



Dear Investors:

Minerva Asset Advisors' wishes you and your loved ones a very happy and prosperous 2023. It's worth reminding though that 'prosperity' is a well-nourished plant that emerges from continuous engagement, and not one that comes from periods of neglect that follow overwatering. Just as there is never a good moment to be indiscriminate, and never a bad moment to be discriminate, there is always a good time to invest somewhere. Essentially, not investing is just about as harmful as indiscriminate investing, if not worse. Today, while we aren't enamored with India in general, there are parts of India that still look extremely compelling even though headline street darlings don't. Meanwhile, there is too much gun powder that would likely preclude a 'here and now' rationalization in private deal valuations. Elsewhere, most of listed emerging Asia might appear attractive, but we won't go ahead and gobble up regional ETFs. So, do yourself a favor this year and eschew investment advice that drops strategies into asset class or capitalization "cans". Consider this --> the value differentials we see today between ourselves and the supposed benchmarks are among the widest we have seen in 12 years of deploying capital in India - We ended C2022 at barely 7.8x F2023E (Mar) EBITDA, while *Nifty50* and *NiftySmallcap50* ended at highly elevated 160% and 130% premiums respectively over our book, despite incomparable underlying earnings and estimates momentum.

Strong underlying earnings drove *Minerva India Under-served's* **+18%** gain (net; in INR terms) in C2022, vs. **+6%** gain in *Nifty50* and **-2%** decline in *BSE Smallcap*. Since strategy's inception nearly 12 years ago, *Minerva India Under-served* has now compounded at **+18%** (net; in INR terms), vs. **+10%** for *Nifty50* and **+11%** for *BSE Smallcap*. Our volatility during the year was 20%, a bit below our since-inception annualized volatility of 21%. To see how the strategy also adds value to portfolios simply designed to minimize variance, please read [here](#).

We have now materially outpaced smallcap benchmarks in 4 of the 5 years that *BSE Smallcap* has declined for the calendar (since our inception). We have consistently maintained that our performance during broader drawdowns and moderate periods was and will remain the primary source of our long-term alpha capture. Ironically, our most meaningful relative contributions historically have come during periods when allocation flows decelerate or decline.

Covid 4.0.....or not. As incredulous as it might sound, that was the street chatter as the year ended. Where headline India trades (regardless of size), drawdowns are usually imminent. While it's impossible to time them, its more than an even bet to suggest that a material one is likely around the corner. Securities will somehow find the most inane reasons to correct at such times and *Covid 4.0* or whatever other version one can conjure for the next infection wave could drive this. In our view though, the next wave of infections should be the least of our concern at this time. That however didn't stop domestic investors from having a near seizure as China re-opened and case numbers moved up in December, even though it's well established that contained populations go through surges as they get exposed for the first time. Korea and parts of Pacific are prime examples that witnessed a sharp rise in infections once they began relaxing social distancing guidelines after extended containment periods¹.

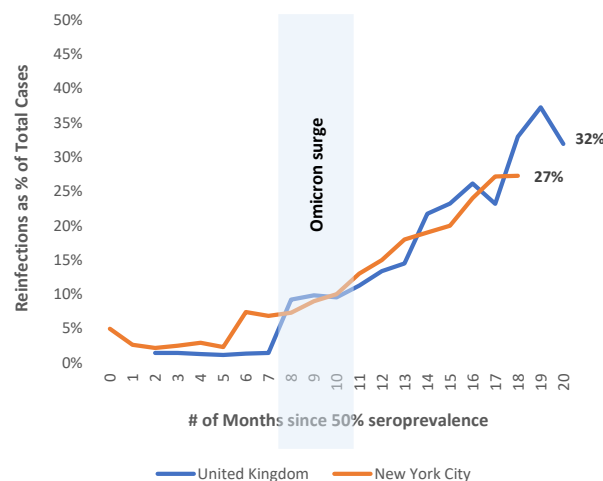
On last year's Omicron evidence, India's high natural seroprevalence shields it well. India's biggest cities were practically unvaccinated prior to *Delta* and natural seroprevalence was mostly >50%, a level that Beijing didn't reach until after the recent relaxation in rules. India then went through a debilitating *Delta* surge, acceleration in vaccination, *Omicron*, and boosters. We believe that most fail to appreciate the durability of immunity from prior *Covid* infections. India's *Omicron* experience from a year ago confirms this - India

¹ Korea began relaxing distancing guidelines in early 2022, and case surge peaked in April with ~70% of population estimated to be infected at least once by then.

virtually stood out in both speed of reaching the peak and its low peak positivity rate. While US was comparable to India in speed of peaking (4 weeks), it nonetheless reached a peak positivity of close to 30%. India, in sharp contrast, peaked in the high-teens, which was unparalleled vs. any major economy that shared credible regular data. It is critical to note that >60% of US population was vaccinated prior to *Omicron* vs. <50% in India², laying down the significance of arguably stronger immune responses within previously infected. While we have argued on India's poor early tackling of the pandemic, be it in terms of the low efficacy of containing the surge or holding a fiscally unyielding stance that led to widespread damage to India's informal economy, India's resulting high natural seroprevalence apparently shielded it better against early *Omicron* variants vs. just about any other major economy.

