Metis Opportunity Fund

Steering clear of the 'basket prognosis'

January 2016 Newsletter

January 22, 2016

We might be performing to nearly empty seats. There is some palpable mind-numbing panic around us, coupled with near-absence of bottom-up capital allocators. The world might apparently be more interested in a collective medley of geopolitical movements, stretched balance sheets in Latin America, what's happening with container volume at the Shanghai port, or speculating on default rates and recoveries of CCC rated shale assets vs. keeping their ears to their respective grounds. Somebody sneezes, somebody else catches a virus, and people all over are sudden recipients of a 'basket prognosis'. Let's try and retain some sort of a perspective here, as hard as that might sound. We just witnessed 3 consecutive years of *MSCI World* outpacing *MSCI Emerging Markets*, something that hasn't happened in a while. In a world where allocations are predominantly top-down, even as most allocators would argue to the contrary, that's enough fodder to paint that asset class (if you can call a highly heterogeneous group an 'asset class') a growth-only space. While we wouldn't bother arguing for or against an opinion on a highly heterogeneous group (**Exhibits 2a** and **2b** on page 4 might be helpful), we strongly believe that market microstructure in several of these economies lend them beautifully to generate extremely attractive bottom-up returns. Critically, price discovery in these markets remains poor and accordingly the key determinant of long term growth in our view is superior up-down capture vs. the quest for unrealistic absolute returns.

In 4Q15, *Metis Opportunity* was up **+7.6%** (net of all fees; in INR terms), vs. no change in *Nifty* and **+1.3%**, **+2.7%**, **+3.2%**, and **+7.4%** increases in *BSE 500, Eurekahedge India, BSE Midcap* and *BSE Smallcap* respectively. Our net exposure at the end of 2015 was 97% vs. 81% at the beginning of the year. During the quarter, we added one new position while increasing select exposures in existing holdings and fully liquidating 4 positions. Elsewhere, we selectively added to existing positions wherever we identified a disconnect.

For the full year, *Metis Opportunity* was up **+9.6%** (net of all fees; in INR terms). That compares with **-0.8%** and **-4.1%** declines in *BSE 500* and *Nifty,* and **+7.4%**, **+6.8%**, and **+5.7%** increases in *BSE Midcap, BSE Smallcap*, and *Eurekahedge India* respectively. Over this period, our volatility was **81 bps** and **104 bps** below that of *Nifty* and *BSE Smallcap* respectively, in-line with *BSE 500,* and **196 bps** and **275 bps** ahead of *BSE Midcap* and *Eurekahedge India* respectively.

4Q15 was the 14th quarter of us outperforming the benchmark *Nifty* (out of 18 operational quarters). Incidentally, 3 of the 4 calendar quarters when we underpaced *Nifty* were first quarters. 2015 also marked our fifth successive year of our outperformance over *Nifty*, and was quite clearly a tale of two halves – By the time June rolled in, we were underpacing *Nifty* by more than 2%, which was well more than offset by a 16%+ outperformance in 2H15.

Over the past 3 years, *Metis Opportunity* is up **+78.9%** (net of all fees; in INR terms) vs. **+34.6%**, **+40.3%**, **+56.7%**, **+60.4%**, and **+38.3%** increases in *Nifty*, *BSE 500*, *BSE Midcap, BSE Smallcap*, and *Eurekahedge India* respectively.

Since inception in April 2011, *Metis Opportunity* is up **+122.7%** (net of fees; in INR) vs. **+36.0%**, **+41.1%**, **+55.0%**, **+34.4%**, and **+23.3%** increases in *Nifty*, *BSE 500*, *BSE Midcap, BSE Smallcap*, and *Eurekahedge India* respectively.

Before we delve deeper into specific portfolio movements during the quarter, we'll share an interesting insight with you. Our forensic engagements often help us develop fresh insights into financial reporting and some of these are always worth sharing.

'Qualified' opinions in audits have come down……. 2015 was the fifth straight year of drop in number of qualified audits within *BSE 500*, with nearly 70% of those that were 'qualified' last year being serial qualifiers i.e. had their audits 'qualified' in each of the past 5 years. While we aren't sure if this is a result of QARC's establishment, it's worth noting that qualified opinions have certainly reduced since then. It's now been more than 3 years since *SEBI* set up its Qualified Audit Report Review Committee (QARC). The role of the committee was to review qualified audit opinions and refer serious concerns to *ICAI*'s Financial Reporting Review Board, which in turn is supposed to revert and recommend a restatement. Effectively, QARC was supposed to be the enforcer of sorts for restating 'flagged' financials.

………but most material restatements still aren't a result of a 'qualified' audit. The above process is expectedly focused on restating financials for serious qualified audits. Restatements however remain fairly common within India and happen for a host of reasons, a vast majority of which may not even be associated with an audited company that had an 'emphasis on a matter' listed in the auditor's report, let alone a 'qualification'. When we analyzed restatements in recent years across the *BSE 500* universe, we found that 1 out of every 14 companies materially restated on a frequent basis. Amazingly, more than 3/4th of such 'material restaters' weren't recipients of any qualified audit opinion over the past five years.

Suspect earnings announcements apparently achieve their nefarious (short-term) 'objective'. Our work over the past few years clearly establishes that when it comes to market reaction to earnings beats across businesses with arguably clean numbers (i.e. ones that aren't frequent recipients of 'qualified' audit opinions or are 'material restaters'), collective market reaction to beats is immaterial, with average alpha being an insignificant +0.1% (see **Exhibit 1a**). Our work across frequent restaters suggests that in a vast majority of cases, material restatement at the operating line doesn't necessarily translate into a concomitant readjustment in net profit or operating cash flows. Instead, most of such restatements simply involve restating non-cash items or shifting items below the operating line. When such frequent restatements are identified with certain companies and associated market reaction is analyzed, we note that market reaction was clearly counter-intuitive i.e. while one would expect that an operating-line beat by a frequent material restater be viewed with skepticism (since the beat was likely driven below the line, as has been consistently demonstrated by the name in question), these stocks actually materially outpaced the market around the announcement (see **Exhibit 1b**). Tellingly, market reaction was most prominent in names that had fewer than 5 analyst opinions.

