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Brazil Education | Latin America

Addressing 'New Fies' Potential Outcomes

Mr. Lula suggested bringing back FIES. It was a game changer in the past, and could now be a catalyst for an inexpensive industry, and depending on details, it could be relevant for EBITDA and multiples, reflected in our Bull Case Scenario. This report frames the opportunity and how to play it.

FIES could be a positive driver in an inexpensive industry that lacks catalysts. Post-secondary names have de-rated to all-time low multiples (~5x EV/EBITDA), offering an attractive risk-reward, but there are no catalysts in front of a challenging macro scenario, which would keep intake and dropout under pressure. A potential FIES comeback could accelerate the recovery process and allow for a re-rating in multiples.

Improving pricing dynamics. In this report, we frame the opportunity with a range of potential outcomes depending on the amount of funds and distribution rules. Inside that range, we see as reasonable BRL18bn that would have a small impact on volume (~270k new loans), but a positive impact on prices, potentially ending the price war in the industry, driving a ~10% revenue improvement in the sector.

Large potential impact on EBITDA... Increasing revenue ~10% would imply a ~20% increase in EBITDA and even larger EPS impact as schools are running with idle capacity, being able to capture the incremental revenue without needing to invest much on capex or opex. OC would benefit. DL market might decline, but the net impact would be positive as the incremental funds will increase the addressable market.

...And large potential impact on valuation multiples. EDU industry has historically traded in two different ranges, 10-15x EV/EBITDA during good (FIES) cycle years, and 6-8x in weak cycle years. We would expect a re-rating from current 5x to 8-12x depending on FIES details (scale and distribution rules).

We model FIES to be back in 2024 in our Bull Case scenario. In our view, it is a reasonable scenario to consider under a potential PT administration, being a handy resource to redistribute wealth without impacting inflation – this scenario implies 14% EBITDA CAGR and a re-rating to 8x EV/EBITDA for the industry. Our Base Case does not include a new FIES program, but a slow macro scenario, with still weak capacity utilization but some price recovery, suggesting 10% EBITDA CAGR and a re-rating to 6.5x EV/EBITDA for the industry.

Who could be the beneficiaries? The entire industry would benefit with more FIES, mainly listed companies, as they should capture once again a good part of those contracts. In a scenario of larger loan distribution, volume-focused players should have the highest upside, with 27-38% higher EBITDA in 2028e (after

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Brazil Education Services

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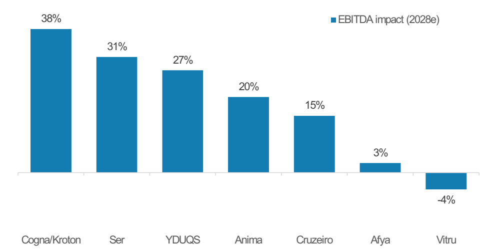
IndustryView **Attractive**

Exhibit 1: Likely impact on EBITDA (2028e) in a New Fies Scenario: better for volume-focused players



Source: Company data, Morgan Stanley Research. Note: Cogna impact considers only Kroton EBITDA.

Exhibit 2: Change in 2028e (vs. No FIES): FIES tuitions driving EBITDA growth

	Revenue	EBITDA	Margin
Sector	10%	n.a.	n.a.
Cogna/Kroton	19%	38%	5.8pp
YDUQS	14%	27%	4.4pp
Ser	13%	31%	4.8pp
Anima	10%	20%	3.4pp
Cruzeiro	7%	15%	2.4pp
Afya	1%	3%	0.5pp
Vitru	-2%	-4%	-1.1pp

Source: Company data, Morgan Stanley Research

maturation of FIES). We also see upside for quality-focused players (15-20%), but if loans are more restrictive, they could most benefit due to students' profile. We think FIES should also be neutral for Afya (+3%) and pose downside risks for Vitru (-4%).

How to play EDU industry in Latam? Trading at 5x EV/EBITDA, we see upside in all names, particularly in "commodity" ones (3-5x), but given the complex outlook and not including FIES yet in our Base case, we favor players with strong balance sheets and either DL or Learning Systems exposure. At current prices, we like ARCE, VTRU and LAUR, all rated Overweight.