Infections, Vaccinations, Boosters, (and now Re-infections!!) on shuffle-mode, and it has all led to continued declines in global ICU admissions and fatality rates. It increasingly appears to be the new world order and we need to live with breakthrough infections. Be it in populations vaccinated with m-RNA or viral vector vaccines, breakthroughs happen and they increase in absence of regular boosters. The world has now decidedly entered a 'reinfection phase'. We note that Korea's cumulative re-infection rate from the

Exhibit 1 – Re-infection rate curve for UK and NYC



Notes: Curve begins from end of June 2021; Serological surveys suggest that NYC breached 50% seroprevalence around June 2021, while UK breached those levels 1-2 months earlier.
Source: Coronavirus tracker UK; NY Gov

beginning of the pandemic until mid-April 2022 (i.e. early days of its reopening) was barely 0.35%. By the end of the year though, every 6th case in Korea was a re-infection. Overall, everything else held equal (similar containment policies, demographics, vaccination rates etc.), higher mobility and population density expectedly have driven higher infections (and accordingly higher re-infection rates as of today). We note that nearly 30% of cases in New York City and United Kingdom today are re-infections (see **Exhibit 1**). Concomitantly, ICU admissions and fatalities have dropped as hybrid immunity has become prevalent. Even though there are studies within small(er) cohorts that suggest that reinfections tend to be more acute, evidence from large cohorts does not confirm this – Since the *Omicron* surge from early 2022, ICU admissions in New York City (relative to hospitalizations) haven't crossed 10% and are materially lower vs. the pre-*Omicron* period. ICU admissions data from UK confirms this too.

Given that India's biggest cities reported much steeper curves of seroprevalence, breaching 50% seroprevalence about 6 months ahead of NYC and UK, we postulate that the country should have materially higher reinfection rates today vs. these peers. If we were to use reinfection rate evidence from consistent viral gene sequencing data within large cohorts in NYC and UK, we estimate that >40% of India's present day *Covid* cases could be reinfections, arguably curbing potential ICU requirements during surges.

² Suggesting that odds of breakthrough infections within vaccinated in United States and elsewhere were apparently higher than within India's previously infected but unvaccinated population.



Then and now: unspectacular earnings, overbought optimism, and stretched valuations. Little has changed here. Be it muted earnings on easier comparisons, or weak evidence around growth acceleration, we believe that the weight of evidence suggests a reasonably extended period of depressed headline performance for India's unequivocally 'rich' benchmark names.

1. ***Easy comparisons and metal deflation still couldn't prevent an egg splat on street's face in F2Q.*** A significant turnaround in mobility off of depressed post-*Delta* wave situation of last year, and sharp drops in metal prices (everything from aluminum to iron-ore dropped between 10 and 40% in USD terms, partly offset by 7.5% decline in the rupee) clearly still weren't enough to preclude a muted F2Q (Sept) for India's headline benchmark components. Despite easing material costs, it is sufficiently evident that the consumer (particularly India's bottom-half) continued to struggle in the first half of this fiscal. Despite comping a low F2Q22 (Sept) base³, *Nifty50* (ex-financials and adjusted for outliers) reported barely +13.5% pre-tax earnings growth in F2Q23, and even that was skewed by 3 components (*Bharti Airtel*, *Maruti Suzuki*, and *Adani Enterprises*) that made more than half of the headline. Tellingly, pre-tax earnings for the median *Nifty50* component (ex-financials) barely grew +8.5% on last year's depressed base. In sharp contrast, pre-tax earnings for our book grew in the mid-30s in F2Q23 (Sept), with our median holding reporting high-teens growth.
2. ***There is distinct optimism around us, but scant evidence to support it (for now).*** We see continued struggle for India's bottom half at this time. We note little on the ground wage growth over the past 2 quarters, further depressing pricing power for the bottom half. This incidentally is in sync with our discussions across staples' distribution networks, where half of all distributors outside metros reported volume declines in December, and >40% of them noted that consumers were trading down⁴, with particular weakness in the personal care category.
3. ***We do not expect to see any significant acceleration in industrial capital spending.*** Contract labor requirements across industries have remained largely unchanged over the last 2 quarters, even as there has been clear optimism around 2023. Environmental clearances data (for industrial projects) across the most industrialized states⁵ also isn't suggestive of any material improvement in manufacturing employment in C2023E. We note that *Nifty50*'s benchmark manufacturing components reported barely mid-70s utilization rates at the end of F2Q23 (Sept), which was marginally higher vs. mid-2022. Coupled with the fact that we increasingly see growth headwinds, we do not share street's broad-based optimism around a material acceleration in domestic private capital spending.

We wouldn't be a bit surprised by strong breakouts across EM Asia over the next year, with headline Indian names likely materially trailing these peers. United States stepped-up rhetoric on China had a somewhat odd influence on Dalal street narratives over the past year, which have appeared increasingly jingoistic. Meanwhile, China's trade with EU has actually strengthened significantly since the beginning of the pandemic and has well more than offset China's lost export revenues in United States. If anything, China has nearly single-handedly gained share within EU imports across industries from bloc's historically fellow-member trade partners such as Poland and Slovakia.