Exhibit 1a – Reaction to beats (excl. qualifiers and restaters)

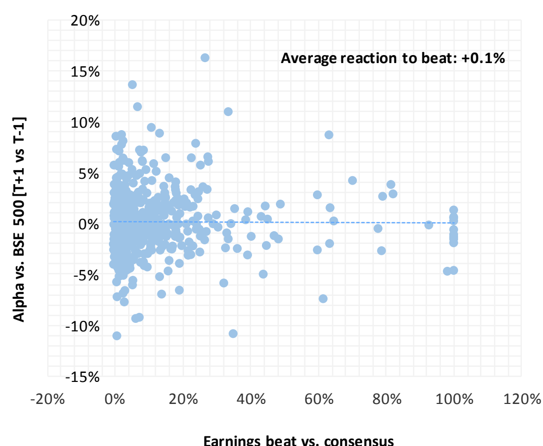
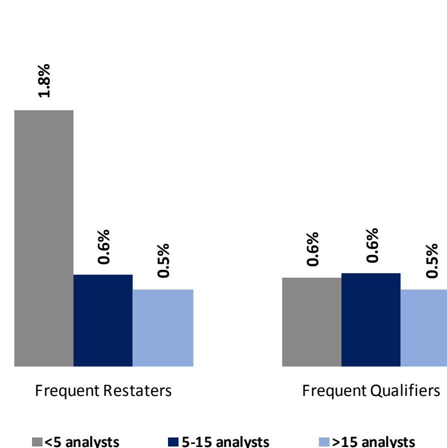


Exhibit 1b – Avg. alpha on beats (qualifiers and restaters)



Source: Reuters; BSE

Auditor continuity needs to improve. While more than 3/4th of all *BSE 500* companies that haven't had a 'qualified' audit over the past 5 years have retained the same auditor, the situation is markedly different in case of companies that have been recipients of 'qualified' opinions in each of the last 5 years, with nearly 45% of them showing their auditor(s) the door at some point over this period.

When auditor scares more than the audit does. In possibly the most contentious case of 2015, a major industrial name in the business of supplying castings and forgings lost nearly 80% of its value within a span of a month. The underlying cash crunch was so severe that the company allegedly (seemed more than plausible) engaged in stock price rigging of a subsidiary in order to force conversion of certain warrants. Post conversion, at an obviously elevated rate, parent's holding in the subsidiary was slashed in about half and it ceased to be a sub i.e. was accounted as an 'associate'. The ensuing blame game focused on an allegedly aggressive acquisition strategy of the parent and how that eventually forced its hand.

On the face of it, cash generation at subsidiaries and associates, for the most part, was never an issue. The larger issue, as is often the case with Indian businesses, is how that cash was deployed. Consider this – Despite forcing the bond conversion, this subsidiary (now associate) was still sitting on INR 49 Bil in debt by the end of F2015 (Sept) while generating just over INR 3 Bil in operating cash flows during the year. During this period, it invested >INR 7 Bil in another overseas subsidiary (a debt-issuing vehicle) of its parent, whose bond credit rating was first cut to 'junk' before being withdrawn in September. While we aren't alleging anything here, its perplexing how the same auditor auditing the parent and the listed subsidiary didn't find the above mentioned investment material and suspect enough to even place it under 'matter of emphasis', let alone qualify its opinion. Further, for an auditor whose only two clients within *BSE 500* were the 2 companies in question (parent and associate described above), a nearly $4 mil audit fee payout was more than eye-catching. That works out to about 8x the average payout for *BSE 500* companies. While it's well established that audit fee typically increases in the 15%-20% range from extra work resulting from restatements/modified reports, this name had steered clear of a qualified audit opinion or any material restatement. It's near impossible to justify that size of an audit fee in this case.

Exhibit 2a – Operating cash flows across markets

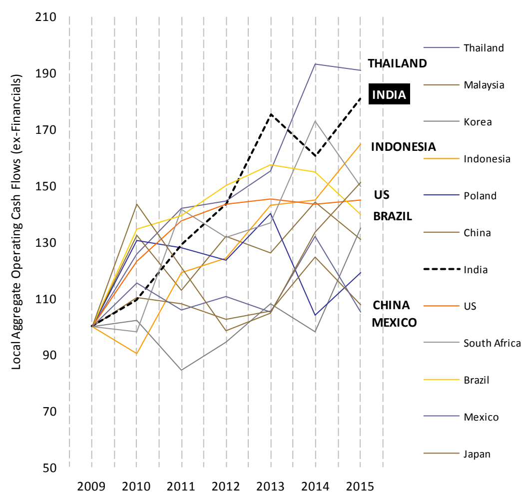
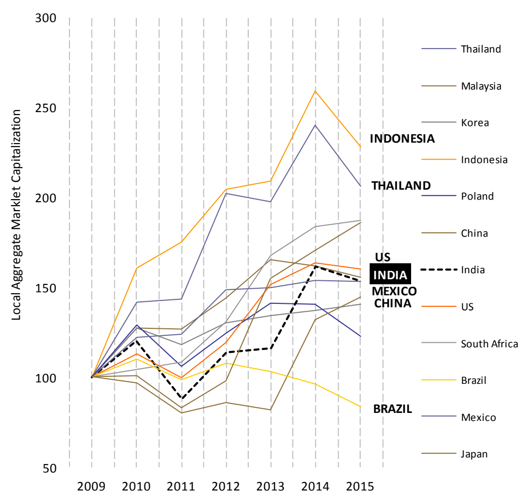


Exhibit 2b – Market capitalization across markets



Source: Reuters; Company Reports

2016 would likely be the year when asset prices eventually adjust to reconcile with cash flows. Some of the adjustments are certain to cause excruciating pain. Take US, for instance - Repeatedly, US stocks significantly outpace underlying operating cash flows every up-cycle before it dawns on investors that asset prices can't be reconciled with sustainable cash flows. Since 2009, underlying aggregate operating cash flows in the US expanded by about 45%, or slightly faster than in Brazil, ranking it around the middle of the pack in **Exhibit 2a**. In sharp contrast however, while Brazilian equities lost 17% of their market capitalization over this period, US gained 60% (see **Exhibit 2b**). To be clear, while the capitalization expansion in the US might be a bit less than headline earnings performance over this period, we note that the headline earnings performance in recent years was largely driven below the line (read 'buybacks').