Executive Summary

Brazil Education industry looks inexpensive, but we see limited catalysts. Listed players have done a decent job navigating a tough market in the last few years, growing and sustaining good margins, but the industry has still de-rated to an all-time low ~5x EV/EBITDA. At current prices, we see upside and attractive risk-rewards, but the industry lacks clear catalysts being late cyclical in front of a complex macro environment.

It is about capacity utilization and prices. Education is a fixed cost industry, driven by two (correlated) moving parts: (i) capacity utilization and (ii) prices. The structural over-supply may only reduce if the installed capacity declines (slow process) or students' affordability improves (employment, inflation, funding).

Could FIES be the catalyst? Mr. Lula has suggested a "strong FIES" if he wins the elections. So far, it is just in the headlines, with no further details. This report is about framing the potential impact of such a possibility.

Framing the "new FIES" opportunity: We see a large impact on EBITDA. Should it come back, the impact and the best vehicle to play it would depend on scale and rules to distribute those funds. We analyze those in 3 separate debates:

- **Debate #1: limited impact on volume**. We frame how much FIES fund could increase (~BRL18bn, or 11-34bn range), how many new loans could be created (~270k, 150-550k range) and who would benefit the most in each scenario (quality players in the low end, commodity players in the high end range).
- **Debate #2: improving price dynamics and EBITDA**. The impact would depend on the distribution and payment rules, still increasing revenue (~10%, or 3-19% range) as schools cash back the incremental money on the table.
- **Debate #3: impact on listed companies.** A ~10% rise in revenue would imply a ~20% increase in EBITDA and have an even larger EPS impact. How much will each company benefit would depend on the distribution rules of the game, and in the most likely hypothetical scenario range from 27-38% for "commoditized" players and 15-20% for quality players. Additionally, FIES should have neutral or marginally positive impact on Afya and presents downside risks for Vitru.

Added to a relevant impact on valuation multiples. EDU industry has historically traded in two different ranges, 10-15x EV/EBITDA during good (FIES) cycle years, and 6-8x in weak cycle years. We would assume a re-rating from current 5x to 8-12x depending on FIES details (scale and distribution rules).

Building potential scenarios. At this point, given the uncertainty, we only include incremental FIES in our Bull case scenario. The base case assumes no Covid, but still a weak macro, with a gradual normalization of interest rates and limited access to funding:

- **Bull Case: FIES is back in 2024**. A decent FIES (or a supportive macro scenario) would definitively impact demand, recovering capacity utilization and prices with a material impact on EBITDA and valuation multiples. The whole industry should perform well, and our model suggests 14% EBITDA CAGR '23-'28 and our bull case valuation would imply 8x EV/EBITDA for the industry.
- **Base Case: No FIES, mild, gradual recovery**. We assume no incremental FIES in a slow macro scenario, with still weak capacity utilization but some price recovery. We would still remain selective, our models suggest 10% EBITDA CAGR and our base case valuation implies 6.5x EV/EBITDA for the sector.
- **Bear Case: Covid closing schools again**. No recovery in demand, due to a weaker than expected macro and/or a new Covid wave requiring students to again be out of school, resulting in additional price pressure. Our models suggest 2% EBITDA CAGR and our bear case valuation implies 5x EV/EBITDA for the industry.

Industry blues. After several years of crisis in the on-campus segment (FIES cut, DL cannibalization, Covid-19), Brazil post-sec industry largely underperformed Ibovespa, de-rating to 5x EV/EBITDA (-1 sd below historical level). Most listed players were able to operationally navigate those waters supported by medical and DL courses, but were not able to attract investors' interest, due to (i) the late cyclical profile with expectation of a slow U-shaped recovery, (ii) high leverage and (iii) reduced liquidity.

More macro headwinds ahead. The challenging macro keeps delaying any recovery expectation, as Brazilian mid-class family income is being eroded by inflation, likely driving weak results in 3Q22 intake and still high dropout rates in 2H22, see Brazil Education: 2H22: Weaker Intake Outlook (9 Sep 2022).

