,616)	(551)	(1,664)	(662)	(131)	(165)	(144)	(74)	3	11
Operating FCF	**7,222**	**(535)**	**2,678**	**2,146**	**3,690**	**4,437**	**4,680**	**4,988**	**5,467**	**5,876**	**6,264**
Capex	**(9,414)**	**(4,544)**	**(3,508)**	**(2,204)**	**(2,026)**	**(2,241)**	**(2,491)**	**(2,544)**	**(2,878)**	**(3,072)**	**(3,263)**
Free cash flows [FCFF]	**(2,192)**	**(5,079)**	**(830)**	**(57)**	**1,664**	**2,197**	**2,189**	**2,445**	**2,589**	**2,804**	**3,001**

DCF for SITI Networks	Sep-18E
WACC (%)	11.5
Terminal growth (%)	6.0
Implied Exit EV/FCF multiple (X)	18.2
Implied Exit EV/EBITDA multiple (X)	7.3
PV of cash flows (2018E-2026E)	10,155
PV of Terminal value	25,554
Gross Enterprise Value (GEV)	35,709
Terminal value as % of EV	72
Less: Effective net debt/(cash)	14,255
Value attributed to minority interest	3,996
Equity value (Rs mn)	17,458
Equity value (US$ mn)	273
Number of shares (mn)	873
DCF equity value (Rs/share)	20.0
Sep-18E TP (Rs/share)	20

Sensitivity of Sep-18E DCF value to WACC, Terminal Growth

	WACC (%)				
	10.5	11.0	11.5	12.0	12.5
5.0	22	18	15	13	10
5.5	25	21	17	14	12
6.0	29	24	20	16	13
6.5	34	28	23	19	15
7.0	41	33	27	22	18

Sensitivity of EV/EBITDA multiple to WACC, Terminal growth

	WACC (%)				
	10.5	11.0	11.5	12.0	12.5
5.0	7.3	6.7	6.2	5.7	5.3
5.5	8.0	7.3	6.7	6.2	5.7
6.0	8.9	8.0	7.3	6.7	6.2
6.5	10.0	8.9	8.0	7.3	6.7
7.0	11.4	10.0	8.9	8.0	7.3

Source: Company, JM Financial.

Exhibit 97. SITI networks—key assumptions and forecasts

Fiscal-ending March	FY16	FY17	FY18E	FY19E	FY20E	FY21E	FY22E
Video segment							
Video subs (mn)	12.2	13.2	13.2	13.5	13.6	13.8	13.9
Digital subs incl. inactive (mn)	7.9	10.0	13.0	13.5	13.6	13.8	13.9
Digitised base (%)	65	76	98	100	100	100	100
Effective video subscription ARPU (INR)	32	37	48	61	70	74	77
ARPU growth (%)	12	15	28	27	16	5	5
C&P revenue per sub (INR/month)	18	20	20	20	20	20	20
Activation fee per STB (INR)	771	875	840	850	800	800	800
Video subscription gross margin (%)	18	11	23	31	34	34	34
Pay channel cost per sub (INR/month)	26	33	37	42	46	48	51
Net content cost per sub (INR/month)	8	14	17	22	26	28	30
Bad debt expense-to-video revenues (%)	6.6	3.8	4.1	3.6	3.5	3.1	2.9
Broadband segment							
Homes passed (mn)	0.9	1.6	2.2	2.8	3.4	4.1	4.7
BB HPs to digital video subs (%)	11	16	17	21	25	30	34
BB subs incl. inactive ('000)	133	228	310	400	500	600	700
Home-pass penetration (%)	14.9	14.2	14.1	14.3	14.5	14.8	15.0
Effective ARPU (INR/month)	401	448	376	400	423	443	459
ARPU growth (%)	(1)	12	(16)	7	6	5	4
Revenue growth (%)							
Video subscription (net of LCO share)	25	29	33	28	17	6	6
C&P income	(2)	23	5	3	1	1	1
Broadband subscription	84	99	25	41	34	28	23
Other forecasts							
Share of BB in adjusted revenues (%)	5	9	10	11	13	16	18
Growth in pay channel costs (%)	24	41	15	15	11	6	6
Growth in net content cost (%)	185	81	31	29	21	10	9
Growth in non-content opex (%)	13	(10)	8	11	9	7	6
Content cost-to-revenue (%)	31	42	41	41	41	41	40
NCO-to-revenue (%)	47	41	37	36	35	35	35
EBITDA margin (%)	21.5	17.0	21.8	23.1	24.3	24.6	24.8
Adjusted EBITDA margin (%)	9.4	3.2	9.5	16.4	20.0	21.1	22.5
Capex-to-revenue (%)	82.1	38.0	24.7	13.5	11.0	11.4	12.0

Source: Company, JM Financial

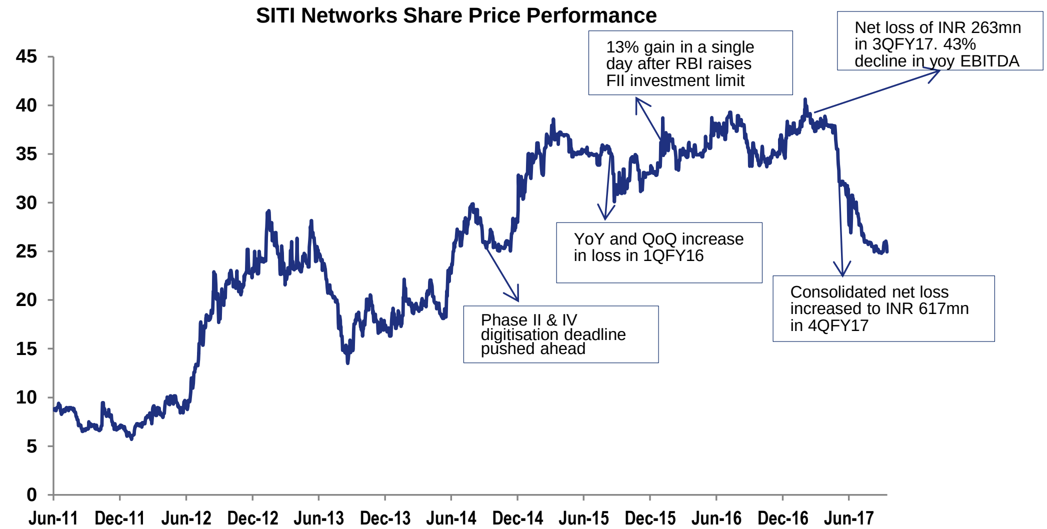
Valuations unattractive—robust growth outlook but negative FCF

Despite our projected 36% EBITDA CAGR in FY18/19 for Siti, the stock is trading at 10.6x FY19 EV/EBITDA. EBITDA growth is likely to come down after FY19, i.e. post initial monetisation in P-III and IV areas, and may remain in the low-teens on a CAGR basis. In our view, a multiple of 10-11x EV/EBITDA is expensive for prospective EBITDA growth profile of 11-12%. At INR 25 CMP, Siti stock is trading at an EV of 11.0x forward EBITDA [Sep-18]. At our DCF-based Sep-18 TP of INR 20, stock's implied forward multiple would be 8.7x based on our Sep-19 EBITDA forecast.

We do not expect Siti to generate FCF over the next two years; thus, net debt would continue to increase, through its leverage ratio would start declining from 2HFY18, driven by strong EBITDA growth.

Siti's stock has delivered attractive (>4x) returns over the past 5-6 years, from its lows of INR 6/share in early 2012. However, the stock price has declined sharply by 35% from its recent peak of INR 39 six months ago, led by a YoY decline in adjusted EBITDA in FY17, and rising net debt.

Exhibit 98. Siti—share price history with key events



Source: JM Financial, Bloomberg.

Exhibit 99. Peer and global valuation comps

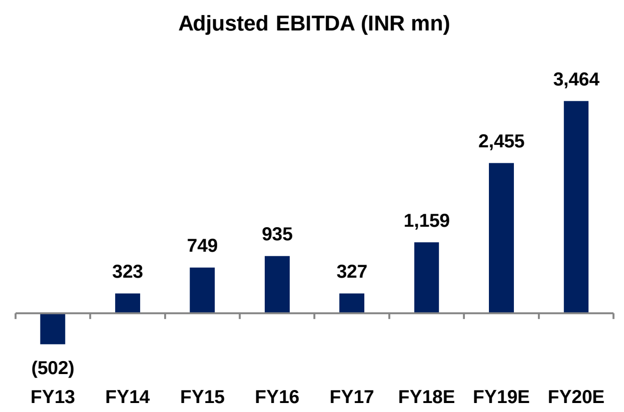
		CMP	M-cap	EV/EBITDA (x)		EBITDA CAGR (%)
	LCY	[LCY]	(USD bn)	FY18E	FY19E	FY18E-20E
Siti Networks	**INR**	**25.0**	**0.34**	**12.1**	**10.6**	**20.1**
GTPL Hathway	**INR**	**148.9**	**0.26**	**7.3**	**5.7**	**22.0**
Dish TV	INR	78.7	1.3	10.3	9.2	12.1
ZEEL	INR	529.3	7.9	22.6	18.9	15.7
Sun TV Network	INR	836.4	5.1	18.0	14.5	17.7
				CY17E	CY18E	CY17E-19E
Comcast Corp	USD	37.6	176.9	8.4	7.9	5.2
Charter Communications Inc-A	USD	376.0	97.0	10.4	9.6	7.6

Source: Bloomberg, JM Financial. Note: Source for Dish TV, Comcast Corp and Charter Communications is Bloomberg.

Financials—strong EBITDA growth; PAT/FCF turnaround to wait

Siti's adjusted EBITDA declined 65% YoY in FY17, led by a 41% surge in pay channel expenses; the decline appears large, given the 'low base' of adjusted EBITDA. We forecast a recovery from FY18, led by continued momentum in video and BB subscription revenues, and a slower (15-16%) increase in the PC expense. We forecast adjusted EBITDA to grow >10x in 3 years (FY20) to INR 3.5bn, from its rather low base of INR 327mn in FY17.

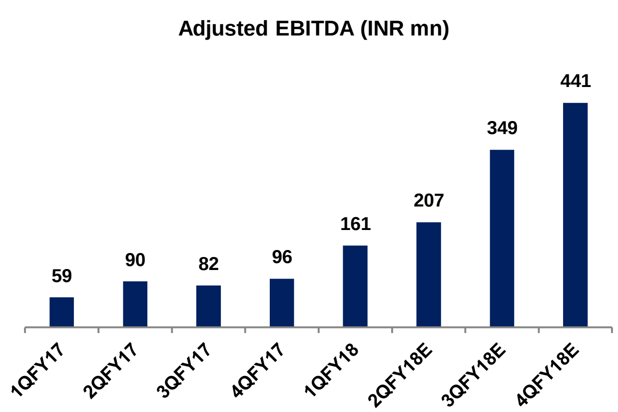
Exhibit 100. Siti—adjusted EBITDA



Source: Company, JM Financial.

Siti shifted to IND AS reporting from I-GAAP in FY17, and its latest annual report contains FY16 financials restated as per IND AS. This accounting shift has mainly impacted Siti's video activation fee revenues, and therefore the headline EBITDA. According to management, Siti is recognising activation fee as revenue over four years, in the following manner: 60% is recognised upfront in the first year, and the remaining 40% over the following three years. We note this policy results in more front-loaded revenue recognition vis-à-vis MSO peers, who are recognising activation fees as revenue over 4-8 years.

Exhibit 101. Siti—adjusted quarterly EBITDA

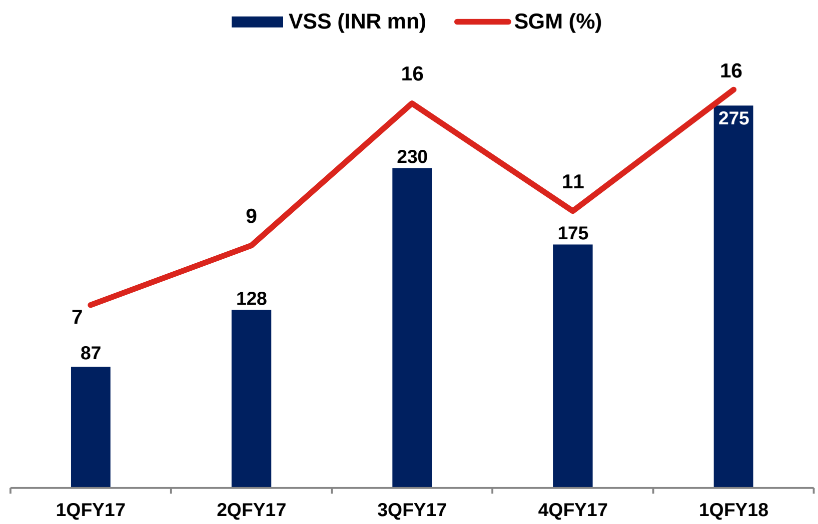


Source: Company, JM Financial.

Our projected 30% EBITDA CAGR for FY17-20E critically depends on improvement in: (1) monetisation levels [ARPUs]; (2) video subscription spread or gross margin; (3) BB subscriber and ARPU growth; and (4) operating leverage + control over non-content opex or NCO.

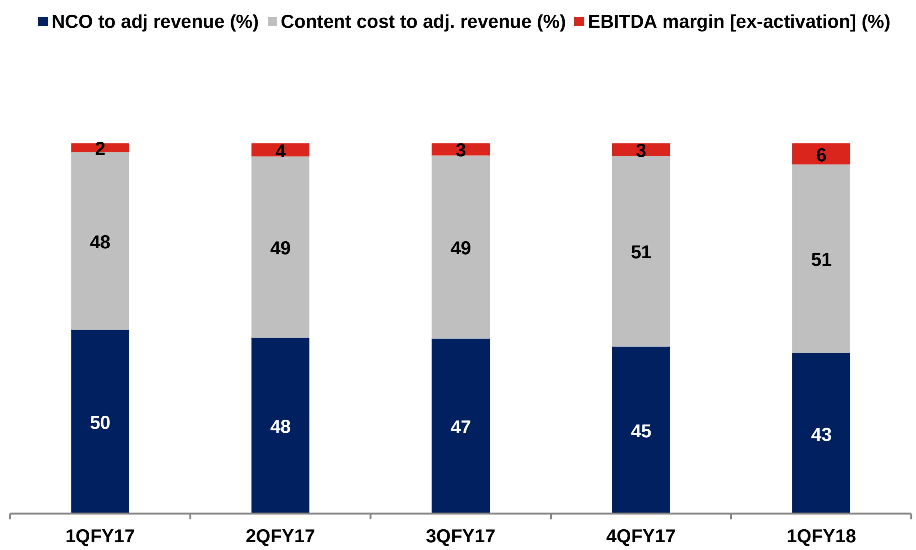
Siti's consolidated headline EBITDA declined 18% YoY in FY17 to INR 2.03bn

Exhibit 102. Siti—video subscription spread and subscription gross margin



Source: Company, JM Financial.