While asset prices disconnected from underlying cash flows in the US, the disconnect was even larger in most other markets, allowing US and EAFE-focused managers to widely proclaim US as the safe-house. In fact, equities across the globe, with the exception of Brazil and India, moved ahead of their respective operating cash flows. In sum, while cash flow performance within most of ASEAN and India comfortably outpaced the US, India is clearly one market where asset prices haven't quite done justice to solid post-global financial crisis underlying cash flow growth. That could change in 2016 even as the world around us might shift in other ways.

Not only was the underlying expansion in India second only to Thailand, it was clearly broad-based with no material drag across sectors. To put that in context, with the exception of a couple of *Metal* constituents, all *Sensex* names grew their operating cash flows since 2009.

While its apparent to us that the obvious disconnect between stocks and cash flows is evidently in India's favor, it's far more critical to understand how our book is positioned within that market - As things stand, our book has insignificant direct non-INR exposure, with nearly all revenues and inputs coming from India. Further, while things have changed for the better across most of this book, it's worth noting that this book actually grew earnings at a mid single-digit pace back in F2009 (Mar). Furthermore, our current book retains 30 cents of net cash for every dollar of EBITDA and isn't one where unexpected top-line weakness would wreck havoc on headline earnings. Finally, it has always been our endeavor to ensure that the book is never valued at levels where historical growth and profitability needs to be replicated for us to capture incremental value.

If FX were a fundamental trade (in the short-term), INR wouldn't be hurting. It's that time of the year when GDP growth and BOP expectations are being recalibrated as commodity deflation enters near frenzy. The highlight of these times is that they sort of catalyze the downsizing of expectations. We had previously noted how capex growth expectations across the street were disconnected from underlying realities. Now, with those drivers getting downsized, new expectations (contingent on normal monsoons) still project 6%+ growth in the old series and mid-7s in the new series. So, while that comfortably trumps nearly the entire "collapsing" world around us, what is far more critical to appreciate is that Indian manufacturing is now at a point where it doesn't need rapid growth to report earnings acceleration. Between already embedded operating leverage (please refer to our October 2015 newsletter), and materials hitting multi-year lows, minimal growth could asymmetrically benefit earnings over the next year. Meanwhile, the broad-based fear has hurt INR even as import cover remains close to 11 months and crude price is way below where prevailing current account consensus expectations are marked. We also note how RBI's latest OMO purchase earlier this week attracted nearly 5x bids. Nonetheless, *Rupee*, *Real*, *Rand*, or *Ruble* are always guaranteed to feel pressure with portfolio flow movements.

As we have pressed on several times before, India Inc's upside or woes shouldn't be replicated across our book, which has not only delivered faster[1] and cleaner growth, but it has also done so without leveraging itself. Furthermore, this book has clearly quantifiable near-term drivers to offset any broader weakness, should there be one. Our focus on specific stories positions us nicely to continue what we have done for past 5 years and we don't intend to ease on the pedal now.

[1] Since 2009, our book has expanded operating cash flows by nearly 150% vs. 81% growth for the rest of the market.

We initiated a new exposure within our India Underserved construct in an auto parts name. In 4Q, we added a new exposure within a $120 mil+ auto parts name, whose 'cost-plus' attributes coupled with material unpriced optionality were key facets that captured our attention.

This lighting name has grown to become the vendor of choice for two-wheeler OEMs that source from external vendors vs. from a labyrinth of 'related parties'. Predictably, it therefore doesn't source to *Bajaj Auto*, and only sources for a limited number of models for *Hero Motocorp*. Three key reasons we liked this name were **1**. Its specific OEM exposure, **2**. Its active engagement with OEMs on lighting, and **3**. Material unpriced optionality from participation within India's rapidly growing LED penetration.

1. **Closely associated with share-grabbing OEMs**. Our pick sources heavily to the top-3 two-wheeler OEMs, with particularly strong ties with the #2 player[2]. We note that this particular OEM is in the middle of a wide scale model refreshment program. Further, with their eminent entry in the popular 'low cost 100 CC' bikes category, they are expected to gain incremental share in F2017E (Mar) – It is anticipating 20%+ unit growth in F2017 as its key scooter plant (capacity of 1.2 mil units) comes online in Western India in early 2016. The plan is for an assembly line of 0.6 mil units to begin production around now, with the rest starting around May/June 2016. In addition, this OEM's Karnataka plant has already finished most of the groundwork for expanding its capacity from 1.8 to 2.4 mil units. We strongly believe that there is enough visibility on this OEM's expansion situation (expansion in Ahmedabad + Karnataka; about 1.8 mil incremental units over a 4.8 mil current base) to contribute at least 25% EBITDA upside within the next two years. Most of this OEM's expansion is coming in scooters at Ahmedabad, where a competing vendor wouldn't be participating, since scooters lighting design life-cycle at this OEM is managed by our pick.

2. **Active engagement with OEMs brings nearly unparalleled visibility to margins**. Unlike a vast majority of parts, lighting requires very close active engagement with OEMS, with product development cycles often running north of 15-18 months[3]. That makes lighting one of the very few pockets that can retain profitability almost regardless of how materials cost move since long life cycles come with cost-plus sourcing clauses. So, while there is an obvious embedded risk of lags in pricing escalations when commodity prices move up sharply within short periods, it is nowhere nearly as material as one is used to seeing in just about any Industrials name, let alone in an auto parts business. Further, we are hard pressed to identify parts-related stories where cash cycles run less than a month, as they do here.