Even with that, at current price we see upside in our Base case scenario and an attractive risk-reward. Listed companies' structural competitive advantages allow them to grow, gaining market share, with quite decent margins, most of them trading at 3-6x EV/EBITDA. The valuation opportunity is clear to us, but is missing clear catalysts.

FIES could be the catalyst. The market is starting to consider the possibility of FIES coming to the rescue, and its potential impact on listed players. A normalization in interest rates in 2023 (impacting Kd and Ke) could also bring back M&A, which historically has proven to be a relevant growth driver and a source of value creation in the industry.

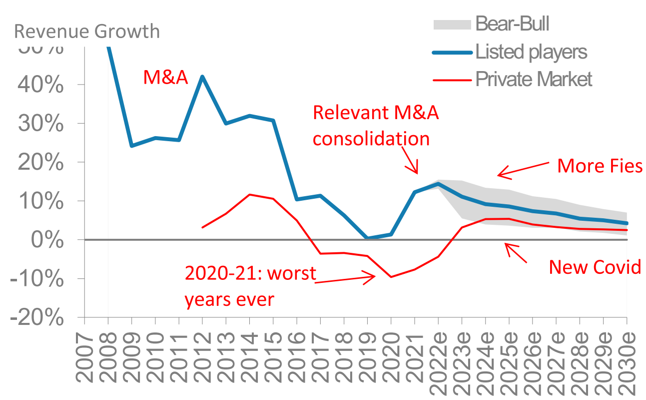
Framing FIES opportunity. There is no visibility at this point, so we suggest the following parameters to anticipate the potential impact that we include in our Bull Case Scenario:

1. **Likely to be a "mild" FIES, starting to impact from 2024:** FIES was a popular measure that boomed under PT administration and a new wave of public funding is possible in case Mr. Lula wins. At this point, it does not look like reasonable to expect 2011-14 boom, but it could still be positive for the market. In our Bull case, we assume the new FIES could start in 2024, reaching 270k new contracts by 2030 (vs 733k in 2014).

2. **Positive for capacity utilization, pricing and student mix:** a lighter version of 2011-14 dynamics could happen in 2024-26, recovering on-campus capacity utilization, with better prices and mix, potentially improving ~10% industry revenue. Similar to what happened in the past, part of the financing demand would not create additional volume, just replace students that would pay out-of-pocket or choose cheaper DL courses, but still having a positive impact on prices.

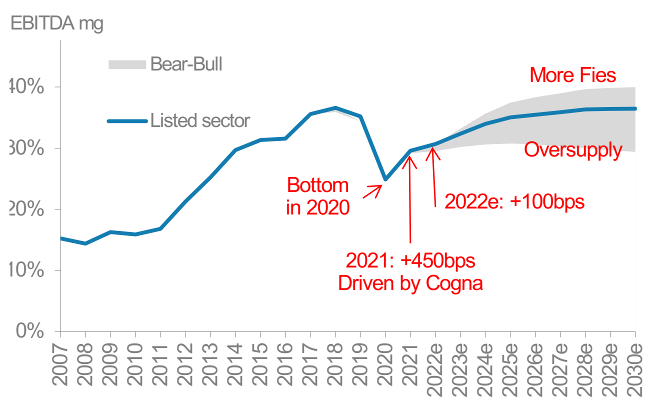
3. **Listed companies could be the main beneficiaries once again**: they had higher market share of FIES students and we think they could be able to capture a large portion of new FIES contracts. In our opinion, "commoditized" players have more EBITDA upside ranging from 27-38%, while quality players should increase 15-20%. FIES should have neutral or marginally positive impact on Afya and presents downside risks for Vitru. Multiples could re-rate from depressed levels in the next 12-18 months.