³ Even by the end of C2022, output at about half of all manufacturing sub-industries still hadn't recaptured pre-pandemic levels from 2019.

⁴ That compares with a significantly lower ~15% reporting downtrading in mid-2022.

⁵ In C2022, environmental clearance applications and approvals across Gujarat, Maharashtra, Haryana, Karnataka, and Tamil Nadu declined vs. C2021.



Be it within automotive, pharmaceuticals, electronics, furniture, or footwear, China has gained share nearly across the board and comfortably ahead of Asian peers. For all the talk, China's high local procurement rates across industries within a sprawling industrial agglomeration remains extremely hard to rebuild. Case in point is vehicle exports. With nearly 2/3rd of global battery capacity, China is today among the strongest positioned in electric vehicle assembly. Expectedly, China's vehicle exports in C2022 about doubled vs. C2019, with EVs accounting for just under a third of exports⁶.

Even within categories such as pharmaceuticals where India's competitiveness is well established, China's since-pandemic share gains in exports to both EU and US have been higher than anyone else's.

Elsewhere, reduced US trade with China since the pandemic has been largely captured by the large ASEAN peers⁷, with India only being an insignificant beneficiary.

While China's reopening has been expectedly choppy, it is naïve to assume that the draconian pandemic containments will be back. Direct and anecdotal evidence clearly points towards case peaks around mid-December, suggesting that the worst of surge preceded lunar new year by a few weeks. We believe that *MSCI Asia's* biggest component largely hadn't priced a rebound even by the end of 2022 and it's foolhardy to bet against a material earnings revival there. Given the depressed base, we wouldn't bet against a >30% estimated earnings growth this year⁸ in China.

Several EM Asian economies meanwhile have already likely seen rates peak. Critically, we note that households within some these economies such as Korea, which in C2022 had its worst year since the global financial crisis, and Thailand are among the most leveraged and monetary transmission could potentially be a significant tailwind over the next two years. We note that China and these 2 markets make nearly 60% of *MSCI EM Asia (ex-Japan)* and should comfortably offset any drag on regional indices because of potential drawdowns elsewhere.

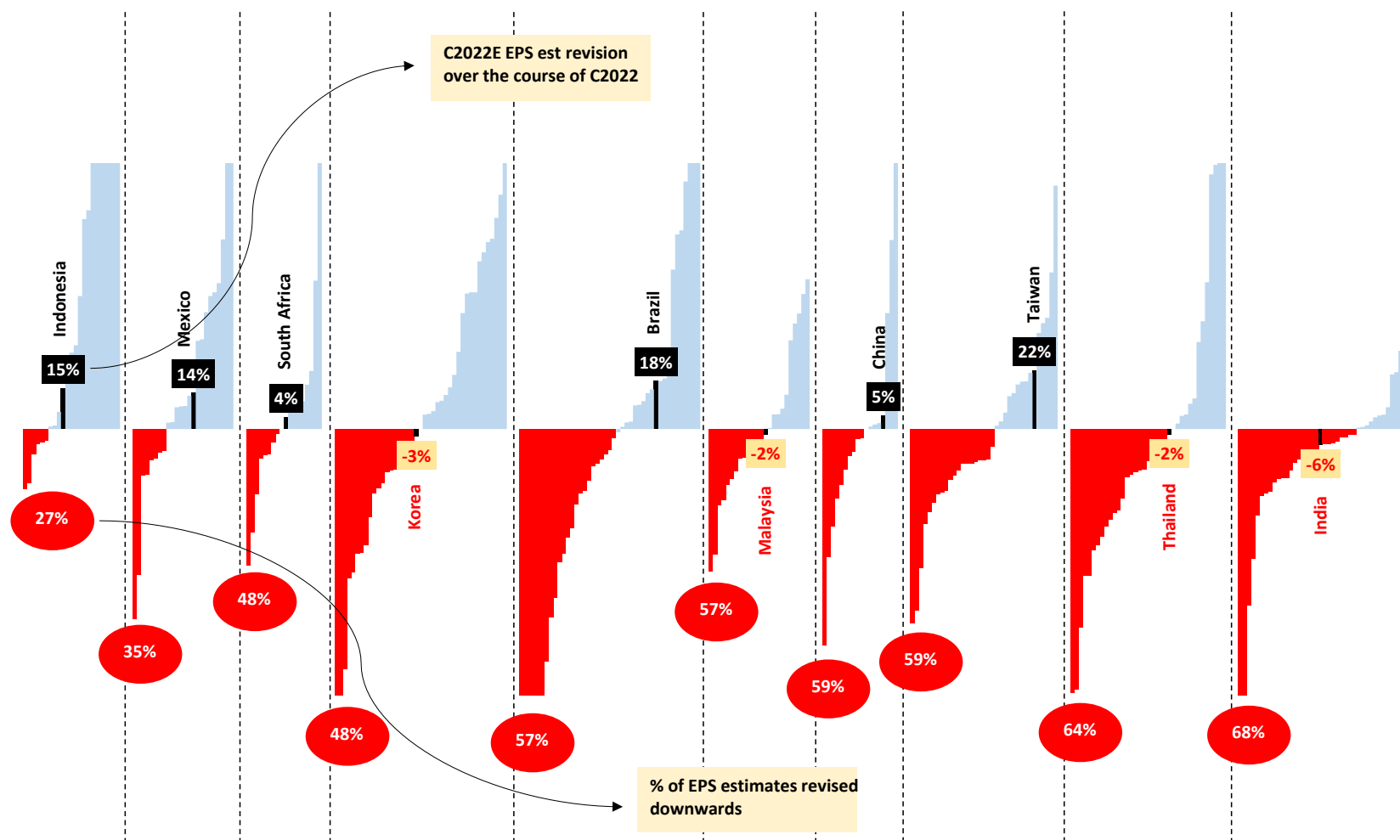
While we see potential green shoots (particularly at compelling values and/or muted/reasonable expectations) in several parts of emerging Asia, we wouldn't attribute either characteristic to India's headline constituents, which remain distinctly frothy. Unsurprisingly, street estimates in India have been found to be clearly stretched – Nearly 70% of *Nifty50* components (ex-financials) reported cuts to F2023E estimates during the course of C2022, incidentally the worst revisions breadth within major EM benchmarks globally (see **Exhibit 2** on next page). Likewise, the magnitude of cuts was also the sharpest among EM peers, with Materials accounting for more than a third of benchmark's -6% cut over the course of the year.