3. **LED expansion could be a huge opportunity at best, and highly unlikely to be dilutive, at worst**. *LED Luminaires* contributed barely anything in F2015 and would contribute about INR 1.5 Bil in F2016E (Mar), or little over a tenth of the business. Beginning F2017E, most of *LED Luminaire* manufacturing would be at a new plant in Rajasthan, which is set to come online within the next few months. The size of the opportunity in discussion, in revenue terms, is clearly huge – By our estimate, this part of the business could easily be somewhere in the INR 5-9 Bil range in 5 years. It would be helpful to provide more color on the LED environment to help you better assess the situation.

    - ***LED penetration is insignicant at this point.*** By our estimate, LED penetration for both residential bulbs and streetlights would be in very low single digits by the end F2016E (Mar) and we anticipate particularly strong ramp-up within streetlights where we expect more than 80% of all streetlights to be LED by F2019E (Mar).

    - ***EESL is utilizing easily achievable energy savings to aid LED expansion.*** EESL is the implementation agency, which in case of streetlights is negotiating contracts (typically 7 years) with municipal bodies while providing installation and maintenance at no cost. Subsequent

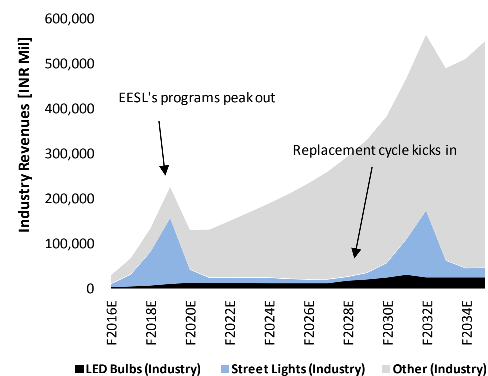
[2] Our pick supplies about 3/4th of this OEM's lighting requirements and is a well-entrenched preferred supplier.
[3] R&D allocations average about 3% of revenues

energy and other[4] savings are then used to pay off EESL. In a parallel initiative focused on residential consumers, DELP, cost recovery from replacing incandescent bulbs with LEDs comes through 8-12 monthly installments billed to the consumer.

- ***While everyone's focus might be on the 'easy EESL-driven opportunity', a larger opportunity exists elsewhere.*** While it isn't appropriate to call the EESL opportunity as easy (since sourcing is exclusively from Indian manufacturers with clear requirements for testing and manufacturing conditions), a much larger set exists elsewhere – We estimate that while light requirement (in luminosity terms) for residential and highway/street lighting is almost 90% of all luminosity, in revenue terms the larger opportunity may lie within the balance 10% (down ceiling light, for instance, in offices/malls/airports etc.), where pricing isn't dictated through competitive bidding[5] but in 1x1 project-based or client specific contracts.

  By our estimate, once EESL's implementation practically ends in F2020E (Mar), revenue opportunity elsewhere could account for nearly 80% of *LED Luminaire* revenues (see **Exhibit 3**). Even within the 'Other' category, we chose to 1. Drive LED penetration extremely slowly, and 2. Didn't include auto lighting since that would be little more than a replacement for the purpose of the business we are evaluating.

Exhibit 3 – LED Luminaires' industry revenues



Source: Internal estimates

- ***The LED race is almost certain to establish substantial over-capacity by F2020E*.** When the government's LED adoption program was launched last year, few manufacturers/assemblers were anticipating such a quick ramp-up. As a result, most of them were caught flat-footed and few of them initiated planning to set up manufacturing in India. However, the capacity being set-up seems too large to us and we expect this to 1. Force ASPs lower, particularly within bulbs, and 2. Eventually lead to material over-capacity in the industry. We note how just about 400 mil CFLs were sold in India in 2014 when installed capacity was north of a billion, and the reason wasn't LEDs until then. That said, the competitive space gets differentiated towards the top by players that have been involved with LED lighting manufacturing for more than a year, and some of these have been closely involved with product development and design.

- ***Flexibility to shift capacity would come handy within the next few years*.** We note that of the 10 odd acres of LED-dedicated expansion in Rajasthan, majority would be dedicated to LED streetlights. Typically, assembly and testing of bulbs takes substantially lesser space vs. streetlight assembly. In this specific case, the assembly line installed is for 'general product use', and the original INR 1 bil of investment would require no more than an incremental INR 100 mil to convert the line for producing say ceiling lights. While different products often tend to have different PCBs, housing, and drivers, we note how several PCB machines now allow for differential programming for production purposes. Small scale producers would likely suffer.

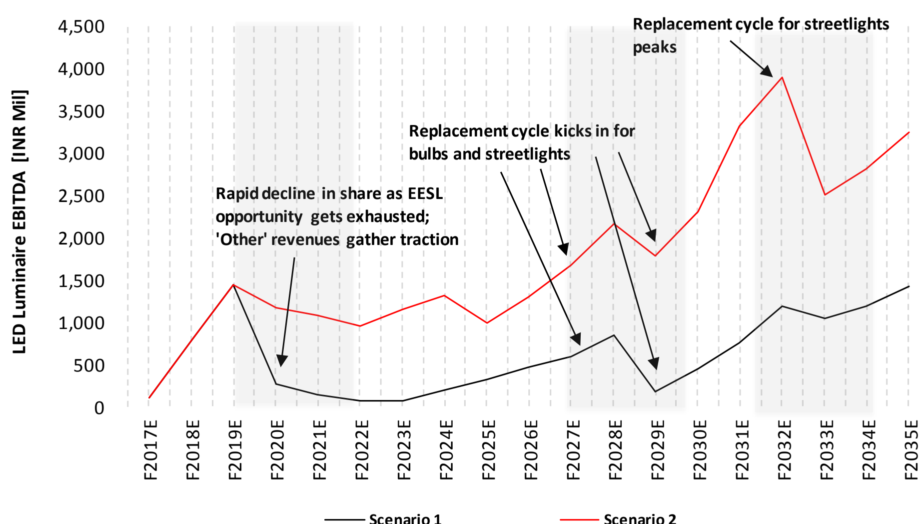
We estimate the value of the LED Luminaire opportunity to be in the INR 150-230 per share range. We believe that there is material embedded optionality within the ongoing *LED Luminaire* expansion, which we believe could easily be worth a fourth of our conservative estimate of the core auto lighting