Exhibit 103. Siti—expansion in adjusted EBITDA margin driven by non-content opex



Source: Company, JM Financial.

Exhibit 104. Siti—consolidated quarterly P&L (IND AS) and KPIs

March year-ends, INR mn	1QFY17	2QFY17	3QFY17	4QFY17	1QFY18	QoQ (%)	YoY (%)
Revenues	**2,820**	**2,890**	**2,985**	**3,255**	**3,650**	**12.1**	**29.4**
Core revenues	**2,790**	**2,853**	**2,963**	**3,229**	**3,625**	**12.2**	**29.9**
Cable subscription	1,393	1,397	1,475	1,600	1,700	6	22
Carriage & Placement	720	757	726	798	765	(4)	6
Broadband subscription	195	249	259	266	258	(3)	32
Activation	366	383	468	484	849	75	132
Others (incl. ad revs)	116	67	35	81	53		
Other operating income	**30**	**37**	**22**	**26**	**25**		
Operating costs							
Pay channel costs	(1,175)	(1,225)	(1,245)	(1,425)	(1,425)	0	21
Revenue share & distribution cost	(309)	(209)	(199)	(184)	(136)	(26)	(56)
Employee expense	(191)	(207)	(191)	(244)	(234)	(4)	23
SG&A expense	(719)	(775)	(800)	(823)	(844)	3	17
Total operating costs	**(2,395)**	**(2,416)**	**(2,434)**	**(2,676)**	**(2,639)**	**(1.3)**	**10.2**
EBITDA	**425**	**473**	**550**	**580**	**1,010**	**74**	**138**
EBITDA margin (%)	15.1	16.4	18.4	17.8	27.7	987bps	1261bps
Depreciation & Amortisation	(547)	(572)	(625)	(667)	(726)	9	33
EBIT	**(122)**	**(98)**	**(75)**	**(88)**	**284**		
Interest & other income	49	24	71	115	62		
Finance cost	(297)	(280)	(360)	(338)	(331)		
PBT	**(370)**	**(355)**	**(364)**	**(310)**	**15**		
Share of JV/associate profits	0	0	3	(1)	1		
XO, prior period items	0	0	0	(202)	0		
Current tax expense	(43)	(22)	0	(14)	(171)		
Deferred tax (liability)/asset	(23)	0	30	(121)	4		
Minority Interest	(101)	(93)	68	32	(139)		
Reported PAT	**(536)**	**(469)**	**(263)**	**(617)**	**(290)**		
Adjusted net profit	**(536)**	**(469)**	**(263)**	**(414)**	**(290)**		
Shares outstanding (mn)	794	794	794	872	872		
EBITDA (ex-activation)	**59**	**90**	**82**	**96**	**161**	**68.5**	**173**
EBITDA margin [ex-activation] (%)	2.4	3.6	3.3	3.4	5.8	230bps	335bps
Video subscription spread	**87**	**128**	**230**	**175**	**275**	**57.1**	**216**
Video subscription gross margin (%)	6.9	9.5	15.6	10.9	16.2		
Net content cost	**455**	**468**	**519**	**627**	**660**	**5.3**	**45**
NCC-to-subscription revenue (%)	**36.1**	**34.6**	**35.2**	**39.2**	**38.8**	**(0.9)**	**7.7**
Cost-to-revenue ratios (%)							
Content costs	**41.7**	**42.4**	**41.7**	**43.8**	**39.0**		
Non content opex [NCO]	**43.3**	**41.2**	**39.9**	**38.4**	**33.3**		
Content cost to adj. revenue (%)	**47.9**	**48.9**	**49.5**	**51.4**	**50.9**		
NCO to adj revenue (%)	**49.7**	**47.5**	**47.3**	**45.1**	**43.4**		
Operational metrics (consolidated)							
Video universe (mn)	12.2	12.2	12.2	13.2	13.2		
Digital subs (mn)	**8.3**	**8.7**	**9.2**	**10.0**	**11.6**		
Digitised base (%)	68	71	76	76	88		
Digital subs added (mn)	0.4	0.4	0.5	0.8	1.6		
Effective video ARPU (INR/month)	**38.1**	**38.2**	**40.3**	**42.0**	**42.9**	**2.2**	**12.8**
BB home passes (mn)	1.2	1.5	1.6	1.6	1.6		
BB subs EOP ('000)	**167**	**195**	**213**	**228**	**240**		
BB subs added ('000)	34.5	28.0	18.0	15.0	12.0		
Effective BB ARPU	**434**	**459**	**423**	**402**	**368**	**(8.6)**	**(15.3)**

Source: Company, JM Financial.

Exhibit 105. Siti—profit and loss statement

Year-end March, INR mn	FY16	FY17	FY18E	FY19E	FY20E	FY21E	FY22E	CAGR (%) FY17-20E
CATV subscription	5,914	5,858	7,575	9,709	11,397	12,086	12,817	25
Carriage & Placement	2,448	3,001	3,150	3,250	3,283	3,315	3,348	3
Broadband subscription	487	969	1,212	1,705	2,287	2,921	3,580	33
Activation	1,524	1,701	1,930	1,316	991	848	636	(16)
Other revenues	1,088	421	320	350	380	410	440	(3)
Revenues	**11,460**	**11,949**	**14,187**	**16,330**	**18,337**	**19,580**	**20,822**	**15**
Revenue (ex-activation)	**9,936**	**10,248**	**12,257**	**15,014**	**17,346**	**18,733**	**20,186**	**19**
Pay channel cost	(3,590)	(5,070)	(5,851)	(6,726)	(7,499)	(7,969)	(8,411)	14
Employee costs	(631)	(833)	(981)	(1,116)	(1,251)	(1,383)	(1,499)	15
SG&A & other opex	(4,780)	(4,018)	(4,266)	(4,716)	(5,132)	(5,420)	(5,743)	8
Total operating costs	**(9,001)**	**(9,921)**	**(11,098)**	**(12,559)**	**(13,882)**	**(14,772)**	**(15,653)**	**12**
EBITDA	**2,459**	**2,028**	**3,089**	**3,771**	**4,455**	**4,809**	**5,169**	**30**
EBITDA margin (%)	21.5	17.0	21.8	23.1	24.3	24.6	24.8	
EBITDA (ex-activation)	**935**	**327**	**1,159**	**2,455**	**3,464**	**3,961**	**4,533**	**120**
Depreciation & Amortisation	(1,655)	(2,412)	(2,967)	(3,209)	(3,341)	(3,381)	(3,395)	11
EBIT	**805**	**(384)**	**122**	**562**	**1,114**	**1,428**	**1,774**	**(243)**
Other income	84	53	140	145	150	155	160	42
Finance income	147	206	56	16	45	85	124	(40)
Finance cost	(1,399)	(1,274)	(1,376)	(1,449)	(1,532)	(1,520)	(1,473)	6
PBT	**(363)**	**(1,399)**	**(1,058)**	**(726)**	**(223)**	**148**	**586**	**(46)**
Share of JV/associate profits	(2)	2	0	0	0	0	0	
Exceptional & prior period items	2	(202)	0	0	0	0	0	
Total tax	(49)	(193)	(151)	102	45	(37)	(203)	
Minority Interest	(61)	(93)	(139)	25	(25)	(75)	(85)	
Reported PAT	**(474)**	**(1,885)**	**(1,349)**	**(599)**	**(204)**	**36**	**298**	**(52)**
Adjusted net profit	**(475)**	**(1,683)**	**(1,349)**	**(599)**	**(204)**	**36**	**298**	
Cash profit	1,209	909	1,735	2,593	3,162	3,492	3,834	
Shares outstanding (mn)	736	833	872	873	873	873	873	
EPS (INR)	(0.6)	(2.0)	(1.5)	(0.7)	(0.2)	0.0	0.3	(51)
Growth rates (%)								
Revenue	27	4	19	15	12	7	6	
EBITDA	79	(18)	52	22	18	8	7	
Revenue (ex-activation)	**18**	**3**	**20**	**22**	**16**	**8**	**8**	
EBITDA (ex-activation)	**25**	**(65)**	**254**	**112**	**41**	**14**	**14**	
Cost-to-revenue ratio (%)								
Pay channel cost	31	42	41	41	41	41	40	
Employee costs	6	7	7	7	7	7	7	
SG&A & other opex	42	34	30	29	28	28	28	
Margins (%)								
EBITDA margin	**21**	**17**	**22**	**23**	**24**	**25**	**25**	
EBITDA (ex-activation)	**9**	**3**	**9**	**16**	**20**	**21**	**22**	
EBIT	7	(3)	1	3	6	7	9	
Net profits	**(4)**	**(14)**	**(10)**	**(4)**	**(1)**	**0**	**1**	
Effective tax rate (%)	**NM**	**NM**	**NM**	**14**	**20**	**25**	**35**	

Source: Company, JM Financial.

Balance sheet—net debt has increased, despite continuous equity infusion

Siti's consolidated net debt has increased 53% [=INR 4.1bn] from INR 7.8bn as of end-FY13 to INR 11.9bn in FY17. This is in spite of INR 12.7bn of equity-raising by the company over the last five years [FY13-17], which includes INR 6.8bn of funds injected by the promoter-group over FY16/FY17. Siti has incurred total capex of INR 14bn over the last two years [FY16/17] including acquisitions that are typically funded through STB subsidies and not any cash consideration.

We forecast net debt to continue to increase over the next two years, as growing cash profits would continue to lag capex requirements. Nonetheless, its leverage ratio [net debt-to-EBITDA] should start declining from end-FY18 based on our forecasts, driven by an increase in EBITDA.

Exhibit 106. Siti—balance sheet model

Year-end March, INR mn

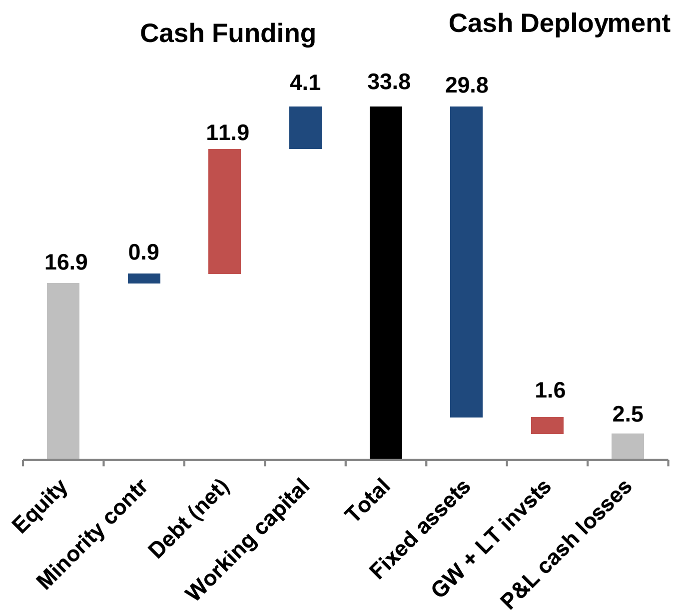
	FY16	FY17	FY18E	FY19E	FY20E	FY21E	FY22E
Equity							
Share capital	795	873	873	873	873	873	873
Reserves & surplus	4,918	4,501	3,152	2,553	2,349	2,385	2,683
Total equity	**5,712**	**5,373**	**4,024**	**3,425**	**3,222**	**3,258**	**3,556**
Minority Interest	783	920	1,059	1,034	1,059	1,134	1,219
Deferred Tax Liability	34	120	120	127	127	127	183
Total debt	**11,370**	**13,725**	**14,500**	**16,000**	**16,250**	**15,750**	**15,250**
Total capital	**17,900**	**20,139**	**19,704**	**20,587**	**20,658**	**20,269**	**20,208**
Assets							
Cash & cash equivalents	**3,815**	**1,795**	**245**	**470**	**1,194**	**1,814**	**2,492**
Inventories	118	93	125	131	138	145	152
Trade Receivables	2,594	3,631	4,353	4,921	5,275	5,364	5,705
Other Current assets	2,692	3,474	3,700	3,829	3,962	4,100	4,242
Total Current assets (ex-cash)	5,404	7,199	8,178	8,882	9,375	9,609	10,098
Current liabilities and provisions	11,427	11,259	11,687	10,726	10,557	10,661	10,985
Net Current Assets (ex-cash)	**(6,024)**	**(4,060)**	**(3,509)**	**(1,845)**	**(1,182)**	**(1,052)**	**(886)**
Net fixed assets	**18,647**	**20,823**	**21,364**	**20,358**	**19,043**	**17,903**	**16,999**
Long term investments	8	47	47	47	47	47	47
Goodwill on consolidation	625	583	583	583	583	583	583
Other non-current assets	808	945	945	945	945	945	945
Deferred tax assets	21	6	29	29	29	29	29
Total assets	**17,900**	**20,139**	**19,704**	**20,587**	**20,658**	**20,269**	**20,208**
Gearing and profitability ratios (%)							
Net worth	5,712	5,373	4,024	3,425	3,222	3,258	3,556
Invested capital	14,051	18,224	19,339	19,990	19,337	18,328	17,534
Net debt/(cash)	**7,555**	**11,931**	**14,255**	**15,530**	**15,056**	**13,936**	**12,758**
Debt/Equity	199	255	360	467	504	483	429
Net-debt/Equity	116	190	280	348	352	317	267
Net-debt/capital	**54**	**65**	**74**	**78**	**78**	**76**	**73**
Net-debt/EBITDA (x)	**3**	**6**	**5**	**4**	**3**	**3**	**2**
Interest coverage (x)	**2**	**2**	**2**	**3**	**3**	**3**	**4**
RoE	**(8)**	**(31)**	**(34)**	**(17)**	**(6)**	**1**	**8**
RoAE	(13)	(30)	(29)	(16)	(6)	1	9
RoACE	5	(2)	1	3	5	6	7
RoAIC	**7**	**(2)**	**1**	**3**	**5**	**6**	**8**

Source: Company, JM Financial.

Siti's balance sheet has expanded rapidly over the last 5 years, as cumulative cash invested in the business has increased 4.4x from INR 7.7bn as of Mar-12 to INR 33.8bn as of Mar-17. The cumulative investment of INR 33.8bn has been funded by:

- Equity [53%] including contribution of minorities
- Net debt [35%]
- Net working capital [12%], thanks to trade and capex vendors

Exhibit 107. Siti--cumulative cash funding and cash deployment till date [Mar-17, INR bn]



Source: Company, JM Financial.