⁶ EVs were barely 2% of China's vehicle exports in C2019

⁷ Given connectivity with China (and reliance on Chinese inputs), Vietnam alone accounts for >2/3rd of ASEAN's gains in merchandise exports to US. To be clear, given China's increased exports to Vietnam, the headline imports re-alignment in US isn't entirely a loss for China. Also, to short circuit trade restrictions, Chinese companies are increasingly establishing facilities within ASEAN markets.

⁸ For MSCI China

Exhibit 2 – Stacking C2022E EPS estimates drift through the course of C2022 across major MSCI EM constituents



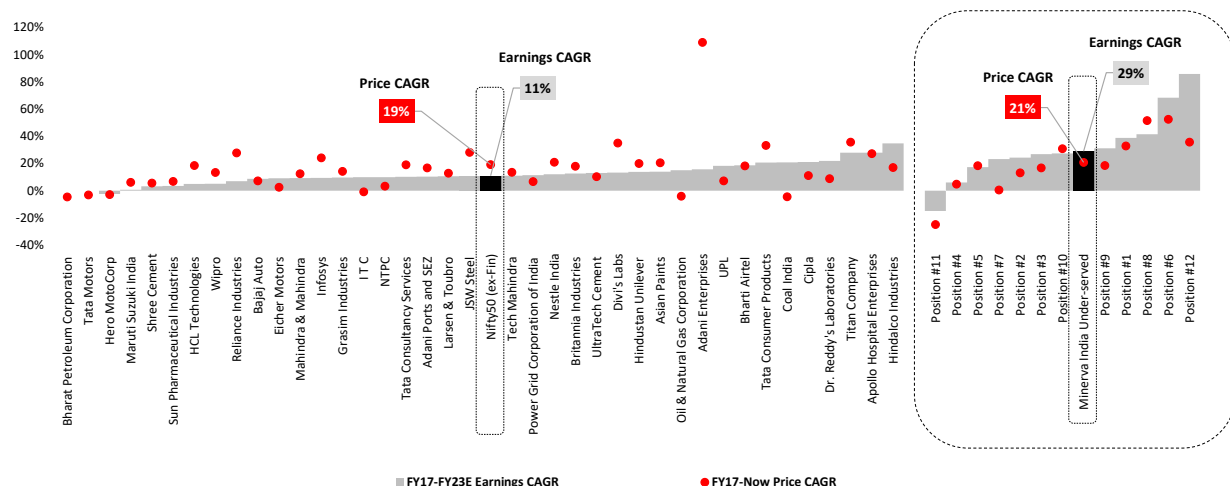
Notes: Only large cap benchmarks were chosen for this estimates' revision exercise. Financials were excluded and outliers were adjusted. Red ovals show the % of benchmark components that saw downside earnings revisions during 2022. Black rectangular labels show the overall weighted average earnings estimate revision for the benchmark. 6 of the 10 markets saw C2022E estimates revised upwards over the course of the year. Nifty50 exhibited both the worst breadth and sharpest cuts within the above EM peer set.

Source: S&P Global Market Intelligence

While **Nifty50 (ex-financials)** has significantly led its underlying earnings over the most recent 6-year period, our positioning today is in stark contrast (with our underlying earnings handily leading prices). For all the froth talk, we haven't been beneficiaries of broad-based multiple expansion largesse over last 6 years. Today *Minerva India Under-served* is comprised of positions that have barely outpaced Nifty50 (ex-financials) with +21% price CAGR vs. +19% for the index over the last 6 years, despite our underlying earnings growth being nearly 3x of India's large-cap benchmark over this period (see **Exhibit 3**).