[4] Durability of LEDs remains an understated selling proposition – We note that nearly 15% of *BSES Yamuna Power Ltd*'s streetlight-related revenues (charged to Delhi govt) came from maintaining the sodium lights.
[5] EESL is currently sourcing bulbs under DELP at barely a third of open market price.

business. This however is still in contrast with management's expectations, which are materially higher. As we analyzed the entire competitive spectrum across the country, one key observation drove our arguably conservative outlook – Its critical to note that unlike automotive OEM lighting, which has long product development life cycles, this is a fairly standardized product and is getting fragmented at a noticeable pace as explained earlier. As a result, our expectations of share and profitability are both considerably below management's expectations.

- ***Our working capital expectations are conservatively kept at the same level as the core auto business***. The EESL program has been designed in a manner that receivables are paid off in 30 days, vs. the 45 days typical payment period from auto OEMs. All EESL requires in exchange is a 30% bank guaranty, which was included in our calculations. As far as material sourcing is concerned, we note that about a third of materials cost (LED chip and packaging) is currently being imported from suppliers in Korea, Taiwan, and Japan[6]. However, with sourcing scale ramping up considerably, local chip dealers are now supplying chip and packaging as required (need-based), allowing for what is a very low working-capital business.

Exhibit 4 – EBITDA scenarios for LED Luminaire expansion



Notes: LED chip and packaging is assumed to be about 20% of total manufacturing cost; Under Scenario 1, share drops rapidly post F2019E until it stabilizes in the low single-digits; 15% of labor and overheads are assumed to be fixed, given ramp-up from nearly nothing; ASP for residential bulb revenues bumps up to INR 100 post DELP exhaustion in F2020E, after which it continues its low single-digit decline.
Source: Internal estimates

We expect about 40% upside over the next 2 years just from the core lighting business; Overall, we expect to grab at least 60% upside over 2 years. We haven't prized incremental opportunity within Railways' passenger information systems (PIS) – We estimate that there would be about 50-75K PISs nationally, with about half of them still not converted to LED. With a 5-year replacement cycle, we estimate that this market is about INR 10 bil in size, with no operational vendor nearly as well-capitalized as our new pick. To conclude, even ignoring the Railways PIS optionality (which is something they are doing already), this has every shot of delivering at least 40%-50% upside within the next 24 months.

[6] Nearly 2/3rd of the global LED fab capacity lies in 4 countries (China, Japan, Korea, and Taiwan, with select Taiwanese companies also establishing capacity in China). Our pick doesn't source from China. Importantly, we note that overcapacity in the LED chip space (largely on account of China) has kept a tab on prices. Oversupply and clouded IP issues drove *TSMC* to sell its LED chip business to *Epistar* earlier in Jan 2015. While players such as *Osram* have shared plans to add capacity, these new capacities aren't expected to come online for several years.

We exited 4 positions during 4Q. During the quarter, we liquidated 4 positions, 3 of which were in our *India Undervalued* construct while the other was in our *India Underserved* construct. All of the positions were sub-2% holdings at the fund level.

Within our *India Underserved* sub-strategy, we sold out of a toll-road operator that we had held for about two years. On the face of it, this position still suggests solid upside as the 'receivable', in the nature of development rights, has ballooned over the years. However, political rhetoric has increased recently as political outfits and homeowner associations have intensified their lobbying efforts to scrap the toll. Given that incremental legal permutations appear such that the 'receivable' in question could also arguably be at risk, we didn't view this trade-off as asymmetric as we viewed earlier.

In early 4Q in our *India Undervalued* sub-strategy we decided to sell stakes in 3 of our low weight positions which had recently lost strong fundamental characteristics (especially as compared to other names in our book, and to a smaller extent, other names that we were evaluating at the time). We sold 2 cyclical names and 1 cyclical beta name. Thus, all three were quite exposed to cyclical upturn in earnings which is not clearly visible at the moment. Since initiation and for almost all time until sale, the 2 cyclical names (one is the largest organized sponge iron producer and the other largest organized compressor manufacturer) were strong performers and contributed to our returns but had recently lost the overall value characteristics that we found so compelling earlier (especially in light of weak reported earnings and uncertain outlook due to a multitude of factors). The cyclical beta name was in the PSU bank space - a space on which the pundits have been right so far and turnaround is not clearly visible even with marginal progress being made by government mandarins. We redeployed the proceeds in one of our recent media picks and also added to a much more compelling (on a price-intrinsic value basis) existing holding in one of world's largest plastic film manufacturing producer.

Running hot and cold on GST. Be it the choice of the universal rate or amendments being requested for passage of the bill in Rajya Sabha, GST bill's passage is still contingent on a host of factors. While we continue to work extensively on specific impact across our book, one entertainment name stands out in so far as potential benefit is concerned (@18% rate). We expect this holding's EBITDA to expand 25%-30% post-GST (see **Exhibits 5a** and **5b**).