Exhibit 108. Siti—cash flow statement

Year-end March, INR mn

	FY16	FY17	FY18E	FY19E	FY20E	FY21E	FY22E
Profit before tax	**(364)**	**(1,600)**	**(1,058)**	**(726)**	**(223)**	**148**	**586**
Depreciation & amortisation	1,655	2,412	2,967	3,209	3,341	3,381	3,395
Interest Income	(134)	(80)	(56)	(16)	(45)	(85)	(124)
Interest expense	1,113	949	1,376	1,449	1,532	1,520	1,473
Interest paid	(1,179)	(1,004)	(1,376)	(1,449)	(1,532)	(1,520)	(1,473)
Profit on sale of fixed assets/investments	(2)	0	0	0	0	0	0
Other non-cash items	416	629	0	0	0	0	0
Taxes paid	(343)	25	(174)	109	45	(37)	(146)
Working capital changes	4,679	(2,616)	(551)	(1,664)	(662)	(131)	(165)
CF from operations	**5,842**	**(1,284)**	**1,127**	**913**	**2,455**	**3,276**	**3,545**
Purchase of Fixed assets	(9,414)	(4,544)	(3,508)	(2,204)	(2,026)	(2,241)	(2,491)
Proceeds from sale of PP&E	3	0	0	0	0	0	0
Other investments, JV, minorities	(187)	(100)	0	0	0	0	0
Interest/dividend received	122	49	56	16	45	85	124
CF from investments	**(9,476)**	**(4,595)**	**(3,452)**	**(2,187)**	**(1,981)**	**(2,156)**	**(2,367)**
Net proceeds from issue of equity	5,370	1,548	0	0	0	0	0
Net proceeds from borrowings	(2,356)	2,360	775	1,500	250	(500)	(500)
CF from financing	**3,014**	**3,908**	**775**	**1,500**	**250**	**(500)**	**(500)**
Net change in cash balance	**(620)**	**(1,972)**	**(1,550)**	**225**	**724**	**620**	**678**
Opening Cash	4,298	3,678	1,707	157	382	1,106	1,726
Closing cash balance	**3,678**	**1,707**	**157**	**382**	**1,106**	**1,726**	**2,403**

Source: Company, JM Financial.

SITI Networks—company profile

SITI Networks Limited is one of the largest Multi System Operators (MSOs) in India, offering digital and analogue cable television (CATV) and broadband services. It is a part of the Essel Group, one of the leading business conglomerates in India, which has presence across diverse industries such as media, entertainment, packaging, technology-enabled services, infrastructure development and education. The cable business of Siti Networks was launched in June 1994. It was then a fully owned subsidiary of Zee Telefilms Limited (ZTL). In 2006, ZTL was renamed as ZEE Entertainment Enterprises Limited (ZEEL) and was demerged into four entities, Wire and Wireless (India) Ltd. (WWIL) being one of the entities. The TV distribution business of ZTL was transferred to WWIL. WWIL was renamed SITI Cable Network Limited in 2014, and later as SITI Networks Limited in 2016.

SITI provides cable services in more than 580 locations in India across 20 states. As of Mar'17, SITI had a cable subscriber base of 13.2 million, digital cable subscriber base of 10 million and HD subscriber base of 160,000. SITI's CATV platform is supported by 15 digital head ends and a network of more than 32,500 km of optical fibre and coaxial cable. As of Dec'16, the company had over 24,000 LCOs as franchisees for TV distribution.

SITI Networks also provides broadband service and as of Jun'17, the company had 0.24mn BB subs, based on 1.62mn home passes. In FY17, SITI's consol. IND AS operating revenue was INR 11.95bn, EBITDA was INR 2.03bn (excl. other income) and net loss was INR 1.89bn. The revenue breakdown was: Video subscription [49%], Carriage & Placement [25%], Activation [14%], Broadband [8%] and other operating revenues [3.5%]. In FY16, based on IND AS, Siti's operating revenue, EBITDA and reported net loss were INR 11.46bn, INR 2.46bn and INR 474mn, respectively.

Exhibit 109. SITI—shareholding pattern (as on Jun'17)

Entity	(mn)	(%)
Promoter Group	642	73.6
FIIs	107	12
Mutual Funds, FIs	46	5
Individuals	43	5
Others	34	4
Total	**872.1**	**100**
Free float	**230.5**	**26.4**

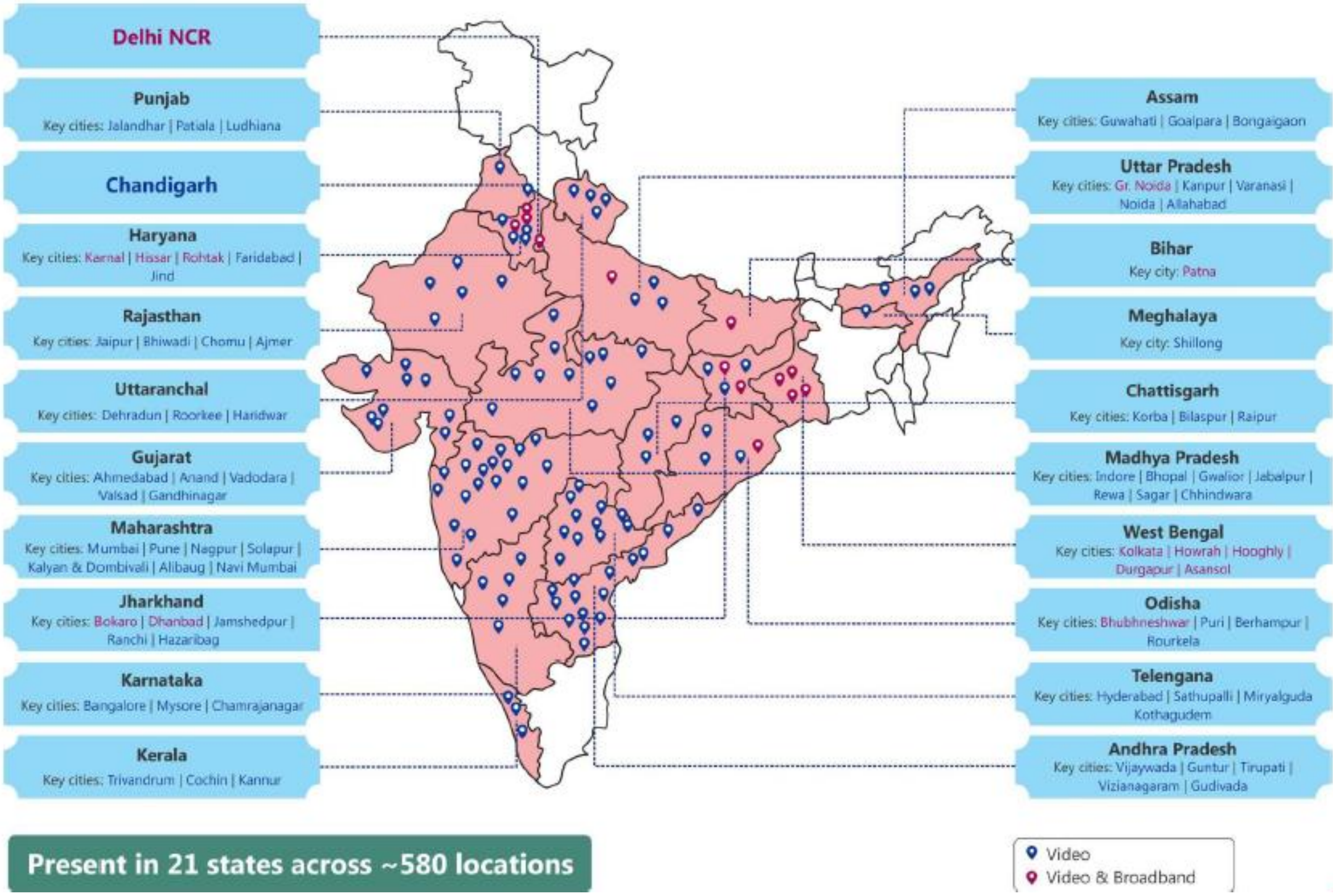
Source: Company, JM Financial.

Exhibit 110. SITI—company history and major milestones

- 1992—Cable business launched
- 2006—Wire and Wireless (India) Ltd. incorporated
- 2007—Implemented CAS in metros (Delhi, Mumbai, Kolkata & Chennai)
- 2009—Rights issue of INR 4500mn fully subscribed
- 2012—Implemented DAS in phase 1 cities
- 2013—Implemented DAS in phase 2 cities; Infusion of INR 3240mn by promoters
- 2015—Raised INR 2210mn through QIP
- 2016—Infusion of INR 5300mn by promoters; Acquired majority stakes/entered into partnerships with regional MSOs in Assam, Maharashtra, Gujarat & Odisha
- 2017—Infusion of INR 1500mn by promoters

Source: Company, JM Financial.

Exhibit 111. SITI—key areas of presence across the country (map not to scale)



Source: Company.

Exhibit 112. SITI—profile of key management personnel

Management Team		
Name	**Designation**	**Profile**
Mr. Sidharth Balakrishna	Executive Director	• Has 13+ years of experience in energy, infrastructure and education sectors • Has been a senior strategy consultant with Accenture and KPMG • Holds an MBA from IIM Calcutta and a bachelor's degree from SRCC, Delhi University
Mr. Sanjay Berry	Chief Financial Officer	• Holds a bachelor's in commerce and is a certified Chartered Accountant • Had served as the CFO of SITI for a period of 4 and half months till April 28, 2017
Mr. Anil Jain	Head—Finance	• Has been associated with Essel Group for more than 8 years • Has worked at Zee Telefilms, Neo Sports, Taj Television, Zee Turner, etc. • He is a certified Chartered Accountant
Mr. Alok Govil	COO—Video Services	• Has 36+ years of experience in sales, business development & distribution • Holds a PGDM from FMS and a B.Com. degree from Delhi University
Mr. Ashish Bhatia	COO—Broadband Services	• Has 20+ years of experience in telecom, FMCG and automobile industries • Holds an MBA in Marketing and a B.E. in Chemical Engineering
Mr. Mukesh Ghuriani	Chief Technology Officer—Video and Broadband	• Has worked at Bharti Airtel Ltd. for over 10 years • Holds an MBA in Finance and a B.E. in Electronics and Telecommunication

Source: Company, JM Financial.

Financial Tables (Consolidated)

Income Statement					(INR mn)
Y/E March	FY16A	FY17A	FY18E	FY19E	FY20E
Net Sales	11,460	11,949	14,187	16,330	18,337
Sales Growth	26.5%	4.3%	18.7%	15.1%	12.3%
Other Operating Income	0	0	0	0	0
Total Revenue	**11,460**	**11,949**	**14,187**	**16,330**	**18,337**
Cost of Goods Sold/Op. Exp	5,686	5,971	6,649	7,701	8,628
Personnel Cost	631	833	981	1,116	1,251
Other Expenses	2,684	3,117	3,468	3,742	4,003
EBITDA	**2,459**	**2,028**	**3,089**	**3,771**	**4,455**
EBITDA Margin	21.5%	17.0%	21.8%	23.1%	24.3%
EBITDA Growth	79.0%	-17.5%	52.3%	22.1%	18.1%
Depn. & Amort.	1,655	2,412	2,967	3,209	3,341
EBIT	805	-384	122	562	1,114
Other Income	231	259	196	161	195
Finance Cost	1,399	1,274	1,376	1,449	1,532
PBT before Excep. & Forex	-363	-1,399	-1,058	-726	-223
Excep. & Forex Inc./Loss(-)	0	0	0	0	0
PBT	-363	-1,399	-1,058	-726	-223
Taxes	49	193	151	-102	-45
Extraordinary Inc./Loss(-)	2	-202	0	0	0
Assoc. Profit/Min. Int.(-)	59	95	139	-25	25
Reported Net Profit	-474	-1,885	-1,349	-599	-204
Adjusted Net Profit	**-475**	**-1,683**	**-1,349**	**-599**	**-204**
Net Margin	-4.1%	-14.1%	-9.5%	-3.7%	-1.1%
Diluted Share Cap. (mn)	794.1	872.1	872.7	872.7	872.7
Diluted EPS (INR)	**-0.6**	**-1.9**	**-1.5**	**-0.7**	**-0.2**
Diluted EPS Growth	0.0%	0.0%	0.0%	0.0%	0.0%
Total Dividend + Tax	0	0	0	0	0
Dividend Per Share (INR)	0.0	0.0	0.0	0.0	0.0

Source: Company, JM Financial

Balance Sheet					(INR mn)
Y/E March	FY16A	FY17A	FY18E	FY19E	FY20E
Shareholders' Fund	5,712	5,373	4,024	3,425	3,222
Share Capital	795	873	873	873	873
Reserves & Surplus	4,918	4,501	3,152	2,553	2,349
Preference Share Capital	0	0	0	0	0
Minority Interest	783	920	1,059	1,034	1,059
Total Loans	11,370	13,725	14,500	16,000	16,250
Def. Tax Liab. / Assets (-)	13	114	91	98	98
Total - Equity & Liab.	**17,879**	**20,133**	**19,675**	**20,558**	**20,630**
Net Fixed Assets	18,647	20,823	21,364	20,358	19,043
Gross Fixed Assets	16,755	21,738	26,979	29,088	30,998
Intangible Assets	3,067	3,721	4,171	4,631	5,101
Less: Depn. & Amort.	6,561	8,928	11,786	14,861	18,056
Capital WIP	5,385	4,292	2,000	1,500	1,000
Investments	145	135	135	135	135
Current Assets	10,515	10,433	9,863	10,791	12,009
Inventories	118	93	125	131	138
Sundry Debtors	2,594	3,631	4,353	4,921	5,275
Cash & Bank Balances	3,678	1,707	157	382	1,106
Loans & Advances	2,025	2,848	3,100	3,229	3,362
Other Current Assets	2,100	2,154	2,128	2,128	2,128
Current Liab. & Prov.	11,427	11,259	11,687	10,726	10,557
Current Liabilities	3,294	4,087	4,561	4,989	5,325
Provisions & Others	8,133	7,171	7,126	5,737	5,233
Net Current Assets	-913	-826	-1,824	65	1,451
Total – Assets	**17,879**	**20,133**	**19,675**	**20,558**	**20,630**

Source: Company, JM Financial

Cash Flow Statement					(INR mn)
Y/E March	FY16A	FY17A	FY18E	FY19E	FY20E
Profit before Tax	-364	-1,600	-1,058	-726	-223
Depn. & Amort.	1,655	2,412	2,967	3,209	3,341
Net Interest Exp. / Inc. (-)	979	869	1,320	1,433	1,487
Inc (-) / Dec in WCap.	4,679	-2,616	-551	-1,664	-662
Others	415	629	0	0	0
Taxes Paid	-343	25	-174	109	45
Operating Cash Flow	**7,021**	**-280**	**2,503**	**2,361**	**3,987**
Capex	-9,411	-4,544	-3,508	-2,204	-2,026
Free Cash Flow	-2,390	-4,824	-1,004	158	1,961
Inc (-) / Dec in Investments	-187	-100	0	0	0
Others	122	49	56	16	45
Investing Cash Flow	**-9,476**	**-4,595**	**-3,452**	**-2,187**	**-1,981**
Inc / Dec (-) in Capital	5,370	1,548	0	0	0
Dividend + Tax thereon	0	0	0	0	0
Inc / Dec (-) in Loans	-2,356	2,360	775	1,500	250
Others	-1,179	-1,004	-1,376	-1,449	-1,532
Financing Cash Flow	**1,835**	**2,904**	**-601**	**51**	**-1,282**
Inc / Dec (-) in Cash	**-620**	**-1,972**	**-1,550**	**225**	**724**
Opening Cash Balance	4,298	3,678	1,707	157	382
Closing Cash Balance	3,678	1,707	157	382	1,106