Exhibit 3: Post-sec revenue growth



Source: Company data, Morgan Stanley Research

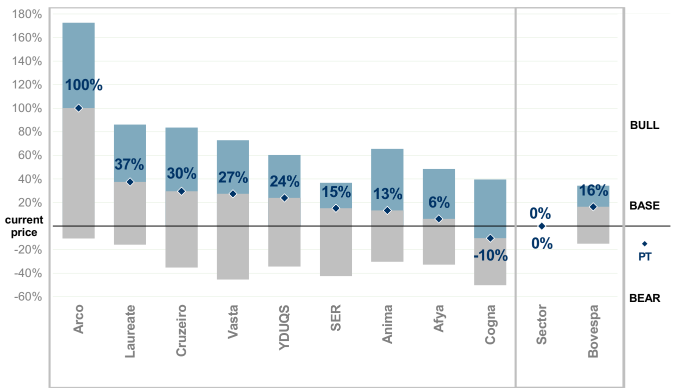
Exhibit 4: Listed players' adj. EBITDA margin



Source: Company data, Morgan Stanley Research

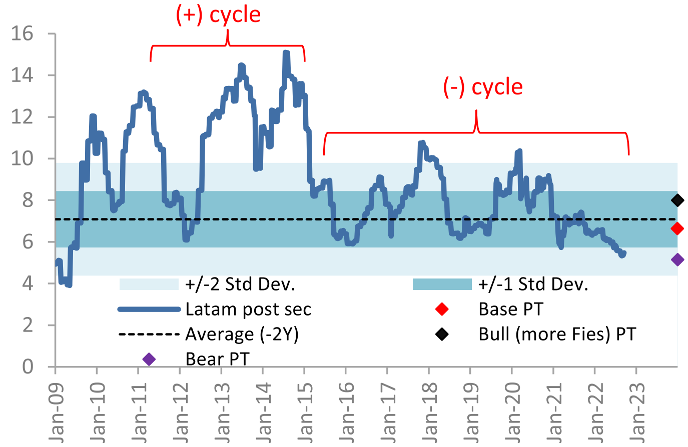
Potentially leading to a re-rating. FIES made Brazil education one of the most attractive industries in 2011-14. when the sector was trading at 10-15x EV/EBITDA. Since the program was cut in 2015, multiples de-rated, trading at 6-8x in weak cycle years. In our view, a FIES comeback would not only accelerate the campus recovery process, but also bring positive perspectives from investors, potentially leading to a re-rating in the next 12-18 months, to 8-12x EV/EBITDA depending on the program conditions (FIES volume and distribution rules).

Exhibit 5: Latam Education Risk-Reward



Source: Morgan Stanley Research

Exhibit 6: Latam Education EV/EBITDA: high multiples during FIES boom years



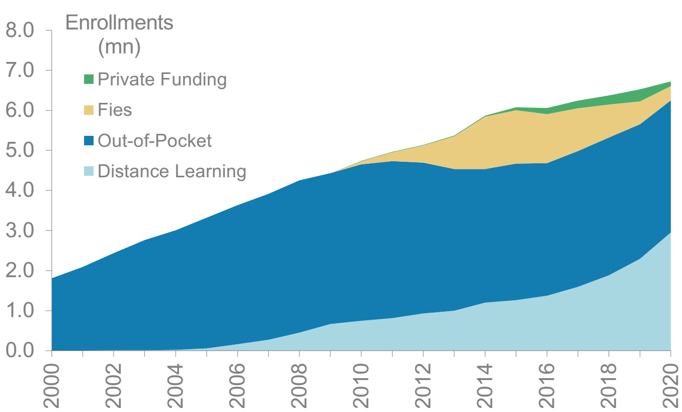
Source: Company data, Morgan Stanley Research

Debate 1: What Are the Potential FIES Expansion Scenarios?

FIES was the main industry driver in 2011-14. Mr. Lula redesigned FIES in 2010 and the program boomed during the following PT years (Mrs. Rousseff). It was a game changer for schools' capacity utilization, ending an everlasting price war, bringing back growth and profitability to the industry. The idea was good, but lack of boundaries made it grow out of control (BRL118bn in loans) with rising delinquency rates (~50% NPL, see: Brazil Education | Is Fies really sustainable? Think twice (19 Sep 2014)), which forced the government to drastically cut it from 1Q15 intake.