Exhibit 5a – Est. GST impact on EBITDA (1)

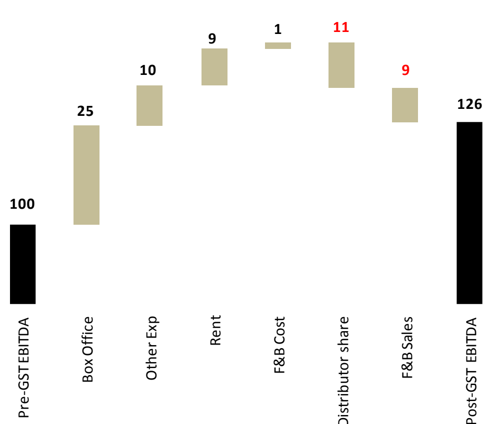
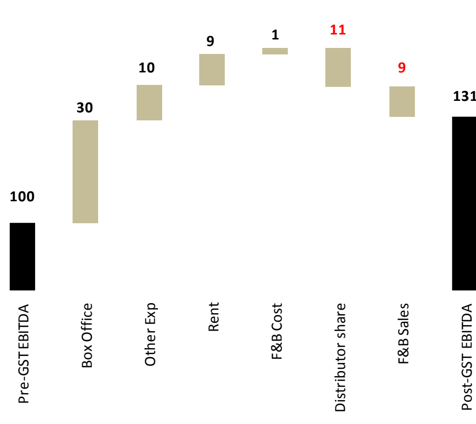


Exhibit 5b – Est. GST impact on EBITDA (2)



Note: Scenario 1 assumes that existing e-tax exemptions are discontinued, while scenario 2 assumes that benefits will continue
Source: Company reports

In another development, the above mentioned entertainment name had to service a CCI request for more information before they could close an earlier announced acquisition. Subsequently, CCI had invited public comments on the combination. That was likely prompted because of a few target screens being close to existing screens of the acquirer. We expect the acquisition to go through, even if that is contingent on pricing caps being placed on the few screens in question. Critically, that doesn't change our estimate on underlying synergies since we expect nearly all of the synergies to be driven by increase in SPH and sponsorship revenues.

Performance and Attribution summary

We have consistently outpaced the benchmarks in second halves of all years since our inception. 2H15 was no different, except that the margin of our outperformance was the largest (as far as second halves are concerned) since our inception. On a quarterly basis, in relative terms, 4Q15 was our 4th best quarter since inception, only being a bit behind 3Q15. Surprisingly, broader small-caps continued their outperformace over large caps even as headline multiples were widely stretched in that part of the capitalization spectrum.

About 80% of our names gained in 4Q, with financial holdings in particular being relative laggards. Our two best performing positions in the quarter were an *Outdoor Entertainment* name (**+37%**) and a *Technology* name (**+35%**). Our two worst performing positions in 4Q were a *Logistics* name (down **-9%**) and an *Auto Parts* name (down **-6%**), with the former featuring among our top-5 positions. For our historical position-wise benchmarking vs. peers and *BSE 500*, please see **Exhibit 6d**.

In 4Q15, *Metis Opportunity* was up **+7.6%** (net of all fees; in INR terms), vs. no change in *Nifty* and **+1.3%**, **+2.7%**, **+3.2%**, and **+7.4%** increases in *BSE 500, Eurekahedge India, BSE Midcap* and *BSE Smallcap* respectively. Since inception in April 2011, *Metis Opportunity* is up **+122.7%** (net of fees; in INR) vs. **+36.0%**, **+41.1%**, **+55.0%**, **+34.4%**, and **+23.3%** increases in *Nifty*, *BSE 500*, *BSE Midcap, BSE Smallcap*, and *Eurekahedge India* respectively (see **Exhibit 6a** and **6c**). Over trailing 12 months, our volatility was **81 bps** and **104 bps** below that of *Nifty* and *BSE Smallcap* respectively, in-line with *BSE 500,* and **196 bps** and **275 bps** ahead of *BSE Midcap* and *Eurekahedge India* respectively (see **Exhibit 6b**).

Exhibit 6a – Perf. since inception

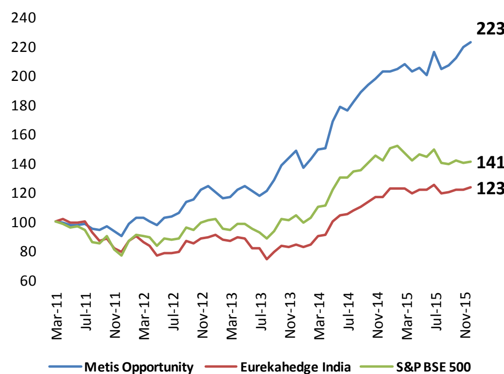


Exhibit 6b – TTM volatility

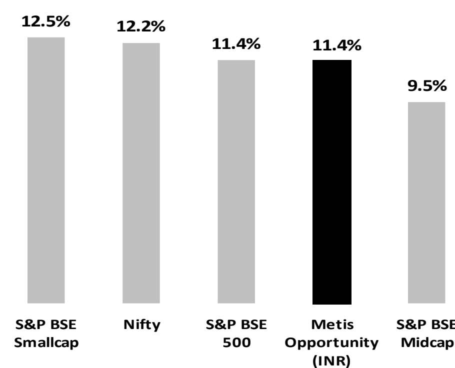


Exhibit 6c – Annuals and average –ve month returns

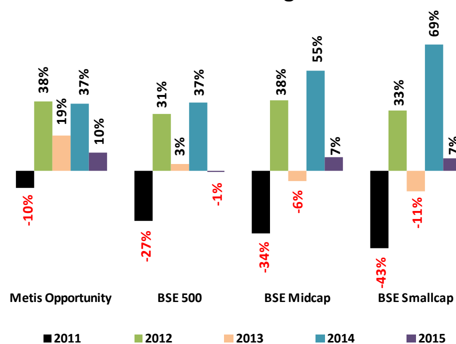
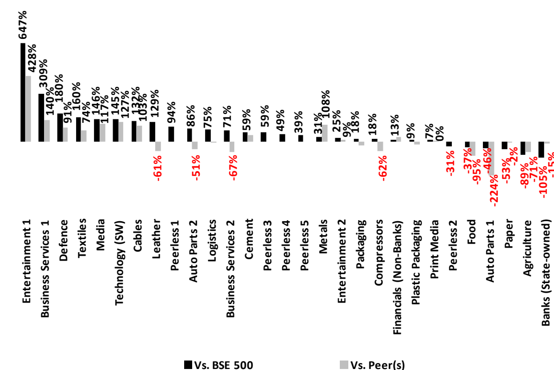