Source: Company, JM Financial

Dupont Analysis					
Y/E March	FY16A	FY17A	FY18E	FY19E	FY20E
Net Margin	-4.1%	-14.1%	-9.5%	-3.7%	-1.1%
Asset Turnover (x)	0.7	0.6	0.7	0.8	0.9
Leverage Factor (x)	4.5	3.4	4.2	5.4	6.2
RoE	-12.6%	-30.4%	-28.7%	-16.1%	-6.1%

Key Ratios					
Y/E March	FY16A	FY17A	FY18E	FY19E	FY20E
BV/Share (INR)	7.8	6.4	4.6	3.9	3.7
ROIC	7.0%	-2.7%	0.7%	2.5%	4.5%
ROE	-12.6%	-30.4%	-28.7%	-16.1%	-6.1%
Net Debt/Equity (x)	1.3	2.2	3.5	4.5	4.7
P/E (x)	-41.8	-13.0	-16.2	-36.4	-107.2
P/B (x)	3.2	3.9	5.4	6.4	6.8
EV/EBITDA (x)	12.3	17.1	12.0	10.2	8.5
EV/Sales (x)	2.6	2.9	2.6	2.3	2.1
Debtor days	83	111	112	110	105
Inventory days	4	3	3	3	3
Creditor days	134	150	150	145	140

Source: Company, JM Financial

Ortel—a unique and differentiated B2C business

Exhibit 113. Ortel Communications—key financials (Indian GAAP)

Fiscal-end March, INR mn	FY13	FY14	FY15	FY16	FY17
Revenues	1,198	1,285	1,548	1,877	2,034
Revenue growth (%)	0.4	7.3	20.5	21.3	8.4
EBITDA	**351**	**374**	**532**	**617**	**513**
EBITDA margin (%)	29.3	29.1	34.4	33	25
Adjusted EBITDA [a]	**331**	**345**	**481**	**507**	**360**
Adj. EBITDA margin (%)	28.1	27.5	32.2	29	19
EBITDA growth (%)	**(1.7)**	**6.6**	**42.3**	**16.0**	**(16.9)**
Adj. PAT	(247)	(96)	56	119	14
EPS (INR)	(10.6)	(4.1)	2.3	3.9	0.5
EV/EBITDA (x)	**6.7**	**6.1**	**2.6**	**4.1**	**5.7**
P/B (x)	3.2	3.9	0.8	0.7	0.8
FCFF yield (%)	**15**	**12**	**17**	**(39)**	**(0)**
RoAIC (%)	(0.1)	8.2	14.5	11.7	6.9

Source: Company, JM Financial. Note: [a] ex-activation income. [b] FY18E onwards is as per IND AS.

Regional MSO—dominant in Odisha, emerging presence in nearby states

Ortel [Not Rated] is a provider of cable TV (video) and broadband service in its home state of Odisha (core market) and five nearby states of MP, Telengana, AP, Chhattisgarh and WB (emerging markets)—the last three are contiguous to Odisha. Ortel reports the size of its business in terms of Revenue Generating Units (or RGUs), comprising video RGUs (or subscribers) and broadband RGUs. As of Mar-17, the company had approx. 824K RGUs, of which 750K (91%) were video RGUs and the remaining 73K were BB RGUs. Furthermore, nearly 35% [286K] of the total Mar-17 RGUs belonged to emerging markets (non-Odisha), and more significantly, 98% of the RGUs added during FY17 were from outside Odisha, as against 65% in FY16.

Finally, of the approx. 1.35mn homes passed (HP) in video business as of Mar-17, the share of emerging markets was 38% [0.52mn] vs. 32% in Mar-16. The company defines 'homes passed' as the number of unique households (kitchens) or shops or commercial establishments (with a concrete roof), within 30 metres of the 'tap off' points on the coaxial cables running through a neighbourhood.

Exhibit 114. Ortel—overall business profile

Fiscal-year end March	FY15	FY16	FY17
Total homes passed ('000)	**810**	**1,182**	**1,354**
Odisha	641	804	838
Non-Odisha	169	379	515
Share of non-Odisha in total HPs (%)	**21**	**32**	**38**
EOP total RGUs ('000)	**530**	**701**	**824**
Odisha	475	535	538
Non-Odisha	55	166	286
Share of non-Odisha in total RGUs (%)	**10**	**24**	**34.7**
RGUs added ('000)	**14**	**171**	**122**
Odisha		60	3
Non-Odisha		111	119
Share of non-Odisha in RGUs added (%)		**65**	**98**
Revenues (INR mn)	**1,564**	**1,867**	**2,019**
Odisha	1,446	1,677	1,544
Non-Odisha	118	190	475
Share of non-Odisha in revenues (%)	**8**	**10**	**24**
RGUs by service ('000)			
Video	472	629	750
BB	59	72	73
Share of BB in total RGUs (%)	**11**	**10**	**9**

Source: Company, JM Financial.

Ortel has market leadership in Odisha, with about 500,000 video subs, translating to approx. 50% share of cable TV HHs, and 25% share of the Odisha pay TV market (including DTH). Rest of the cable TV market is mostly fragmented, with Hathway, Siti and Manthan together accounting for around 150,000 subs, followed by a long tail of independent cable operators (ICOs or ISOs—having single city/town franchise) collectively accounting for the remaining 350,000 subs.

Exhibit 115. Ortel—profile of video [CATV] business

Fiscal-year end March

	FY15	FY16	FY17
Video homes passed ('000)	**810**	**1,182**	**1,354**
Video RGU penetration (%)	58	53	55
EOP RGUs ('000)	**472**	**629**	**750**
Primary	409	569	671
Secondary	63	59	79
Share of primary points (%)	**86.7**	**90.5**	**89.5**
Digital or DAS penetration (%)	23	37	60
Realised ARPUs (INR/month)	-		
Primary	154	140	148
Secondary	51	57	69
Blended ARPU	**141**	**131**	**140**
Blended ARPU [exit quarter]	139	139	129

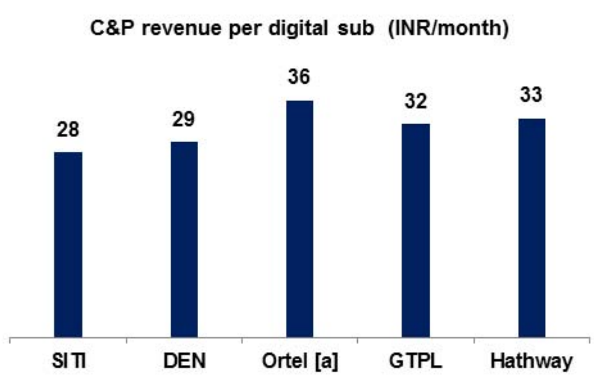
Source: Company, JM Financial.

Per capita income in Odisha is among the lowest—roughly 25-30% below the national average

Ortel has a minuscule presence in Phase-I (Kolkata) and II (Vishakhapatnam/Vizag) DAS markets, and roughly 80%/20% of its total video subs respectively, belong to Phase III/IV areas. Nonetheless, Ortel has historically earned significant C&P income on a per subscriber basis, thanks to its fairly dominant position in Odisha. The per subscriber carriage fee has recently seen a decline though, partly reflecting the impact of: (1) digitisation—major broadcasters have stopped paying or have cut back on C&P fee; (2) shakeout among regional broadcasters in the Odisha market—over 50% of C&P income comes from regional channels. Nonetheless, according to management, Ortel is beginning to capture some of the C&P upside in AP and Telengana markets.

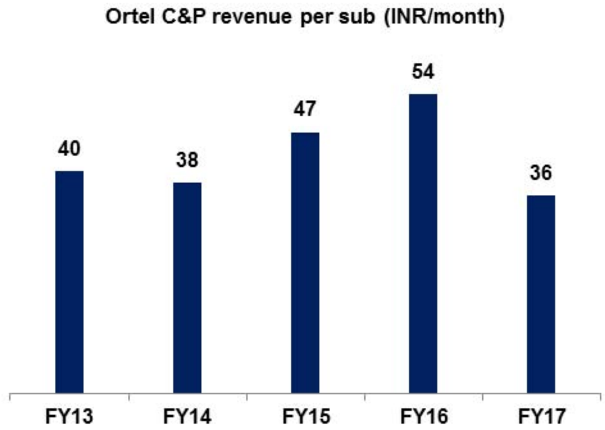
Share of rural population (83%) in Odisha is among the highest. However, Ortel is not present in the rural areas—Phase IV presence is mostly contiguous to existing coverage in Phase III towns

Exhibit 116. C&P revenue per digital subscriber [FY17]



Source: Companies, JM Financial. Note: [a] All video subs taken including analog, since 90% of the business is primary.

Exhibit 117. Ortel—C&P revenues impacted by digitisation and regional shakeout



Source: Company, JM Financial.

A unique and differentiated direct-to-consumer (B2C) business model

Unlike other MSOs in India that effectively run a B2B business (even after digitisation), Ortel is one of the only two scale-MSOs in India (other is Asianet of Kerala), that has ownership and control of its last mile network. As of Mar-17, the share of primary subs (or directly-owned subs) in its video business was c.90%, of which around 60% were digitised. In contrast, the share of primary points for other national/regional MSOs is less than 5%.

Key benefits of last mile ownership:

- Capture the entire video ARPU with minimal leakages, and thus combine the highly profitable retail segment of cable value chain with wholesale MSO operation—return outlook for the latter, tends to be uncertain in general, without significant C&P income
- Provide high-quality, uniform, consistent and responsive service to customers, with proper channel/bouquet packaging, segmentation, consumer billing and collections
- Limited risk of large-scale subscriber churn that is common in B2B MSO businesses because of 'LCO churn', driven by LCO-poaching and STB-swapping by rival MSOs
- Attractive incremental economics of broadband over cable—based on deployment of a 'reverse path' in the coaxial network and use of DOCSIS technology

A B2C video business captures 'excess' value in the last mile

Our analysis indicates that at prevailing ARPUs, without significant C&P revenues, a traditional B2B MSO business is barely capable of earning its hurdle rate (11-12% cost of capital) even after digitisation. This is because super-normal value continues to remain embedded in the last mile—partly driven by the entrepreneurial, mom-and-pop nature of LCO business, which is associated with lower overheads, and lower tax and regulatory compliance.

Exhibit 118. Estimate of video capex per subscriber for LCOs and MSOs (INR)

Video capex per sub (INR)

	LCO	MSO
Cost per home passed	800	
HP penetration (%)	60.0	
HP cost per sub	1,333	
Drop cable	300	
Backend capex	0	200
STB subsidy (net)	0	600
Total capex per sub	**1,633**	**800**

Source: Company, JM Financial.

We believe a B2C MSO will be able to capture bulk of the 'surplus value' residing in the last mile, despite some efficiency loss. We analyse the unit economics for an LCO and an MSO in Phase III/IV areas that have relatively lower ARPUs (around INR 150/month) currently. Our analysis broadly mirrors the context in which Ortel is operating. We conclude that even without over-laying broadband on top of a traditional video business, a B2C MSO would be able to earn around 15% ROIC, as against a 10-11% return possible for a B2B MSO under similar circumstances. Note that our analysis ignores subscriber churn, which tends to push up the effective capex per RGU (sunk costs in Drop Cable, partial STB recovery), and push down the realised ARPUs (delay in replacing churned subscriber)—these factors would dilute the return profile for both LCOs and MSOs.

Exhibit 119. Unit economics of Video in Phase III/IV post digitisation and monetisation

Rs/sub/month

	B2C LCO	+	B2B MSO	=	B2C MSO [Ortel]
Video subscription ARPU	150		60		150
C&P			20		20
Other ARPU (ad revs, infra leasing)			10		10
Total video ARPU	**150**		**90**		**180**
Opex					
Content cost [a]	(60)		(44)		(50)
Other opex [b]	(30)		(29)		(70)
NCF paid to LCO					
Total opex	**(90)**		**(73)**		**(120)**
EBITDA	**60**		**17**		**60**
EBITDA margin (%)	**40**		**19**		**33**
Annual financials					
EBITDA	**720**		**206**		**722**
Depreciation	(98)		(72)		(170)
EBIT	**622**		**134**		**552**
RoIC (%)	**24.9**		**11.0**		**14.8**
Payback period (years)	2.3		3.9		3.4
Capex per sub [c]	**1,633**		**800**		**2,433**
Average depn rate (%)	6.0		9.0		7.0

Source: Companies, JM Financial.
Notes:
[a] Assuming LCO passes on 40% of ARPU to a B2B MSO. We also assume a B2C MSO will incur higher content cost than a B2B MSO.
[b] Assuming a B2C MSO is less efficient on opex than an entrepreneurial mom-and-pop LCO. Some of the opex disadvantage is not due to any inefficiency but has to do with payments for legal right of way (RoW) to local and state authorities.
[c] LCO capex is based on assumption of 60% home pass penetration. MSO capex assumes net STB subsidy of INR 600/sub.

Organic growth strategy entails lower growth rates for a B2C MSO

The key underlying assumption in the above analysis is that the B2C MSO adds or acquires end-customers organically, and not through LCO-acquisitions. However, an organic B2C growth model is not easily/quickly scalable in India, as it would have to rely on new housing-builds, city-expansion or subscriber-churn within existing catchment area of the MSO. At the same time, an inorganic approach, i.e. LCO acquisition strategy faces the following hurdles:

1. Lack of willing sellers among LCOs: Local cable TV is a high-return, annuity cash business, often supported by political patronage and influence. Nonetheless, LCOs willingness to monetise/exit has gradually increased in recent years, driven by risk of subscriber churn to DTH, digitisation (dilution in customer control), government thrust on tax compliance, more demanding customers etc.
2. Cost of LCO acquisition: Valuation per subscriber depends on scale of operations, market position of LCO, and ARPUs. In our analysis above, assuming 50% of the acquired LM network is re-usable (and 50% is built afresh by MSO), we estimate that an acquisition price of INR 1500/sub would wipe out potential value accretion for MSOs. Thus, for MSOs to create value from LM acquisitions, we believe an ARPU increase would be necessary
3. Fragmented and undercapitalised MSO industry

We discuss the economics of inorganic growth in a further section of this report.