At 7.8x F2023E (Mar) EBITDA, the book trades at about 15% discount vs. its pre-pandemic history, while *Nifty50* trades at nearly 35% premium vs. its pre-pandemic history. Effectively, the book needs close to +50% relative outperformance over India's largecap benchmark (assuming estimates remain as-is) in order for it and *Nifty50* to come in line with their respective pre-pandemic averages. While our theses are never grounded in re-rating expectations, it is nonetheless a significant embedded optionality for our investors. With nearly 15% cash, we are also positioned strongly to capitalize on any indiscriminate hysteria.

Exhibit 3 – Charting price and earnings disconnects over FY17A-FY23E: Stark divergence between Minerva and Nifty50



Note: The objective of the exhibit is to stack Earnings vs Prices for Nifty50 and Minerva India Under-served over FY17-FY23E (Mar), and show sharp disconnects. Financials were excluded. All numbers are as of end of December 2022.

Source: Internal estimates; S&P Global Market Intelligence

We fully exited 2 legacy holdings in C4Q22. Collectively, these two holdings (a technology name and a glassware name) made a bit over 5% of the book at the beginning of C4Q. We had been already paring the technology position in the post-Covid run-up. While headline valuation wasn't as much a concern at this time, our confidence in our models, in so far as the terminal value of most Indian technology names is concerned, has waned over the past 4-6 quarters. This is largely driven by our view that most players with material exposure to Fortune 100, particularly within predictable demand environments such as big box retail and healthcare, will continue to see cut back in outsourcing as captive offshore development centers ramp up in India. Continued decline in INR makes this in-house switch decision even easier for clients with large tech spends, and this has clear structural implications for long-term profitability, in our view. Elsewhere, we note that digital transformation roadmaps for most Fortune 100 companies were brought ahead significantly during the pandemic and this will likely lead to growth headwinds over the next few years. While we don't expect enterprise software spends to decelerate as much, it's expectedly hard to find attractive valuations in



this part of the market. We expect smaller IT players that service smaller mandates well beyond Fortune 500 to be the least impacted, at least for now.

Meanwhile, we only initiated 2 new packaging positions during the year that we believe are solid values to benefit from continued CPG penetration in paperboard and mono-material flexibles. These new positions made about 8% of our book at the end of 2022. However, since we also increased exposure in a few legacy holdings, our overall exposure at 87% at year-end remained largely unchanged vs. the beginning of 2022.

Stress-testing domestic paper pricing to C2023E BEKP declines; In our view, valuations more than compensate for worst-case profitability. About 5.5 mil tons of global BEKP (bleached eucalyptus kraft pulp) capacity is coming online between 2022 and 2023, somewhat mimicking the similar capacity build-up between beginning of 2017 and 1Q18⁹. Even though mill operating rates are running about 3-4% ahead of where they were towards the end of 2017, consensus estimates suggest that the peak-to-trough BEKP declines will largely track what we witnessed between 2018 and 2020¹⁰. Effectively, in C2023E, that would translate into a mid-teens BEKP consensus price decline (in USD terms).

Given that we largely focus on institutionally under-owned situations (and all forestry names in India fall in that bucket), industry shifts are often highly generalized and accordingly irrationally priced. Therefore, before we stress-test for potential price declines, it is critical that we scrape through headline industry-wide optics to put a few things in perspective:

1. ***The read-through from pulp prices to cut-size pricing is trivial at best.*** To be clear, cut-size¹¹ prices globally, despite the sticky investor focus on pricing across pulp-grades, DO NOT exhibit the price volatility of BEKP¹². For instance, cut-size prices in Europe barely declined in single-digits during the nearly 40% decline in BEKP prices between end of 2018 and end of 2020. Similarly, cut-size prices barely budged during a 20% BEKP decline between late 2015 and late 2016. Likewise, prices for standard cut-size in US were flat in 2009 despite sharp declines in pulp prices. In fact, the median EBITDA change for our holding following the 3 previous BEKP peaks was +18%, vs. a -2% decline for the European and North American peer group.
2. ***Uncoated supply is expected to remain extremely tight globally.*** Nearly 2 mil tons of uncoated paper capacity has exited NA over the past 4 years alone, and mills were operating at nearly full capacity in the second half of 2022. About as much capacity has permanently come off the market in Europe over the past 4 years. Even assuming a mid-single digit decline in demand in 2023E, mill operating rates should still remain elevated in the 90s in these markets. Given how tight the supply is, we certainly view the situation as a sticky tailwind getting into 2023.
3. ***Sustainable packaging shifts continue to drive structural uplift to FBB demand.*** C2022 was the third straight year of FBB demand growth in Europe. Our discussions across CPG and pharmaceutical clients in India also confirms continued packaging share gains for paperboard and flexibles. In F2023E (Mar), paperboard consumption growth in India could easily be in the mid-teens. Critically, it

⁹ Between the beginning of 2017 and end of 1Q18, little over 5 mil tons of new BEKP capacity came online globally. We note that hardwood pulp operating rates were ~88% getting into 2018. Meanwhile, in 2011, barely 0.6 mil tons of new supply had come in globally.