Exhibit 6d – Industry-wise benchmarking for positions



Note: Metis Opportunity went live on Mar 11th 2014; Industry-wise benchmarking compares position-wise performance (relative to BSE 500 and Industry-peers) from initial cost basis (NOT average cost basis) to present/exit.
Source: Internal Sources; NSE, BSE, Eurekahedge

Exhibit 7a – Relative rolling 12-mth returns

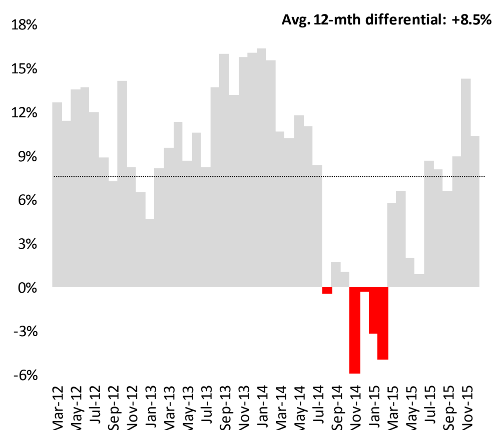
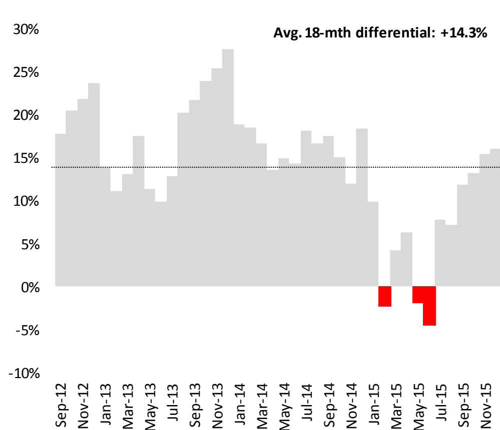


Exhibit 7b – Relative rolling 18-mth returns



Note: Relative strategy return differentials are in INR terms and are calculated vs. BSE 500
Source: Internal Sources

Exhibit 8 – Time window analysis for our sub-strategies

	India Underserved		*India Undervalued*	
	3 Month	*12 Month*	*3 Month*	*12 Month*
Number of periods	55	46	60	51
Average period return	**5.2%**	**24.8%**	**4.0%**	**22.1%**
Number of profitable periods	40	44	37	47
% profitable periods	**73%**	**96%**	**62%**	**92%**
Best period	24%	55%	26%	66%
Gain Standard Deviation	6.5%	14.0%	6.6%	18.6%
Sharpe Ratio @10%	0.36	1.00	0.20	0.60
Sharpe Ratio @5%	0.52	1.34	0.34	0.85
Sharpe Ratio @0%	0.68	1.68	0.49	1.10
Loss Standard Deviation	2.0%	0.4%	3.2%	4.5%
Downside Deviation @10%	3.2%	3.0%	4.2%	5.8%
Downside Deviation @5%	2.5%	1.4%	3.5%	4.0%
Downside Deviation @0%	2.0%	0.2%	2.9%	2.7%
Sortino Ratio @10%	0.88	4.98	0.39	2.08
Sortino Ratio @5%	1.56	13.91	0.80	4.25
Sortino Ratio @0%	2.66	133.27	1.38	8.33
Average Gain/Loss	2.6	30.3	2.5	2.9
Profit/Loss Ratio	6.9	667.4	3.9	33.6

Note: Metis Opportunity is a direct blend of above two sub-strategies
Source: CogentHedge

Exhibit 9 – Long-book snapshot

Top position as % of book	11%
Smallest position as % of book	1.1%
Top 5 positions as % of book	46%
Avg. weighted market cap of book (mil)	$576
Avg. weighted free float of book	39%
Net Exposure	97%
# of positions	22