Broadband—significant long-term potential to scale up

Ortel has built up a meaningful fixed/wired broadband presence in its areas of operations. As of end-FY17, the company had 73,000 BB subs or 9% of its total RGUs. BB accounted for 17% of total revenues (excluding activation income) in FY17. Monthly ARPU was INR 387 in FY17 (steady YoY), but exit-quarter (4QFY17) realised ARPU was much lower at INR 321, impacted by the free 4G service of Reliance Jio, which has driven higher churn, inactivity and down-trading among existing users.

Ortel provides broadband in the major cities of Odisha, and also in Raipur, Bhilai, Vizag etc. in its emerging markets. Core Odisha market accounted for 70-75% of total BB RGUs as of end-FY17

Exhibit 120. Ortel—profile of broadband business

Fiscal-year end March

	FY15	FY16	FY17
BB homes passed ('000)	406	597	650
BB HP penetration (%)	14	12	11
EOP BB RGUs ('000)	59	72	73
BB RGUs added ('000)	4	14	1
BB ARPU (INR/month)	398	386	387
BB ARPU [exit quarter] (INR/month)	397	394	321

Source: Company, JM Financial.

Ortel has deployed both DOCSIS 2.0 and 3.0 technologies to provide BB over its Hybrid Fiber Coaxial or HFC network. HFC network has optical fiber in backbone and co-axial cable in downstream network including the last mile. In smaller locations, Ortel has also deployed Ethernet over Cable (EoC). While DOCSIS 2.0 and EOC can provide speeds of 2-10 Mbps, DOCSIS 3.0 can provide over 50 Mbps speed. Ortel has also completed a few GPON (FTTH) pilots recently, and has plans to deploy it selectively in high value areas.

State-owned BSNL is Ortel's key competitor in BB, especially in Odisha. Outside Odisha, Ortel faces competition mainly from BSNL, Airtel and ACT. In our view, Ortel has the opportunity to gain market share from BSNL, given its superior product (data speeds) and customer service, as well as affordable pricing. BSNL's broadband product has speed limitations—2 to 16 Mbps in ADSL and 8-24 Mbps in VDSL, and therefore cannot compete effectively with DOCSIS 3.0.

Exhibit 121. Ortel—broadband packages

DOCSIS 2.0 [entire Odisha]	Rental [a] (INR)	Speed (Mbps)	Data [b] (GB)	Rate (INR/GB)	Comments
Entry level	299	1	10	30	Overage is INR 0.30 per MB for D/L
Mid-range	499	2	40	12	Overage is INR 0.20 per MB for D/L
Higher end	999	5	80	12	Post FUP D/L speed is 1 Mbps
DOCSIS 3.0 (city of Bhubaneswar)					
Entry level	1,099	10	50	22	Post FUP D/L speed is 1 Mbps
Mid range	1,399	20	70	20	Post FUP D/L speed is 1 Mbps
Higher end	1,799	50	100	18	Post FUP D/L speed is 2 Mbps
Highest	2,199	100	200	11	Post FUP D/L speed is 2 Mbps

Source: Company. Notes: [a] Monthly rental is inclusive of taxes. [b] Data allowance pertains to download or D/L. No limit on data upload.

Ortel also offers bundled plans, charging an additional monthly rental of INR 100-200 for cable TV (depending on whether value pack or premium pack) on top of the price of a pure broadband package.

Ortel is the first MSO in Odisha to offer 50 Mbps broadband speed using DOCSIS 3.0 technology

Last mile ownership supports BB viability despite low ARPUs

Thanks to last mile ownership, Ortel enjoy synergies (economics of scope) between video and BB businesses. Apart from shared/common network operating costs and overheads, incremental capex per subscriber is also lower (subject to minimum home-pass penetration) for a blended video + BB network, compared to a BB-only or pure BB network rollout. In fact, capex for rolling out pure BB network can be prohibitive in Odisha, as dwelling units are fairly spread out, and there are fewer multiple-storey residential buildings and multiple dwelling units [MDUs].

To deploy broadband over its existing cable network, Ortel enables a reverse path that allows for two-way communication. In specific terms, Ortel incurs an incremental capex of INR 800 per home passed (for the reverse-path), and not the typical INR 1600 per HP, since the forward-path is already deployed for the purpose of cable TV. We highlight that MSOs without LM control of video network, are forced to deploy a separate LM network (with both forward and reverse paths) for providing BB. Apart from incurring higher capex/sub in BB, the B2B MSOs also end up sharing 10-15% of their BB ARPU with the LCOs, to ensure security of their network, and to compensate them for other services such as network maintenance.

We estimate that at 20% HP penetration (BB subs divided-by homes passed), Ortel's incremental capex per subscriber in DOCSIS 3.0 would be 40% lower compared with a BB-only network deployment. Approximately 50% of Ortel's BB subs are also video subs.

Exhibit 122. Incremental capex per sub for DOCSIS 3.0 deployment (INR)

Incremental capex per sub for DOCSIS 3.0 (INR)

	Pure BB	Blended [a]
Cost per home passed	1,600	800
HP penetration (%)	20.0	20.0
HP cost per sub	8,000	4,000
Drop cable	300	0
Backend capex	300	300
STB subsidy (net of activation)	1,800	1,800
Total capex per sub	**10,400**	**6,100**

Source: Company, JM Financial. [a] Incremental capex when DOCSIS 3.0 is deployed over an existing video network.

A lower capex per subscriber allows BB to be profitable for Ortel, even at lower ARPUs of around INR 400/month.

Exhibit 123. Ortel--incremental broadband economics on existing last mile network

Incremental BB economics for Ortel

INR/sub/month

BB ARPU (net of taxes)	**400**
Opex	
Bandwidth, lease lines	100
Network O&M	32
Employee + SG&A	108
Operating cost	**240**
EBITDA	**160**
EBITDA margin (%)	**40.0**
Annual financials	
EBITDA	**1,920**
D&A	655
EBIT	**1,265**
RoIC (%)	**13.6**
Payback period (years)	3.2
Capex per sub	**6,100**
STB subsidy (net of activation)	1,800
Network capex	4,300
Avg, depn rate (%)	**10.7**

Source: Company, JM Financial.

M&A potential given Odisha leadership and LM ownership

Ortel can be an attractive M&A target for well-capitalised MSOs looking to enter or expand into Odisha and the adjoining cable markets, and also for telcos, given the company's dual-play video/BB model with LM ownership. Telcos have entered pay TV market through DTH (Airtel, Reliance Comm), and have stayed away from cable, primarily owing to the absence of LM control. We think large telcos such as Airtel or Reliance Jio or Vodafone/Idea, may find Ortel an attractive asset. A combination or partnership with telcos should also work well for Ortel and its sponsors in our view, because it would ensure sustained commitment to Ortel's pioneering B2C business model.

Curtailing inorganic growth or fine-tuning the acquisition model appears sensible

Over the past few years, Ortel has relied heavily on acquiring LCOs to drive RGU growth, both in Odisha and in its new/emerging markets. We believe Ortel's current model of inorganic growth (video blended with BB) will barely yield cost-of-capital returns over medium-term, and therefore the company needs to pursue more organic growth in our view, till such a time it is able to align its LCO-acquisition model with the prevailing low-ARPU environment. As discussed earlier, organic growth (in existing areas) has a short gestation and is value-accretive, but it results in lower growth rates, given limited opportunities to add new subscribers.

The LCO acquisition model

Ortel typically acquires MSOs (ICOs/ISOs) together with a bunch of LCOs, and in some cases it also acquires standalone LCOs. The ISOs typically provide signals to other LCOs in a small city or a town, and may own some primary points as well. Majority of the cable RGUs added by Ortel over the last two years have come through LCO acquisitions.

Ortel signs two agreements in the acquisition deal:

1. **Buyout or asset acquisition agreement:** This is for acquiring assets, customers, and goodwill. Historically, the cost was INR 1200/sub, but in recent years it has come down to INR 1000 (e.g. in the emerging markets). Within Odisha, the buyout price has come down to INR 800, according to the company.

2. **Commission or NCF agreement:** This is for paying a revenue share to selling LCO for a period of five years (60 months)—a form of no-compete fee [NCF]. The agreed NCF payment is at 30% of collections (not billing or ARPU) for analog customers and 25% for digital customers. Thus, NCF is not paid on the bad debts; this combined with churn in inorganic subs have resulted in an actual/effective NCF rate of just-under 20% of inorganic revenues (or ARPU). Further, Ortel management has indicated that majority of the NCF agreements (60-70%) have been renewed after completion of the first 5-year cycle; nonetheless, the renewal period is maximum 1-2 years, and the typical NCF rate for the second cycle is 15% of actual collections. Ortel accounts for the NCF payment below the EBITDA line, but the renewal payments are charged above the EBITDA line, as LCO commissions (within SG&A expense).

Despite paying an upfront buyout fee of INR 1000/sub to the LCO for network and assets, Ortel typically builds-out a fresh last mile network, which is more optimally designed, and also reverse-path enabled (for 50% of cable homes passed). Another reason for dismantling bulk of the existing LCO network is to ensure the LCO gets totally 'disconnected' with the asset, and does not tinker with it in the future.

The major infirmities in Ortel's LCO acquisition model are:

1. A rather high buyout fee (INR 1000/sub) in the context of: (a) lower video ARPUs prevailing in Ortel's markets; (b) fresh LM build-out capex incurred by Ortel
2. High revenue share or NCF at the rate of 25-30% of collections for five years
3. NCF renewal after the end of the first cycle of 5 years

Additional challenges to pursuing inorganic growth are Ortel's smaller balance sheet (limited collateral for banks), negative annual FCF, somewhat high leverage ratio (net debt-to-EBITDA) and relatively low interest and debt servicing coverage ratios—these have historically resulted in a rather high cost of debt for Ortel (14-16%). Nonetheless, cost of debt has been coming down of late, and in any case, it drives a lower overall cost of capital given the tax shield on interest expenses.

What would make inorganic growth profitable?

We illustrate Ortel's profitability challenge under inorganic growth approach, based on analysis of 'pure video' economics. In scenario A—INR 150 cable ARPU, INR 1000 buyout fee, and an effective 20% revenue share, Ortel earns a paltry 2-3% RoIC.

To earn a cost of capital (say c.11%), we believe Ortel needs to:

1. Raise ARPU level to INR180/month or higher
2. Reduce NCF rate to 15% of collections
3. Reduce one time upfront buyout fee by 20% to INR 800/sub

This is depicted in Scenario B in the Exhibit below.

Exhibit 124. Unit economics for a B2C (primary) video business

INR/sub/month

	B2C LCO	+	B2B MSO	=	B2C MSO [Ortel]		Scenario A Inorganic	Scenario B Inorganic
Video subscription ARPU	150		60		150		150	180
C&P			20		20		20	20
Other ARPU (ad revs, infra leasing)			10		10		10	10
Total video ARPU	**150**		**90**		**180**		**180**	**210**
Opex								
Content cost [a]	(60)		(44)		(50)		(50)	(50)
Other opex [b]	(30)		(29)		(70)		(70)	(70)
NCF paid to LCO							(30)	(27)
Total opex	**(90)**		**(73)**		**(120)**		**(150)**	**(147)**
EBITDA	**60**		**17**		**60**		**30**	**63**
EBITDA margin (%)	**40**		**19**		**33**		**17**	**30**
Annual financials								
EBITDA	**720**		**206**		**722**		**362**	**758**
Depreciation	(98)		(72)		(170)		(240)	(226)
EBIT	**622**		**134**		**552**		**122**	**532**
RoIC (%)	**24.9**		**11.0**		**14.8**		**2.3**	**10.8**
Payback period (years)	2.3		3.9		3.4		9.5	4.3
Capex per sub [c]	**1,633**		**800**		**2,433**		**3,433**	**3,233**
Average depn rate (%)	6.0		9.0		7.0		7.0	7.0

Source: Companies, JM Financial. Notes: [a] Assuming LCO passes on 40% of ARPU to a B2B MSO. We also assume a B2C MSO will incur higher content cost than a B2B MSO. [b] Assuming a B2C MSO is less efficient on opex than an entrepreneurial, mom-and-pop LCO. [c] LCO capex is based on assumption of 60% home pass penetration. MSO capex assumes net STB subsidy of INR 600/sub.

However, raising cable ARPUs to the INR 180 level would be very challenging in our view. Therefore, a more feasible approach could be to blend more organic growth (say 50% share of incremental RGUs), improve home-pass penetration to 65% (from 61% currently), and drive tighter cost control (EBITDA margins of 35-40%). This strategy can yield breakeven profitability (11-12% ROIC) even at prevailing cable ARPUs of INR 140-150.

As our analysis of unit-economics of a blended video + BB model below shows, LCO-acquisition model (accounting for >90% share of incremental RGUs recently) is unprofitable on current parameters (ARPUs, NCF rate, buyout fee, HP penetration etc.), and therefore requires a different blending ratio (i.e. inorganic/organic mix) and higher operational efficiency.

Exhibit 125. Ortel—unit economics of a blended video and broadband B2C business

INR per RGU

	Current	Break-even
Capex per Home Passed	1,200	1,200
CATV only	800	800
CATV + BB	1,600	1,600
Share of BB in total HPs (%)	50	50
RGU penetration rate (%)	61	65
Blended capex per RGU [A]	1,967	1,846
Drop cable capex per RGU [B]	300	300
CPE capex	1,324	1,325
CATV	1,250	1,250
BB	2,000	2,000
Activation fee per RGU		
CATV	600	600
BB	1,000	800
Net CPE investment per RGU [C]	684	705
CATV	650	650
BB	1,000	1,200
Share of BB in incremental RGU (%)	9.8	10.0
Back-end capex per RGU [D]	300	300
Organic capex per RGU (net) [A+B+C+D]	3,252	3,151
Acquisition cost per RGU	1,200	1,000
Share of inorganic RGUs (%)	90	50
Blended capex per RGU [E]	4,332	3,651
Gross capex per RGU (w/o activation income)	4,971	4,271

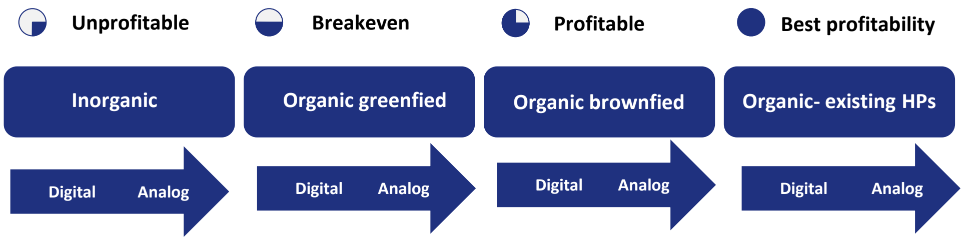
	INR per RGU	INR per RGU
Blended Video + BB ARPU	178	190
Video ARPU	140	150
BB ARPU	390	400
Other ARPU (C&P, Infra leasing)	42	30
Revenue per RGU	220	220
Annualised financials		
Annual revenue per RGU	2,644	2,640
EBITDA margin (%)	25	40
Annual EBITDA per RGU	661	1,056
NCF paid to LCO in Video (%)	20	20
Non-compete fee [NCF] paid to LCO	302	180
Effective annual EBITDA	359	876
Blended capex per RGU [E above]	4,332	3,651
EBITDA payback (x)	12.1	4.2
EBITDA-to-capex (%)	8.3	24.0
D&A expense-to-IC (%)	7.0	6.5
Pre-tax ROIC (%)	1.3	17.5
ROIC (%)	1.0	11.4

Source: Company, JM Financial.