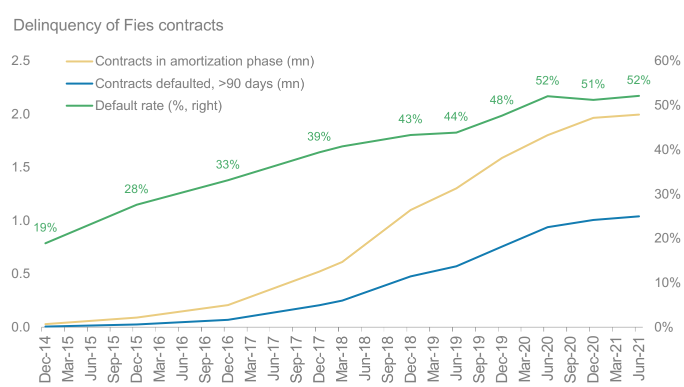
Post-sec never recovered from there. Some companies tried offering their own financing programs, which did not work and deteriorated their balance sheets (high cost of funding + difficulty in enforcing students payments). In 2017, MEC de-regulated DL rules, fueling a boom in online courses, generating a large cannibalization on most OC courses and pressuring industry capacity utilization and prices even more. To make things worse, Covid forced the closure of campuses, deteriorating one step further OC intake and dropouts in 2020-21. Covid seems to be behind us (a comeback reflected in our Bear case scenario), but the complex macro situation keeps delaying a recovery in the industry, which would require 2-3 years of good intakes to impact the student base (students in years 1-2-3-4).

Exhibit 7: Enrollment Breakdown: FIES was the main driver in 2011-14



Source: INEP, Morgan Stanley Research

Exhibit 8: FIES Delinquency: default (>90 days) reached 50% in 2020



Source: INEP, FNDE, Morgan Stanley Research

Mr. Lula has suggested bringing back FIES in his campaign. Until last week, higher education had not been a relevant topic of discussion in the elections but, as we approach the 1st round, Mr. Lula made a public speech in favor of providing support for universities, stating that "Prouni and FIES will come back with strength" and that "FIES was an investment, not an expense".

We think FIES comeback is a reasonable scenario to consider. Education is a powerful popularity driver and could be a handy resource for PT to redistribute wealth with limited impact on inflation. If well managed, it could even be an "investment" as envisioned by Mr. Lula.

But the details matter on how to play it. Assuming a decent scale, it could improve affordability, solving again the main industry issue (capacity utilization), driving a new positive cycle in the sector. But it would depend on the scale of the program and the distribution rules of the game, resulting in a small or a large impact in the industry, benefiting different players.

There are alternative FIES models that could be implemented. Associations of universities have been defending changes to the current FIES model, suggesting conditions similar to the Australian student loan program, in which students only start amortizing the debt after becoming employed and payments are proportional to their income and collected as taxes. This extends the amortization term, but makes the program more: (i) sustainable (lower delinquency since students are not required to pay unless they make enough money) and (ii) efficient (automatically collected by the federal revenue agency). We understand, however, that implementation in Brazil would be difficult since there is a large informal labor market and it is usually the poorer population that needs to take on student loans.

Exhibit 9: FIES and Australian Student Loan Conditions Comparison

	FIES Phase 1 (2000-2009)	FIES Phase 2 (2010-2014)	FIES Phase 3 (2015-2017)	FIES Phase 4 (2018-2020)	Australian Model
Interest rates	Untill 2006: 9% p.a. 2006-2009: 3.5% to 6.5% p.a. 2009-2010: 3.5% p.a.	3.4% p.a.	6.5% p.a.	Variable (0 to inflation)	Inflation
Grace period	Untill 2007: no grace period 2007-2009: 6 months after graduation	18 months after graduation	18 months after graduation	No grace period	Amortization starts only after student's income exceeds a pre-specified amount
% of tuition covered	Untill 2004: up to 70% 2005-2006: up to 50% 2007-2009: up to 100%	50%, 75% or 100%, depending on family income and student's commitment to the course	Up to 100%, depending on family per capita income and student's commitment to the course	50% to 100%, depending on family per capita income	Up to 100%
Amortization method	Student pays installments to financial institution	Student pays installments to financial institution	Student pays installments to financial institution	Pre-determined % of wage, retained by employer	Debt becomes a tax collected by the Australian Taxation Office
Amortization period	8 years	13 years	12 years	No maximum due date	No maximum due date
Requirements	No income limits and no quality standards	Up to 20 minimum wages of gross family income. SINAES score above 3	Up to 2.5 minimum wages per capita until 2015 and up to 3.0 until 2017. Universities with SINAES score at 5 had priority	Up to 3 minimum wages per capita. Universities with SINAES score at 5 had priority	No income limit. Universities have to obey nacional quality standards