Source: Internal Sources

Exhibit 10 – Historical Monthly Performance

	Metis Opportunity (INR)	*Nifty*	*S&P BSE 500*	*S&P BSE Midcap*	*S&P BSE Smallcap*	*Eurekahedge India*	*India-focused CE Funds**
Apr-11	-1.3%	-1.6%	-1.5%	-1.3%	-1.0%	1.4%	-3.0%
May-11	-1.3%	-3.3%	-2.6%	-2.6%	-5.5%	-2.6%	-2.5%
Jun-11	-0.3%	1.6%	0.4%	-0.8%	-1.0%	0.2%	-0.4%
Jul-11	1.6%	-2.9%	-2.1%	0.9%	1.8%	0.7%	-2.7%
Aug-11	-3.7%	-8.8%	-8.8%	-9.3%	-14.1%	-7.4%	-7.1%
Sep-11	-0.7%	-1.2%	-1.6%	-2.3%	-3.5%	-6.3%	-5.5%
Oct-11	2.0%	7.8%	5.9%	2.7%	1.4%	2.1%	5.7%
Nov-11	-2.8%	-9.3%	-9.6%	-10.6%	-12.6%	-7.9%	-5.7%
Dec-11	-3.4%	-4.3%	-5.5%	-8.8%	-9.0%	-2.7%	-8.6%
Jan-12	9.2%	12.4%	13.3%	14.3%	16.5%	9.5%	10.4%
Feb-12	4.0%	3.6%	4.7%	8.8%	6.1%	3.3%	3.5%
Mar-12	-0.3%	-1.7%	-1.4%	-0.6%	-3.4%	-4.1%	0.8%
Apr-12	-1.9%	-0.9%	-0.9%	-0.5%	2.0%	-3.4%	-1.6%
May-12	-2.5%	-6.2%	-6.2%	-6.8%	-7.3%	-7.9%	-4.6%
Jun-12	4.9%	7.2%	6.4%	4.5%	4.3%	2.8%	7.8%
Jul-12	0.9%	-0.9%	-1.1%	-2.3%	-1.5%	0.0%	-1.7%
Aug-12	2.0%	0.6%	0.4%	-0.2%	-0.8%	0.4%	1.8%
Sep-12	7.4%	8.5%	8.7%	10.1%	9.7%	10.2%	6.7%
Oct-12	1.4%	-1.5%	-1.2%	-0.6%	-0.4%	-2.1%	0.1%
Nov-12	6.1%	4.6%	5.0%	5.1%	4.1%	4.0%	3.5%
Dec-12	2.0%	0.4%	1.5%	3.1%	1.4%	0.6%	-0.5%
Jan-13	-3.5%	2.2%	1.1%	-2.0%	-4.1%	2.2%	0.0%
Feb-13	-3.8%	-5.7%	-6.5%	-9.6%	-12.3%	-3.9%	-4.4%
Mar-13	1.3%	-0.2%	-1.1%	-2.6%	-6.5%	-0.9%	1.1%
Apr-13	4.2%	3.9%	4.2%	3.3%	3.7%	3.0%	3.1%
May-13	2.0%	1.4%	0.8%	0.7%	-1.3%	-1.0%	0.3%
Jun-13	-2.8%	-2.4%	-3.7%	-6.7%	-5.0%	-7.4%	-3.9%
Jul-13	-2.5%	-1.7%	-2.5%	-7.1%	-5.9%	-0.6%	0.8%
Aug-13	2.3%	-4.7%	-4.5%	-4.4%	-2.3%	-9.1%	-5.0%
Sep-13	6.5%	4.8%	5.2%	5.8%	5.3%	7.1%	4.8%
Oct-13	7.9%	9.8%	9.1%	8.9%	7.9%	5.1%	8.7%
Nov-13	3.3%	-2.0%	-0.8%	3.6%	3.4%	-0.9%	-1.0%
Dec-13	3.7%	2.1%	3.0%	6.0%	7.4%	2.0%	1.7%
Jan-14	-7.7%	-3.4%	-4.2%	-5.9%	-4.4%	-2.4%	-4.0%
Feb-14	3.8%	3.1%	2.8%	3.1%	2.9%	2.1%	5.8%
Mar-14	5.0%	6.8%	7.6%	9.0%	9.7%	7.1%	8.0%
Apr-14	0.5%	-0.1%	0.6%	3.4%	5.9%	0.6%	-0.9%
May-14	12.2%	8.0%	10.4%	15.6%	20.4%	10.5%	9.2%
Jun-14	5.9%	5.3%	6.4%	10.8%	13.2%	4.6%	6.6%
Jul-14	-1.5%	1.4%	0.4%	-2.0%	-2.1%	0.4%	1.4%
Aug-14	3.5%	3.0%	2.7%	1.2%	2.8%	2.4%	4.6%
Sep-14	3.5%	0.1%	0.8%	2.5%	4.1%	2.8%	4.3%
Oct-14	2.6%	4.5%	4.1%	3.2%	2.3%	2.5%	3.1%
Nov-14	2.5%	1.9%	3.4%	4.4%	3.1%	2.9%	5.5%
Dec-14	2.5%	-2.3%	-2.1%	1.0%	-1.6%	0.2%	-2.5%
Jan-15	0.0%	6.4%	5.8%	3.5%	2.2%	4.8%	6.2%
Feb-15	0.6%	1.1%	1.0%	0.7%	-0.6%	0.6%	2.4%
Mar-15	1.6%	-4.6%	-3.5%	-2.0%	-3.3%	-0.1%	-2.1%
Apr-15	-2.5%	-3.6%	-3.2%	-1.7%	0.5%	-3.2%	-5.6%
May-15	1.3%	3.1%	3.1%	2.9%	3.1%	2.1%	4.7%
Jun-15	-2.3%	-0.8%	-1.1%	-0.3%	-1.8%	-0.1%	-0.6%
Jul-15	7.8%	2.0%	3.0%	5.6%	6.8%	3.0%	3.3%
Aug-15	-5.3%	-6.6%	-6.2%	-4.8%	-7.3%	-4.4%	-6.4%
Sep-15	1.1%	-0.3%	-0.4%	0.6%	0.5%	0.4%	0.6%
Oct-15	2.5%	1.5%	1.7%	1.6%	2.7%	1.5%	0.2%
Nov-15	3.6%	-1.6%	-0.8%	0.1%	2.8%	-0.4%	-1.9%
Dec-15	1.3%	0.1%	0.5%	1.4%	1.7%	1.5%	-1.5%
Trailing 12 months	10%	-4%	-1%	7%	7%	6%	-1%
Trailing 24 months	50%	26%	36%	66%	81%	46%	46%
Trailing 36 months	79%	35%	40%	57%	60%	38%	55%
Since inception	**123%**	**36%**	**41%**	**55%**	**34%**	**23%**	**45%**
2015	10%	-4%	-1%	7%	7%	6%	-1%
2014	37%	31%	37%	55%	69%	39%	49%
2013	19%	7%	3%	-6%	-11%	-6%	6%
2012	38%	28%	31%	38%	33%	14%	28%
2011	-10%	-25%	-27%	-34%	-43%	-25%	-31%
Annualized Volatility (TTM)	11%	12%	11%	9%	12%	9%	13%
Sharpe Ratio	1.12	0.30	0.34	0.42	0.25	0.17	0.39
Calmar Ratio (3-yr/3%)	2.39	0.69	0.69	0.52	0.47	0.45	1.37

*Note: Metis Opportunity Fund's INR track record was a live blend of our running onshore strategies till March 31, 2014; Fund went live on March 11, 2014 and reports net of all fees;*Close-ended funds in US, with USD returns converted into INR.*
Source: Internal Sources; NSE; BSE; Bloomberg; Eurekahedge

Investment Managers

Piyush Sharma, is the co-investment manager of Metis Opportunity Fund. Having spent time with Citigroup and Bombay Stock Exchange in India, he moved to United States in 2002, where he covered stocks within Business Services, Autos, Consumer Products and Financials with Sanford Bernstein, Longbow Research, and Avondale Partners, working in teams that received accolades by leading institutional research arbiters , including Institutional Investor (II) and Greenwich Associates. Piyush received an MBA from University of North Carolina at Chapel Hill, MS from MNNIT, and BS in Accounting from University of Allahabad.

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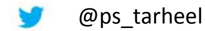

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