Clearly, with digitisation (in Phase IV) likely to get largely over by end-FY18, future inorganic opportunities would necessitate replacing the existing STBs of acquired customers, i.e. box swapping. This would raise the overall cost of acquisitions (loss of activation income + promotional ARPU discounting) and further weaken the already poor inorganic economics, in our view.

In fact, even to organically add existing digital RGUs (churn from other MSOs or DTH operators), Ortel uses sweeteners in the form of small-to-zero activation fees and/or discounted ARPUs during the initial promotional period. Yet, such organic RGU additions are value accretive in our view, as long as they happen in existing catchment areas (with or without new home passes).

Exhibit 126. Direct to consumer MSO business models—profitability spectrum



Source: Companies, JM Financial.

Exhibit 127. Ortel—key metrics

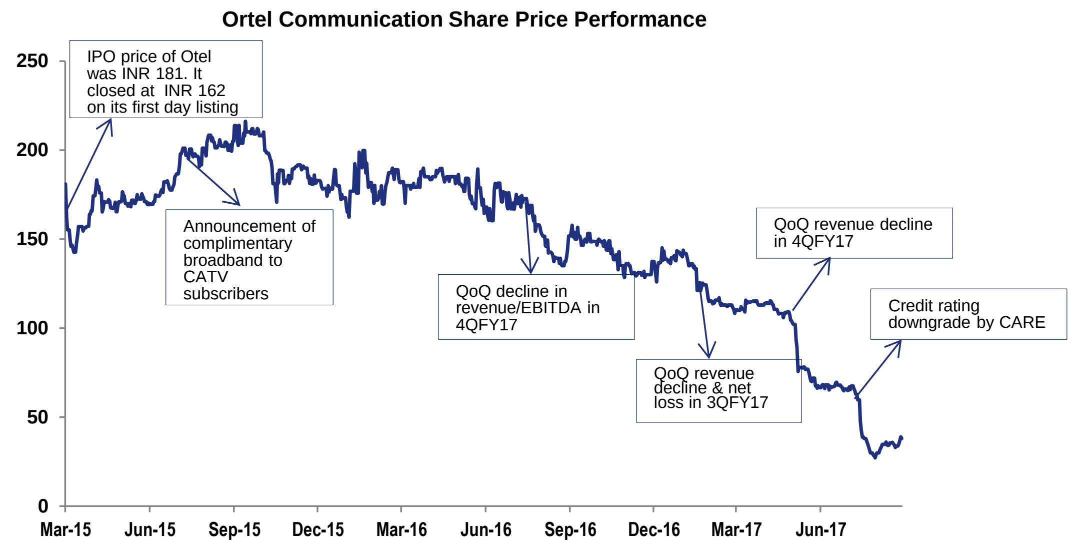
	FY13	FY14	FY15	FY16	FY17
Cable homes passed ('000)	802	805	810	1,182	1,354
Broadband homes passed ('000)	401	403	406	597	650
Total subscribers or RGUs ('000)	486	516	530	701	824
RGU penetration in homes passed (%)	61	64	65	59	61
Share of cable in RGU mix (%)	90	89	89	90	91
Net RGU addition ('000)		30	14	171	122
Cable RGUs added ('000)		26	10	157	122
BB RGUs added ('000)		4	4	14	1
Share of BB in RGUs added (%)		13	29	8	0
Adj. revenue per RGU (INR/month)	204	209	239	239	206
Video segment					
Cable subs or RGUs ('000)	436	461	472	629	750
Cable home pass penetration (%)	54	57	58	53	55
Share of Primary HHs (%)	89	88	87	91	89.5
Share of DAS HHs (%)	16	15	23	37	60
Primary ARPU (INR/month)	140	153	154	140	148
Effective subscription ARPU (INR/month)	131	141	141	131	140
ARPU growth (%)		8	0	(7)	7
Overall video ARPU (INR/month)	181	185	219	222	186
Broadband segment					
Broadband subs or RGUs ('000)	51	54	59	72	73
BB penetration in homes passed (%)	12.6	13.5	14.4	12.2	11.2
Effective BB ARPU (INR/month)	398	409	398	386	387
Change in BB ARPU (%)		3	(3)	(3)	0
Revenue growth (%)					
Video subscription	4	12	4	10	34
C&P income	(9)	(1)	29	35	(17)
Broadband subscription	(0)	5	5	12	11
Others metrics					
C&P revenue (INR/sub/month)	40	38	47	54	36
Pay channel (INR/sub/month)	60	59	61	57	46
Content cost-to-subscription rev (%)	46	42	43	43	33
EBITDA margin (%)	29	29	34	33	25
Adj. margin [ex-activation/NCF] (%)	22	22	28	27	18
Capex-to-revenue (%)	7	11	30	74	37

Source: Company, JM Financial.

Ortel's stock price has declined more than 80% since July 2016, led by sharp cuts in earnings and in the company's medium-term growth outlook. Recent (July 2017) downgrade in credit rating by CARE has fuelled debt-rollover concerns that have further pressured the stock to a level, where Ortel's market-cap is now below the net debt on its balance sheet.

Ortel raised INR 1.09bn equity in an IPO in Mar-15; the total issue size was INR 1.75bn including INR 0.66bn of secondary share offering. The issue price was INR 181, and the stock peaked at INR 221 in Oct-15, before starting its downward journey driven by a host of factors.

Exhibit 128. Ortel—share price history with key events



Source: JM Financial, Bloomberg.

Financials—FY17 was a bad year

Confluence of factors led to EBITDA decline

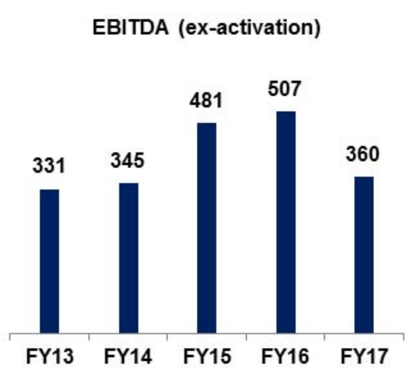
Ortel's adjusted EBITDA (ex-activation fee) fell 29% YoY or c.INR 150mn in FY17, despite 34% growth in video subscription revenues and 11% growth in BB revenues. The EBITDA decline was driven by the following factors:

1. Collapse in the high-margin infrastructure leasing or IL income by 74% YoY or by c.INR 160mn compared with FY16 levels. IL is a B2B business (telcos are main customers), and therefore inherently volatile and lumpy
2. Decline in C&P income by 17% YoY or by INR 60mn, driven by:
    a. Regional Odisha channels going through a shakeout phase
    b. Some leading Hindi GEC broadcasters have stopped paying or have cut back drastically on the placement fees
3. Increase in bad debt expense by c.INR 80mn YoY to INR 249mn in FY17, which is 12.2% of headline revenues, and 13.2% of adjusted revenues
4. Increase in bandwidth charges by 130% or INR 86mn. Bandwidth charges are for inter-city leased lines and for internet connectivity

Further, while BB revenues were up 11% YoY on a full-year basis, the exit-quarter i.e. 4QFY17 BB revenues were 26% lower than 2Q revenues, on account of severe impact of the free 4G service by Reliance Jio. Ortel management has indicated that demonetisation of older high-value currency notes did not have a major impact on the business in 2HFY17. Management also indicated there have been some delays in the integration and monetisation of video subs, acquired recently through LCO-buyouts in the states of AP and Telengana.

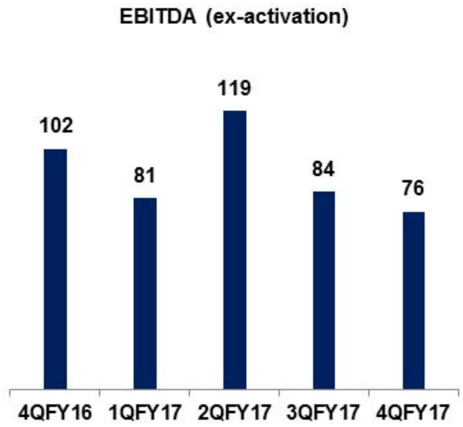
We believe Ortel needs to improve its execution, especially w.r.t. cable TV collections, to reduce receivable-days (nearly doubled in FY17 to 115) and bad debts. In the immediate short term, Ortel needs to tie up refinancing/funding to meet debt repayments and to alleviate debt-rollover concerns.

Exhibit 129. Ortel—adjusted EBITDA (INR mn)



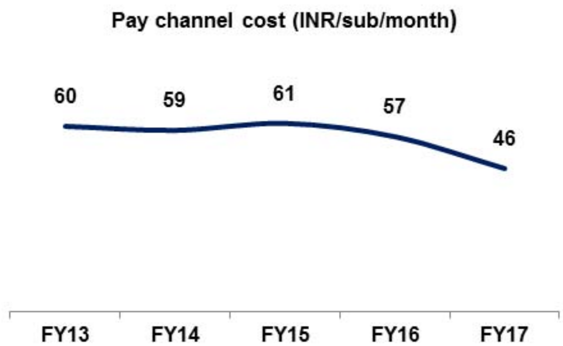
Source: Company, JM Financial.

Exhibit 130. Ortel—quarterly EBITDA [adjusted] (INR mn)



Source: Company, JM Financial.

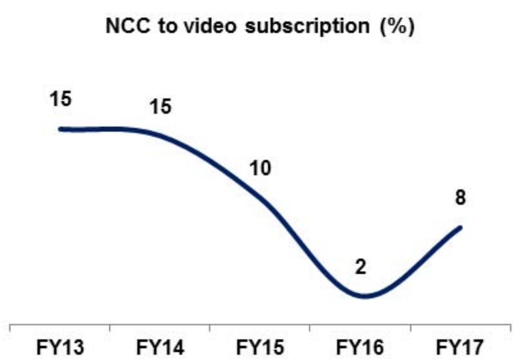
Exhibit 131. Ortel—pay channel cost per subscriber



Source: Company, JM Financial.

Ortel saw PC cost/sub decline to c.INR 46 in FY17 from INR 61 in FY15, thanks to a shift to RIO deals and benefit of lower cost contracts acquired through LCO-buyouts.

Exhibit 132. Ortel—net content cost as a % of video subscription revenue



Source: Company, JM Financial.

Exhibit 133. Ortel—profit & loss statement

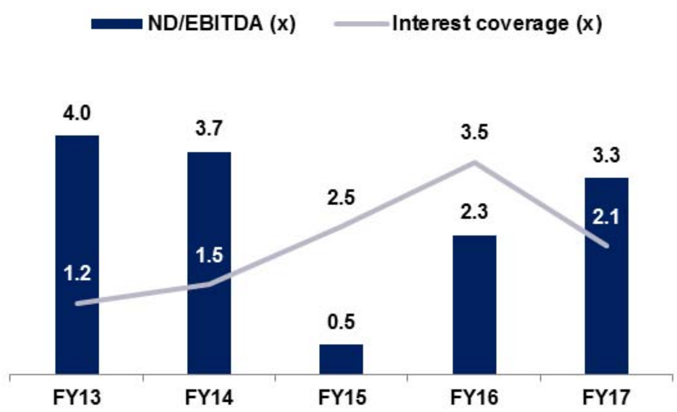
FY ending March, INR mn	FY13	FY14	FY15	FY16	FY17	CAGR (%) FY13-17
CATV subscription	674	757	790	866	1,162	**20**
Carriage & Placement	207	205	264	356	296	**13**
Broadband subscription	246	258	270	303	338	**11**
Activation	20	29	51	109	153	**97**
Other revenues (incl. leasing & uplinking)	51	37	174	243	85	**19**
Revenues	**1,198**	**1,285**	**1,548**	**1,877**	**2,034**	**19**
Revenue (ex-activation)	**1,178**	**1,256**	**1,497**	**1,767**	**1,881**	**17**
Pay channel cost	(310)	(317)	(342)	(375)	(384)	7
Other opex	(59)	(61)	(67)	(83)	(170)	43
SG&A	(307)	(391)	(440)	(577)	(721)	33
Employee costs	(171)	(142)	(167)	(225)	(246)	13
Total operating costs	**(847)**	**(911)**	**(1,016)**	**(1,260)**	**(1,521)**	**22**
EBITDA	**351**	**374**	**532**	**617**	**513**	**13**
EBITDA margin (%)	29	29	34	33	25	
EBITDA (ex-activation)	**331**	**345**	**481**	**507**	**360**	**3**
Non compete fee payout	(76)	(67)	(59)	(35)	(28)	(28)
D&A	(187)	(138)	(136)	(150)	(212)	4
Fixed asset write-off	(105)	(72)	(105)	(132)	(44)	(25)
EBIT	**(18)**	**97**	**232**	**300**	**228**	
Other income	17	36	53	21	26	16
Finance income	3	5	10	65	13	56
Finance cost	(249)	(234)	(225)	(236)	(252)	0
PBT	**(247)**	**(96)**	**71**	**150**	**14**	
Current Tax	0	0	(15)	(31)	0	
Deferred Tax	0	0	0	0	0	
Exceptional & prior period items	0	(42)	0	0	0	
Reported PAT	**(247)**	**(138)**	**56**	**119**	**14**	
Shares outstanding (mn)	23	23	30	30.4	30.4	
EPS (INR)	(11)	(4)	2	3.9	0.5	
Growth rates (%)						
Revenue	0	7	20	21	8	
EBITDA	(2)	7	42	16	(17)	
Revenue (ex-activation)	**1**	**7**	**19**	**18**	**6**	
EBITDA (ex-activation)	**0**	**4**	**40**	**5**	**(29)**	
EBIT	(123)	(637)	139	29	(24)	
Net profit	38	(61)	(158)	113	(88)	
Cost-to-revenue ratio (%)						
Pay channel cost	26	25	22	20	19	
Other opex	5	5	4	4	8	
SG&A	26	30	28	31	35	
Employee costs	14	11	11	12	12	
Margins (%)						
EBITDA margin	**29**	**29**	**34**	**33**	**25**	
EBITDA (ex-activation)	**28**	**27**	**32**	**29**	**19**	
EBIT	(2)	8	15	16	11	
PBT	(21)	(7)	5	8	1	
Net profits	**(21)**	**(7)**	**4**	**6**	**1**	
Effective tax rate (%)	**NM**	**NM**	**21**	**20**	**21**	

Source: Company, JM Financial.