¹⁰ BEKP prices have historically been driven by supply situations (with price inflection points following supply additions by about 4-5 quarters) vs marginal production costs for the most efficient producers

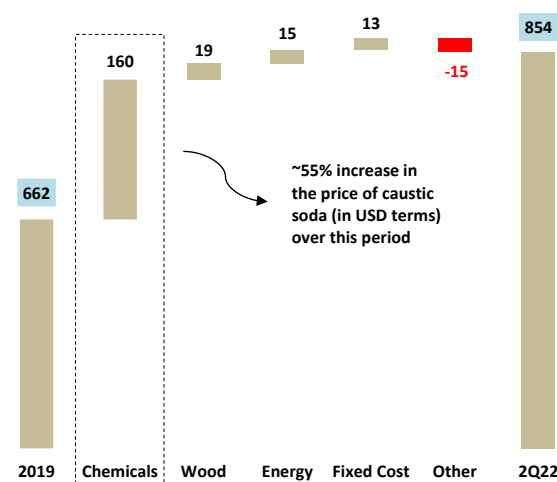
¹¹ Copier (aka cut-size) paper makes about half of our holding's revenues

¹² Source: FOEX

should be noted that Indian CPG and Pharmaceutical buyers prefer local supply lines since requirements are often overnight and it's also hard to get offshore supply commitments. We note that packaging paperboard now accounts for more than a third of our holding's business.

We note that domestic uncoated cut-size pricing in December was about 45% higher (in INR terms) vs. pre-pandemic (F2020) levels. Importantly, that's ~25-30% higher in USD terms. Meanwhile, cash production cost for BEKP production in Latin America (for the most competitive producer globally) was up nearly 30% over this period (in Brazilian Real terms – see **Exhibit 4**). >80% of the increase in pulp production cost between the end of 2019 and mid-2022 (for this Brazilian pulp seller globally) was attributed to increase in cost of chemicals (as a result of +25% increase)¹³ alone. However, given continued optimization efforts and local procurement, standalone chemicals cost for our holding had barely inched up over that period.

Exhibit 4 – 2019 -> 2Q22 cost escalation for a competitive Brazilian BEKP seller [in BRL per ton]



Source: Company reports; FastMarkets

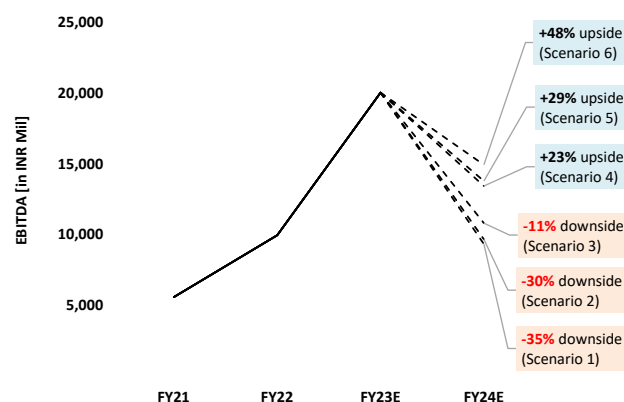
Excluding overheads and pricing, our holding has structurally elevated underlying margins by +250 bps over the last 4 years. Use of specific clonal saplings

have helped reduce consumption of chemicals. Despite significant increase in prices of chemicals between F2018 (Mar) and F2022 (Mar), chemicals made 9.2% of our holding's operating revenues in F2022 (Mar), or 110 bps below F2018 (Mar) levels. Meanwhile, per-ton consumption of water, coal, and power have all been cut between 7-20% since F2018 (Mar), significantly offsetting elevated input costs. Essentially, even at current elevated costs and F2018 (Mar) paper realizations and operating rates, our holding's margins today would be ~250 bps higher than where they were 4 years ago (even excluding any impact of better overheads absorption).

While we are trying to stress test for price declines here, we note that copier prices in India were flattish in F3Q23 (Dec) vs. the prior quarter, with exports still cutting back domestic supplies in several wholesale channels. As we had mentioned earlier, the read-through from pulp prices to cut-size office paper has historically been weak. Nonetheless, for the purpose of this stress test, we would assume that domestic realizations for our holding conservatively at least tracks the mid-teens consensus decline in BEKP (in USD terms), despite extremely tight supply conditions. Assuming that INR loses say another 5% over the course of the next fiscal, that would translate into ~10% decline in net pricing (in INR terms) in this case.

For this stress test, we have conservatively established that price declines and INR depreciation are near certainties, and are therefore creating 3 value scenarios each for 2 price decline situations that focus on **1**. Unrealistically harsh scenario of status quo in operating costs with 5% inflation across the board, with no further optimization offsets, **2**. Input costs remain elevated, but there is continued reduction in use of chemicals, and continued reduction in energy consumption, and **3**. Continued reduction in use of chemicals,

¹³ Nearly all of Brazil's requirements of caustic soda and poly-aluminum chloride are met through imports, and BRL had declined nearly 30% vs the USD over this period. Forestry is comfortably the biggest industrial use of caustic soda (sodium hydroxide), accounting for about a third of chemical's overall usage.