Source: CMAS, IPEA, Morgan Stanley Research

Framing FIES volume impact. We base our estimates on four different outcomes, assuming the new FIES model could begin in 2024:

- **Super expansion:** annual budget reaches BRL34bn by 2030e (~0.25% of GDP), as high as in 2011-14, making FIES the main growth driver again. This is an unlikely scenario, considering the bad experience and the tight fiscal situation. All players would benefit, mainly players covering lower income segments (YDUQS, Cogna, Ser).

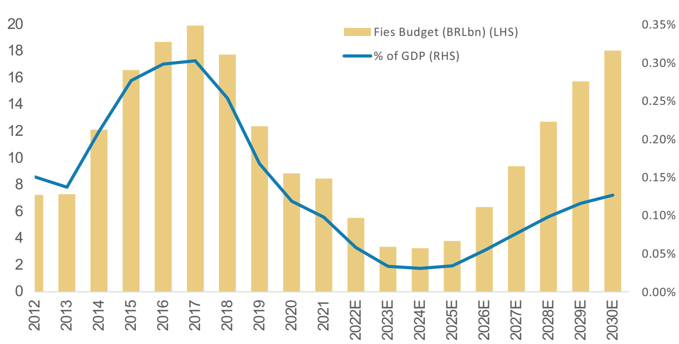
- **Strong expansion:** BRL18bn budget (~0.13% of GDP), with ~270k new contracts in 2030e (vs. 733k in 2014); still relevant for the industry, but not a game changer in a complex macro scenario. We think it provides a good balance between improving access to education in Brazil and keeping funds under control.

- **Limited expansion:** BRL11bn budget (~0.08% of GDP) with 150k new contracts in 2030. It would still represent an improvement, but the impact would be limited for companies. In this scenario, it is likely that the bar would be set higher, which would likely reward students with better credit profile, potentially benefiting Anima and Cruzeiro more.

- **No incremental FIES**. Either Mr. Bolsonaro wins the elections or Mr. Lula's minister of finance prioritizes fiscal balance, keeping current status quo (BRL3bn budget in 2030e). It is worth mentioning that Mr. Bolsonaro government cancelled FIES overdue debts (up to 99%) of 1.8m students and renovated Prouni for 10 years (govt. scholarships).

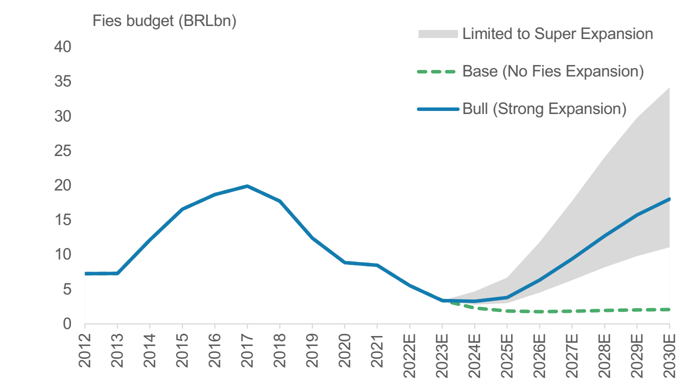
We assume FIES is open only for on-campus students. Based on previous experience, our analysis assumes the program would be exclusively dedicated for on-campus enrollments. DL would still have room to grow given its flexibility and geographical footprint, but could lose part of the demand as some price-oriented students could prefer OC if the affordability issue is resolved. But again, it will not be an automatic transfer of students from DL to OC, since part of the benefited students would have paid from their pockets anyway (see Exhibit 15).