Financial leverage is not excessive…

Ortel's financial leverage (ND/EBITDA ratio) has increased from a low of 0.5x (immediately after its IPO in Mar-15) to 3.3x as of Mar-17 (exit quarter was 4.1x). Ortel's interest coverage ratio declined to 2.1x in FY17 (1.9x in exit-quarter) from 3.5x YoY. Its average cost of debt has come down materially from a peak of c.17% in FY12, but still remains rather high at 14.5% in FY17.

Exhibit 134. Ortel—financial leverage and interest coverage ratios

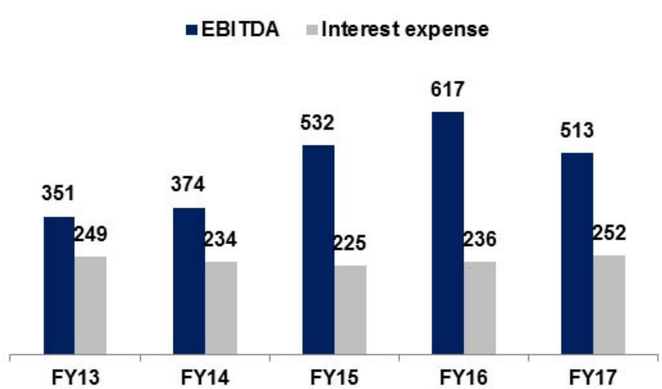


Source: Company, JM Financial.

…but cash generation is lagging debt-servicing requirements

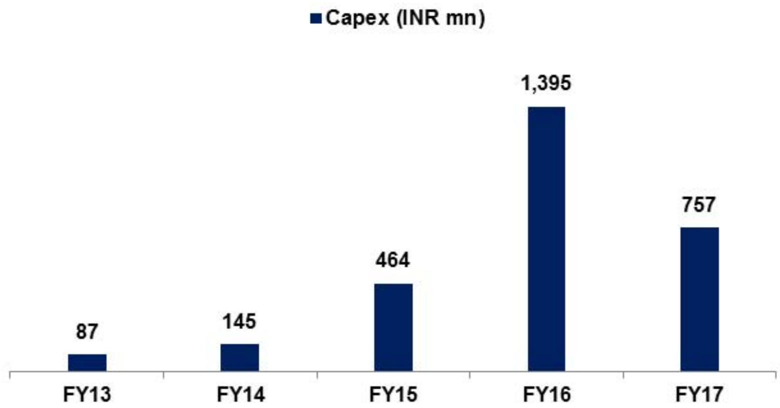
While a ND/EBITDA of 4x per-se is not alarming for a cable TV business (given annuity-type subscription revenues), Ortel's near-term woes stem from increasing debt repayments are compounded by a decline in cash generation—EBITDA was down in FY17, interest expense was up, capex was more than EBITDA, and receivables doubled yoy. Further, a portion of FY17 capex was financed by vendor credit, which being short-term in nature, may have to be paid back using fresh loans/borrowings.

Exhibit 135. Ortel—EBITDA has been sufficient to service the interest expense



Source: Company, JM Financial.

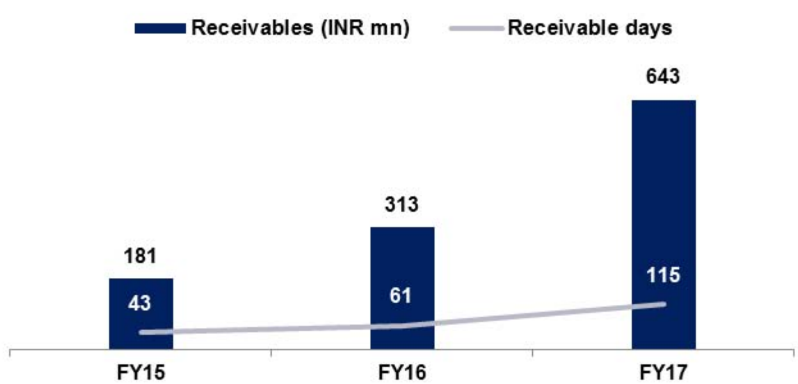
Exhibit 136. Ortel—capex declined in FY17



Source: Company, JM Financial.

Ortel's FY17 EBITDA of INR 513mn would have been enough to pay the interest expense (INR 252mn), but for the INR 330mn YoY surge in the receivables. Even assuming the level of receivables would remain stable, the INR 100mn EBITDA in exit-quarter (4Q) was only good enough to pay for interest expense (INR 62mn) and maintenance capex, but not debt repayment. According to the management, Ortel's repayments of outstanding debt (total INR 1.75bn in Mar-17) are bunched up in FY18 and FY19 (around INR 500mn p.a.), and given the lack of surplus cash flow and liquidity, Ortel is heavily dependent on refinancing and/or rollover of debt.

Exhibit 137. Ortel—receivables and DSO doubled in FY17



Source: Company, JM Financial.

Rating downgrade—fresh funding is critical to address debt rollover concerns

On 27Jul'17, rating agency (CARE) downgraded Ortel's long-term (INR 400mn) and short-term (INR 200mn) bank facilities to D, which means the instruments are in default, or expected to be in default. Ortel has been delaying some of the repayments by up to 60 days, due to decline in cash generation in FY17. Nonetheless, the downgrade by the rating agency could be deemed harsh.

According to Ortel's stock exchange filing, of the INR 1.76bn outstanding debt as of Jun-17, only about of INR 710mn is rated, of which INR 200mn is short-term working capital overdraft, which doesn't have a repayment date. Thus, only INR 510mn is 'rated' bank debt, and the rating downgrade makes it difficult to rollover approximately INR 200mn of principal repayment due in FY18. According to management, all other repayments (especially NBFC debt) can be rolled over without much of a difficulty.

Exhibit 138. Ortel—balance sheet

Year-end Mar, INR mn

	FY13	FY14	FY15	FY16	FY17
Equity					
Share capital	233	233	304	304	304
Reserves & surplus	(30)	(167)	967	1,091	948
Total equity	254	205	1,271	1,395	1,252
Total debt	1,437	1,437	1,448	1,719	1,747
Total capital	1,691	1,642	2,719	3,114	2,999
Assets					
Cash & cash equivalents	45	55	1,184	290	75
Inventories	1	1	5	130	6
Trade Receivables	136	178	181	313	643
Other Current assets	139	144	198	487	391
Total Current assets (ex-cash)	276	323	384	930	1,041
Current liabilities and provisions	787	756	1,022	1,389	2,056
Net Current Assets (ex-cash)	(511)	(432)	(638)	(459)	(1,015)
Net fixed assets	2,153	2,017	2,169	3,280	3,935
Long term investments	3	3	3	3	3
Total assets	1,691	1,642	2,719	3,114	2,999
Gearing and profitability ratios (%)					
Net debt/(cash)	1,392	1,382	263	1,430	1,672
Debt/Equity	566	699	114	123	140
Net-debt/Equity	548	673	21	103	134
Net-debt/capital	85	87	17	51	57
Net-debt/EBITDA (x)	4.0	3.7	0.5	2.3	3.3
RoE	(97)	(47)	4	9	1
RoAE	(66)	(42)	8	9	1
RoACE	(0)	8	10	9	7
RoAIC	(0)	8	14	12	7

Source: Company, JM Financial.

Exhibit 139. Ortel—cash flow statement

Year-end Mar, INR mn

	FY13	FY14	FY15	FY16	FY17
Profit before tax	**(247)**	**(113)**	**71**	**150**	**14**
Depreciation & amortisation	187	138	136	150	212
Fixed Assets written off	105	72	105	132	44
Payment of Non-Compete Fee to LCOs	82	67	59	44	28
Interest Income	(3)	(5)	(10)	(65)	(13)
Interest expense	249	234	226	236	252
Interest paid	(224)	(253)	(217)	(227)	(252)
Other non-cash items	75	93	146	156	61
Taxes paid	(10)	(12)	(20)	(46)	0
Working capital changes	78	6	(50)	(436)	184
CF from operations	**292**	**228**	**446**	**94**	**531**
Purchase of Fixed assets	(89)	(139)	(329)	(1,230)	(757)
Payment of No Compete Fee to LCOs	(82)	(67)	(59)	(44)	(28)
Other investments, JV, minorities	66	(106)	42	(43)	0
Interest/dividend received	4	6	3	57	13
CF from investments	**(100)**	**(306)**	**(342)**	**(1,260)**	**(773)**
Net proceeds from issue of equity	(13)	87	1,015	0	0
Net proceeds from borrowings	(184)	(0)	11	272	28
CF from financing	**(197)**	**87**	**1,026**	**272**	**28**
Net change in cash balance	**(5)**	**9**	**1,130**	**(895)**	**(214)**
Opening Cash	50	45	55	1,184	290
Closing cash balance	**45**	**55**	**1,184**	**290**	**75**

Source: Company, JM Financial.

Ortel—company profile

Ortel Communications Ltd. is a regional cable television service provider, offering analogue and digital cable television services, broadband services, leasing of fibre infrastructure, signal uplinking services and other value added services (video on demand, electronic program guide, gaming, local content, etc.). It has a significant presence in the states of Odisha, Chhattisgarh, Andhra Pradesh and West Bengal and has forayed into newer geographies, such as Madhya Pradesh and Telangana. Ortel is the dominant CATV service provider in Odisha with a nearly 50% share of cable TV subs in the state. Further, 65% of Ortel's total subscribers (revenue generating units) are in Odisha. Ortel has a direct-to-consumer business model, with full control over the 'last mile' connection—about 90% of its subscriber base is under its owned network. This enables the company to engage in direct billing and collections from subscribers.

Ortel provides cable services in 78 towns. As of Mar'17, the company had a cable TV subscriber base of 0.75 million, of which digital subscriber base was 0.45 million. Ortel owns and operates its cable network, which spans a length of 64,685 km including the last mile drop cable network.

Ortel also provides wired broadband service, and as of Mar'17, the company had 73,000 BB subs, with total BB home-passes of nearly 0.65mn. In FY17, Ortel's consol. operating revenue was INR 2.03bn, EBITDA was INR 0.51bn (excl. other income) and reported PAT was INR 14.3mn, based on IND AS accounts. The revenue breakdown was: CATV subscription [57%], Carriage & Placement [c.14%], Activation [c.8%], Broadband [c.17%] and lease & uplinking revs [4%]. In FY16, operating revenue, EBITDA and reported PAT were, INR 1.88bn, INR 0.62bn and INR 119mn, respectively, based on I-GAAP accounts.

Promoters and Management

Mr. Baijayant Panda is the company's Chairman and Co-founder. He has extensive experience in media, operations, strategic and financial planning, capital structuring, mergers and acquisitions. He is a Member of Parliament in the Lower House (Lok Sabha), elected from Odisha. Ms. Jagi Mangat Panda is the company's Managing Director. She has more than 19 years of experience in the media and broadcasting industry.

Mr. Bibhu Prasad Rath is the President & CEO of Ortel Communications. He has been with the company since 1999. He is involved in strategic decision making and planning.

Exhibit 140. Ortel—shareholding pattern (as on Jun'17)

	mn shares	(%)
Promoter Group	15.8	51.8
New Silk Route [PE]	4.6	15.1
Body Corporates	4.0	13.2
FIIs	3.6	11.7
Individuals, Others	2.0	6.5
DIIs	0.5	1.8
Total	**30.5**	**100.0**
Free float (%)	**14.7**	**48.2**

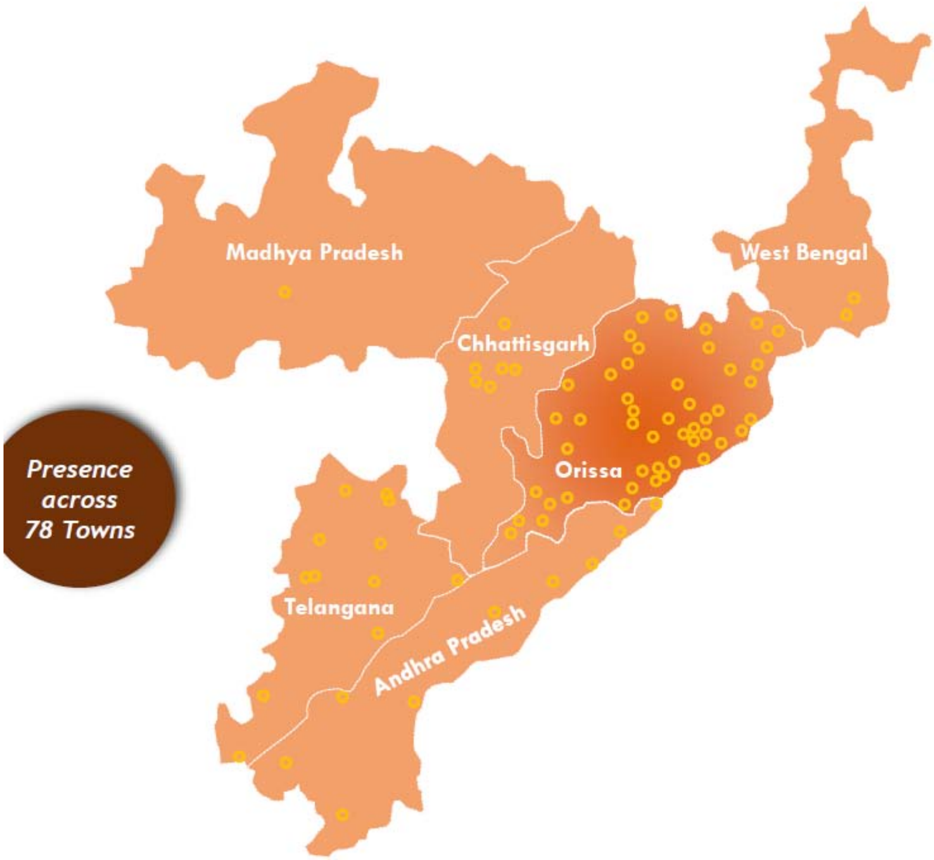
Source: Company, JM Financial.

Exhibit 141. Ortel—company history and major milestones

- 1995: Incorporation of Ortel, Cable business started in Odisha
- 1998: Obtained ISP license
- 1999: Investment of INR 85mn by South Asia Regional Fund
- 2004: ISO 9001:2000 achieved
- 2006: Legal right of way granted in Chhattisgarh
- 2007:Legal right of way granted in West Bengal and Andhra Pradesh; Commencement of provision of digital services
- 2008: Investment of INR 600mn by NSR (PE fund); Services launched outside Odisha in WB, AP and Chhattisgarh
- 2010: Pilot project of internet telephony launched
- 2014: Crossed 500,000 RGUs
- 2015: Publicly listed as Ortel Communications Limited

Source: Company, JM Financial.

Exhibit 142. Ortel- key areas of presence (map not to scale)



Source: Company.