Exhibit 5 – Unrealistic stress-testing for our forestry holding


Notes: Stress test unrealistically assumes that stressed margins under all scenarios do not revive and remain as-is going forward; While domestic coal prices have softened considerably since April last year, they are still more than twice the levels of early C2021; Given that 1. we have ~20 mil tons of idle capacity of caustic soda globally (and another 7-8 mil tons coming online within the next 2-3 years), and 2. Coal prices are expected to soften, it's reasonable to expect 10-15% decline in caustic soda prices within the next few quarters; INR is expected to depreciate by 5% in FY24E (Mar); BEKP prices are expected to decline in mid-teens (in USD terms) in FY24E (Mar); Terminal multiple is assumed at 8x depressed EBITDA in all scenarios. Source: Internal estimates, Company reports, CoalMint

and continued reduction in energy consumption, while chemicals prices decline by 10% and energy prices stay flat (despite expectation for coal prices to continue to soften).

Under our most unrealistic stress scenario (15% decline in INR pricing or 20% decline in USD terms, significant volume growth deceleration to 2%, continued elevated costs for power, energy, water, and chemicals, with no more productivity gains), we see barely mid-30s downside in this position.

Meanwhile, under our least unrealistic stress scenario (10% decline in INR pricing or 15% decline in USD terms, volume growth at 5%, continued elevated costs for power, energy, and water, 10% decline in cost of chemicals, with productivity gains in line with what we have seen), we still see nearly +50% upside here. Any revival in prices in F2025E (Mar) and beyond, along with lower energy prices is a large free optionality across all scenarios.

Nearly 30% headline discount vs. EU and NA peers does not appropriately reflect our holding's focus on cut-size uncoated market (which is significantly more consolidated vs. writing and printing paper in general). While our holding trades at a headline discount of nearly 30% vs. its significantly less profitable and less growthy EU and NA peers, the current discount expands to nearly 45% (see **Exhibit 6**) when we take into account the fact that given underlying integration and focus on cut-size uncoated grades, its profitability is not nearly as closely tied with BEKP declines as is the case with the peer-set. This remains the most asymmetric holding in our book and we will engage aggressively if any broader market panic spills over here.

Exhibit 6 – Value benchmarking vs. EU and NA peers (on current and projected EBITDA using prior BEKP-peaks)

EV/Trailing EBITDA	Holmen	Navigator	Stora Enso	UPM	IP	PKG	Median for NA & EU	Our Holding	Discount
Sep-08	10.3x	5.6x	14.2x	7.9x	6.0x	5.8x	6.9x	4.7x	
Mar-11	6.3x	6.5x	6.7x	7.6x	5.8x	6.7x	6.6x	3.2x	
Sep-18	12.8x	10.1x	9.5x	10.3x	9.9x	8.9x	10.0x	5.3x	
Dec-22	8.3x	5.0x	5.2x	9.5x	6.7x	7.3x	7.0x	5.1x	-27%
EV/Next 12-months EBITDA*	Holmen	Navigator	Stora Enso	UPM	IP	PKG	Median for NA & EU	Our Holding	
Sep-08	9.0x	6.9x	26.2x	18.4x	3.5x	4.0x	7.9x	4.0x	
Mar-11	4.2x	7.1x	8.8x	13.0x	4.8x	7.8x	7.5x	5.3x	
Sep-18	12.3x	10.2x	11.2x	8.7x	9.5x	8.7x	9.8x	3.9x	
Dec-22	8.1x	4.7x	8.0x	18.5x	5.1x	6.9x	7.5x	4.3x	-43%

Notes: All numbers are as at the end of C2022; Paper and paperboard (not counting external sales of pulp) make the following % of peer-group revenues: 63% for Holmen, 81% for Navigator (which controls a fourth of cut-size market in Europe), 62% for Stora-Enso, 52% for UPM, 86% for IP (with no exposure to printing paper), and 91% for PKG.

** Next 12-months EBITDA isn't based on current consensus projections. Instead, we took the median forward 12-month EBITDA change following prior 3 BEKP (Bleached Eucalyptus Kraft Pulp) peaks to project next 12-months EBITDA. Last 3 BEKP peaks used were from Sept 2018, Mar 2011, and Sept 2008.*

Source: Company Reports, S&P Global Market Intelligence



We identify low-hanging post-deal synergies in a theatrical exhibition holding. We again raised our exposure in this holding during C4Q. Over the past two quarters, we have nearly doubled our exposure in a theatrical exhibition name. In 2+ decades of investing across industries, geographies, and capital structure, we do not recall many names that were either more disciplined in deal-making, or had a better track record in extracting post-deal synergies. We believe that there are material synergies that can be extracted from civil work in theater builds. On average, excluding contingencies, the cost to build a standard multi-screen theater is about equally split between civil work and equipment, and civil work expectedly takes a lion share within luxury formats (which are increasing in the screen mix). While the equipment side of the project has limited room to lower costs¹⁴, we certainly expect the merged entity to have significantly more leverage in negotiating down civil work-related costs (which is highly fragmented and mostly locally sourced). We now believe that cutting down theatrical capex by 2-5% is more than achievable for the merged entity. Depending on how post-deal integration progresses, we now conservatively identify at least 50% incremental upside on this holding of ours.

Stay safe! Feel free to reach out if you have any questions. We are available 24/7 to address your concerns.

Thanks,

Piyush Sharma

¹⁴ Both sound and projection equipment providers are part of duopolies in India. Projection is largely controlled by 2 overseas players, while a domestic sound systems company now increasingly services the large theatrical exhibitors. Accordingly, the only low hanging material synergies we can identify here are on the working capital side.

Performance benchmarking

	Minerva India Under-served	Nifty 50	S&P BSE 500	S&P BSE Midcap	S&P BSE Smallcap	EurekaHedge India	India-focused CE Funds*
Trailing 1 year	18%	6%	3%	1%	-2%	-6%	-19%
Trailing 3 yr CAGR	39%	15%	16%	19%	28%	12%	2%
Trailing 5 yr CAGR	18%	12%	10%	7%	9%	6%	0%
Trailing 7 yr CAGR	16%	13%	13%	12%	14%	8%	4%
Trailing 10 yr CAGR	19%	12%	12%	14%	15%	9%	7%
Since inception CAGR	18.2%	10%	11%	11%	10.7%	7%	7%
2022	18%	6%	3%	1%	-2%	-8%	-2%
2021	92%	23%	30%	39%	63%	25%	20%
2020	18%	15%	17%	20%	32%	20%	12%
2019	-10%	12%	8%	-3%	-7%	1%	3%
2018	-6%	3%	-3%	-13%	-22%	-7%	-5%
2017	17%	29%	36%	48%	60%	29%	31%
2016	9%	3%	4%	8%	2%	3%	1%
2015	22%	-4%	-1%	7%	7%	6%	-1%
2014	34%	31%	37%	55%	69%	39%	49%
2013	21%	7%	3%	-6%	-11%	-6%	6%
2012	39%	28%	31%	38%	33%	14%	28%
2011	-11%	-25%	-27%	-34%	-43%	-25%	-31%
Annualized Volatility	21.4%	17%	17%	20%	23.4%	13%	17%
Sharpe Ratio	0.74	0.40	0.42	0.43	0.38	0.20	0.23

Source: BSE, NSE, EurekaHedge, Bloomberg

Note: Returns are until the end of December 2022; Our performance is net of execution charges and mgmt. fees, but before incentive fees; Our management fees are accrued monthly for reporting purposes. Since the fee is actually charged and calculated quarterly, compounding of the fee charge leads to us conservatively reporting slightly lower returns vs. client actuals; Sharpe was calculated by using since-inception monthly returns and is based on an Rf of 5%. Sortino was 1.02.

*US-based close-ended funds, with returns adjusted for INR/USD movements.

Strategy Snapshot

Characteristic	Notes	
Top 5 positions as % of book	63%	
Avg. weighted market cap of book (mil)	\$565	>> Median holding's market cap is \$276 mil
Avg. weighted institutional ownership	13.0%	>> Median institutional ownership of current holdings is 7.2%
Avg. weighted free float of book	41%	
Net Exposure	87%	
Avg. weighted F2023E (Mar) EV/EBITDA	7.8x	>> vs. 18.1x (Nifty Smallcap 50), and 20.2x (Nifty 50)
# of positions	13	

Note: Characteristics are as at the end of December 2022



Meet your investment manager

Piyush Sharma, born and raised in India, has been running the Minerva India Under-served strategy across offshore and onshore structures since early 2011. The strategy focuses on investing in uncrowded and institutionally under-owned/orphaned situations within Indian micro and smaller smallcaps. Essentially, strategy's focus is on poor price discovery pockets. Having spent time with Citigroup and Bombay Stock Exchange in India, he moved to United States in early 2000s, 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 from 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.

@ps_tarheel

OFFERING DESCRIPTION: Minerva India Under-served is managed by Minerva Asset Advisors Pvt Ltd. It is offered on both onshore and offshore structures. Any reference to "Minerva" in this document refers to an investment offering managed by a regulated manager. The offering is only applicable for accredited investors.

DISCLAIMER: The information, opinions, estimates and projections contained in this newsletter were prepared by managers of Minerva India Under-served and constitute its current judgment as of the date of this note. The information contained herein is believed to be reliable and has been obtained from sources believed to be reliable, but we make no representation or warranty, either expressed or implied, as to the accuracy, completeness or reliability of such information. We do not undertake, and have no duty, to advise you as to any information that comes to our attention after the date of this fund brief or any changes in its opinion, estimates or projections. Prices and availability of securities are also subject to change without notice. This is not a prospectus and does not constitute investment advice or an offer or solicitation to buy or sell any designated investments discussed herein. Neither Minerva Asset Advisors, nor its officers, directors, agents, or employees make any warranty, express or implied, as to the suitability of any fund as an investment or of any kind whatsoever, or assumes any responsibility for, and none of these parties shall be liable for, any losses, damages, costs, or expenses, of any kind or description, arising out of this newsletter or your investment in any fund. You understand that you are solely responsible for reviewing any fund, its offering and any statements made by a fund or its manager and for performing such due diligence as you may deem appropriate, including consulting your own legal and tax advisers.

CONTACT US:

Piyush Sharma piyush.sharma@minervaassetadvisors.com
Sourav Dutta sourav.dutta@minervaassetadvisors.com
Shrey Gupta shrey.gupta@minervaassetadvisors.com
CS Raju raju.cs@righthorizons.com

+1-919-360-0359 [United States]
+91-8007381793 [Gurgaon]
+91-7982250326 [Kanpur]
+91-9739010590 [Bangalore]