Exhibit 143. Ortel—profile of key management personnel

Management Team		
Name	Designation	Profile
Mr. Bibhu Prasad Rath	President & CEO	•Has been with Ortel since 1999 •Holds a bachelor's degree in science from Utkal University & has studied at an executive management program from IIM Ahmedabad •He is a qualified cost and works accountant from ICWAI •Has previously worked at Indian Metals & Ferro Alloys Limited
Col. Man Mohan Pattnaik	CTO	•Has been with Ortel since 2001 •Holds a bachelor's degree in electronics and telecommunications and a master's degree in computer science •Has served in the Indian Army for 30 years and retired as a colonel
Mr. Chitta Ranjan Nayak	Executive Vice President (Operations)	•Has been with the company since 2004 •Holds a bachelor's degree in engineering and a post graduate diploma in management
Mr. Bibhu Prasad Mohapatra	VP (Corporate Affairs)	•Has been with the company since 2009 •Holds a bachelor's degree in law, a master's degree in commerce and a master's degree in business administration
Mr. Satyanarayan Jena	CFO	•Was appointed CFO on 5th September, 2017 •Has been with the company since 2015 •He is a fellow member of the Institute of Chartered Accountants of India
Mr. Dhananjaya Sarangi	Sr. GM (IT)	•Has been with Ortel since December 2015 •He is the former COO of Esquare Systems & Technology Pvt Ltd •Holds a master's degree in computer applications from NIT Rourkela

Source: Company, JM Financial.

Exhibit 144. Glossary of abbreviations used in the report

AGR	Adjusted Gross Revenue
ARPU	Average revenue per user
ATP	Average Ticket Price [cinema ticket]
B2B	Business to Business
B2C	Business to Consumer
BARC	Broadcast Audience Research Council
BB	Broadband
BC	Broadcaster
BST	Basic Service Tier or bouquet; comprises 100 FTA channels, including 25 mandatory government-notified channels
C&P	Carriage and Placement fee
C&S	Cable and Satellite
CAF	Customer Application Form
CAS	Conditional Access System
CATV	Cable Television
CMP	Current Market Price (per share price)
CPS	Cost per Subscriber
DAS	Digital Addressable System
DD	Doordarshan
DDT	Dividend Distribution Tax [currently 20.36%]
DoT	Department of Telecommunications
DPO	Distribution Platform Operator
DRP	Distributor Retail Price [of a pay channel or bouquet]
DTH	Direct-to-Home
EoC	Ethernet over Coaxial [or Cable]
EOP	End of Period
EPG	Electronic Programme Guide
FCF	Free Cash Flow
FICCI	Federation of Indian Chambers of Commerce & Industry
FTA	Free-to-Air TV
FTTX	Fiber-to-the-X, which refers to broadband network architecture that used optical fibre to provide last mile high-speed internet communication
FUP	Free Usage Period (data allowance before throttling of speed)
GCI	Gross Capital Investment
GDP	Gross Domestic Product
GEC	General Entertainment Channel
GPON	Gigabit Passive Optical Networks
GST	Goods and Services Tax
HD	High Definition
HH	Household
HITS	Headend-in-the-Sky
HSM	Hindi Speaking Market
ICO	Independent Cable Operator
IMCL	IndusInd Media & Communications Ltd
IPTV	Internet Protocol TV
ISO	Independent Service Operator
ISP	Internet Service Provider
ITC	Input Tax Credit
LCN	Logical Channel Number
LCO	Local Cable Operator
LM	Last Mile
MIB	Ministry of Information and Broadcasting
MPA	Media Partners Asia
MRP	Maximum Retail Price [of a pay channel or bouquet]

MSO	Multiple System Operator in Cable TV [multiple head ends]
NCC	Net Content Cost
NCO	Non Content Opex
NCR	National Capital Region [Delhi, Gurgaon, NOIDA, Faridabad, Ghaziabad]
OLT	Optical Line Terminal
ONT	Optical Networking Terminal
ONU	Optical Networking Unit
OTT	Over The Top; refers to media content transmitted over the Internet
PC	Pay Channel
Primary ARPU	Retail ARPU collected by LCO from end-customers (excluding taxes)
P-I	Phase I [Four metro cities]
P-II	Phase II [38 cities with population of over 1mn]
P-III	Phase III [Remaining urban areas with population less than 1mn]
P-IV	Phase IV [All rural areas]
PPP	Purchasing Power Parity
RGU	Revenue Generating Unit [or subscriber, as reported by Ortel]
RoAE	Return on Average Equity
RoAIC	Return on Average Capital Invested
SGM	Subscription Gross Margin
Secondary ARPU	ARPU collected by MSO from LCO. Same as Monetisation.
SVOD	Subscription Video-On-Demand, delivered via open networks (i.e. OTT)
TDSAT	Telecom Dispute Settlement and Appellate Tribunal
TRAI	Telecom Regulatory Authority of India
VSS	Video Subscription Spread

Source: JM Financial.

APPENDIX I

JM Financial Institutional Securities Limited

Corporate Identity Number: U65192MH1995PLC092522
Member of BSE Ltd. and National Stock Exchange of India Ltd. and Metropolitan Stock Exchange of India Ltd.
SEBI Registration Nos.: BSE - INZ010012532, NSE - INZ230012536 and MSEI - INZ260012539, Research Analyst – INH000000610
Registered Office: 7th Floor, Cnergy, Appasaheb Marathe Marg, Prabhadevi, Mumbai 400 025, India.
Board: +9122 6630 3030 | Fax: +91 22 6630 3488 | Email: jmfinancial.research@jmfl.com | www.jmfl.com
Compliance Officer: Mr. Sunny Shah | Tel: +91 22 6630 3383 | Email: sunny.shah@jmfl.com

Definition of ratings	
Rating	Meaning
Buy	Total expected returns of more than 15%. Total expected return includes dividend yields.
Hold	Price expected to move in the range of 10% downside to 15% upside from the current market price.
Sell	Price expected to move downwards by more than 10%

Research Analyst(s) Certification

The Research Analyst(s), with respect to each issuer and its securities covered by them in this research report, certify that:

All of the views expressed in this research report accurately reflect his or her or their personal views about all of the issuers and their securities; and

No part of his or her or their compensation was, is, or will be directly or indirectly related to the specific recommendations or views expressed in this research report.

Important Disclosures

This research report has been prepared by JM Financial Institutional Securities Limited (JM Financial Institutional Securities) to provide information about the company(ies) and sector(s), if any, covered in the report and may be distributed by it and/or its associates solely for the purpose of information of the select recipient of this report. This report and/or any part thereof, may not be duplicated in any form and/or reproduced or redistributed without the prior written consent of JM Financial Institutional Securities. This report has been prepared independent of the companies covered herein.

JM Financial Institutional Securities is registered with the Securities and Exchange Board of India (SEBI) as a Research Analyst, Merchant Banker and a Stock Broker having trading memberships of the BSE Ltd. (BSE), National Stock Exchange of India Ltd. (NSE) and Metropolitan Stock Exchange of India Ltd. (MSEI). No material disciplinary action has been taken by SEBI against JM Financial Institutional Securities in the past two financial years which may impact the investment decision making of the investor.

JM Financial Institutional Securities provides a wide range of investment banking services to a diversified client base of corporates in the domestic and international markets. It also renders stock broking services primarily to institutional investors and provides the research services to its institutional clients/investors. JM Financial Institutional Securities and its associates are part of a multi-service, integrated investment banking, investment management, brokerage and financing group. JM Financial Institutional Securities and/or its associates might have provided or may provide services in respect of managing offerings of securities, corporate finance, investment banking, mergers & acquisitions, broking, financing or any other advisory services to the company(ies) covered herein. JM Financial Institutional Securities and/or its associates might have received during the past twelve months or may receive compensation from the company(ies) mentioned in this report for rendering any of the above services.

JM Financial Institutional Securities and/or its associates, their directors and employees may; (a) from time to time, have a long or short position in, and buy or sell the securities of the company(ies) mentioned herein or (b) be engaged in any other transaction involving such securities and earn brokerage or other compensation or act as a market maker in the financial instruments of the company(ies) covered under this report or (c) act as an advisor or lender/borrower to, or may have any financial interest in, such company(ies) or (d) considering the nature of business/activities that JM Financial Institutional Securities is engaged in, it may have potential conflict of interest at the time of publication of this report on the subject company(ies).

Neither JM Financial Institutional Securities nor its associates or the Research Analyst(s) named in this report or his/her relatives individually own one per cent or more securities of the company(ies) covered under this report, at the relevant date as specified in the SEBI (Research Analysts) Regulations, 2014.

The Research Analyst(s) principally responsible for the preparation of this research report and members of their household are prohibited from buying or selling debt or equity securities, including but not limited to any option, right, warrant, future, long or short position issued by company(ies) covered under this report. The Research Analyst(s) principally responsible for the preparation of this research report or their relatives (as defined under SEBI (Research Analysts) Regulations, 2014); (a) do not have any financial interest in the company(ies) covered under this report or (b) did not receive any compensation from the company(ies) covered under this report, or from any third party, in connection with this report or (c) do not have any other material conflict of interest at the time of publication of this report. Research Analyst(s) are not serving as an officer, director or employee of the company(ies) covered under this report.

While reasonable care has been taken in the preparation of this report, it does not purport to be a complete description of the securities, markets or developments referred to herein, and JM Financial Institutional Securities does not warrant its accuracy or completeness. JM Financial Institutional Securities may not be in any way responsible for any loss or damage that may arise to any person from any inadvertent error in the information contained in this report. This report is provided for information only and is not an investment advice and must not alone be taken as the basis for an investment decision. The investment discussed or views expressed or recommendations/opinions given herein may not be suitable for all investors. The user assumes the entire risk of any use made of this information. The information contained herein may be changed without notice and JM Financial Institutional Securities reserves the right to make modifications and alterations to this statement as they may deem fit from time to time.

This report is neither an offer nor solicitation of an offer to buy and/or sell any securities mentioned herein and/or not an official confirmation of any transaction.

This report is not directed or intended for distribution to, or use by any person or entity who is a citizen or resident of or located in any locality, state, country or other jurisdiction, where such distribution, publication, availability or use would be contrary to law, regulation or which would subject JM Financial Institutional Securities and/or its affiliated company(ies) to any registration or licensing requirement within such jurisdiction. The securities described herein may or may not be eligible for sale in all jurisdictions or to a certain category of investors. Persons in whose possession this report may come, are required to inform themselves of and to observe such restrictions.

Persons who receive this report from JM Financial Singapore Pte Ltd may contact Mr. Ruchir Jhunjhunwala (ruchir.jhunjhunwala@jmfl.com) on +65 6422 1888 in respect of any matters arising from, or in connection with, this report.

Additional disclosure only for U.S. persons: JM Financial Institutional Securities has entered into an agreement with JM Financial Securities, Inc. ("JM Financial Securities"), a U.S. registered broker-dealer and member of the Financial Industry Regulatory Authority ("FINRA") in order to conduct certain business in the United States in reliance on the exemption from U.S. broker-dealer registration provided by Rule 15a-6, promulgated under the U.S. Securities Exchange Act of 1934 (the "Exchange Act"), as amended, and as interpreted by the staff of the U.S. Securities and Exchange Commission ("SEC") (together "Rule 15a-6").

This research report is distributed in the United States by JM Financial Securities in compliance with Rule 15a-6, and as a "third party research report" for purposes of FINRA Rule 2241. In compliance with Rule 15a-6(a)(3) this research report is distributed only to "major U.S. institutional investors" as defined in Rule 15a-6 and is not intended for use by any person or entity that is not a major U.S. institutional investor. If you have received a copy of this research report and are not a major U.S. institutional investor, you are instructed not to read, rely on, or reproduce the contents hereof, and to destroy this research or return it to JM Financial Institutional Securities or to JM Financial Securities.

This research report is a product of JM Financial Institutional Securities, which is the employer of the research analyst(s) solely responsible for its content. The research analyst(s) preparing this research report is/are resident outside the United States and are not associated persons or employees of any U.S. registered broker-dealer. Therefore, the analyst(s) are not subject to supervision by a U.S. broker-dealer, or otherwise required to satisfy the regulatory licensing requirements of FINRA and may not be subject to the Rule 2241 restrictions on communications with a subject company, public appearances and trading securities held by a research analyst account.

JM Financial Institutional Securities only accepts orders from major U.S. institutional investors. Pursuant to its agreement with JM Financial Institutional Securities, JM Financial Securities effects the transactions for major U.S. institutional investors. Major U.S. institutional investors may place orders with JM Financial Institutional Securities directly, or through JM Financial Securities, in the securities discussed in this research report.

Additional disclosure only for U.K. persons: Neither JM Financial Institutional Securities nor any of its affiliates is authorised in the United Kingdom (U.K.) by the Financial Conduct Authority. As a result, this report is for distribution only to persons who (i) have professional experience in matters relating to investments falling within Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 (as amended, the "Financial Promotion Order"), (ii) are persons falling within Article 49(2)(a) to (d) ("high net worth companies, unincorporated associations etc.") of the Financial Promotion Order, (iii) are outside the United Kingdom, or (iv) are persons to whom an invitation or inducement to engage in investment activity (within the meaning of section 21 of the Financial Services and Markets Act 2000) in connection with the matters to which this report relates may otherwise lawfully be communicated or caused to be communicated (all such persons together being referred to as "relevant persons"). This report is directed only at relevant persons and must not be acted on or relied on by persons who are not relevant persons. Any investment or investment activity to which this report relates is available only to relevant persons and will be engaged in only with relevant persons.

Additional disclosure only for Canadian persons: This report is not, and under no circumstances is to be construed as, an advertisement or a public offering of the securities described herein in Canada or any province or territory thereof. Under no circumstances is this report to be construed as an offer to sell securities or as a solicitation of an offer to buy securities in any jurisdiction of Canada. Any offer or sale of the securities described herein in Canada will be made only under an exemption from the requirements to file a prospectus with the relevant Canadian securities regulators and only by a dealer properly registered under applicable securities laws or, alternatively, pursuant to an exemption from the registration requirement in the relevant province or territory of Canada in which such offer or sale is made. This report is not, and under no circumstances is it to be construed as, a prospectus or an offering memorandum. No securities commission or similar regulatory authority in Canada has reviewed or in any way passed upon these materials, the information contained herein or the merits of the securities described herein and any representation to the contrary is an offence. If you are located in Canada, this report has been made available to you based on your representation that you are an “accredited investor” as such term is defined in National Instrument 45-106 Prospectus Exemptions and a “permitted client” as such term is defined in National Instrument 31-103 Registration Requirements, Exemptions and Ongoing Registrant Obligations. Under no circumstances is the information contained herein to be construed as investment advice in any province or territory of Canada nor should it be construed as being tailored to the needs of the recipient. Canadian recipients are advised that JM Financial Securities, Inc., JM Financial Institutional Securities Limited, their affiliates and authorized agents are not responsible for, nor do they accept, any liability whatsoever for any direct or consequential loss arising from any use of this research report or the information contained herein.