Exhibit 10: Base FIES Budget



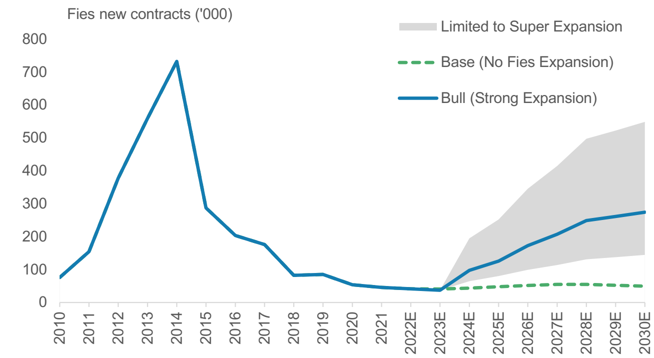
Source: INEP, Morgan Stanley Research

Exhibit 11: FIES Budget potential scenarios



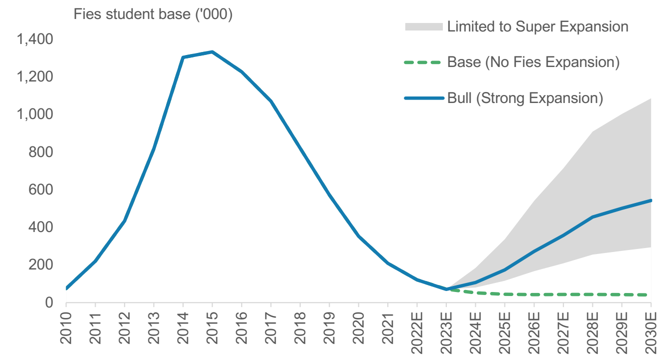
Source: INEP, FNDE, IBGE, Morgan Stanley Research

Exhibit 12: Fies New Contracts



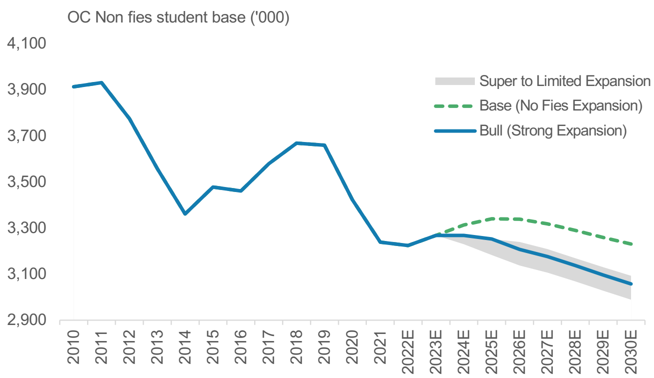
Source: INEP, FNDE, Morgan Stanley Research

Exhibit 13: FIES Enrollments



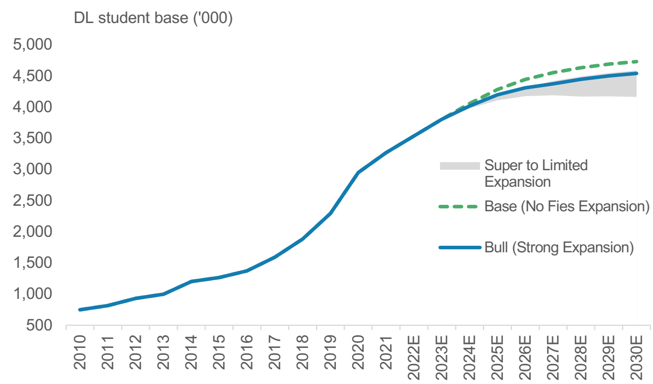
Source: INEP, FNDE, Morgan Stanley Research

Exhibit 14: OC Non-FIES Enrollments: losing share to FIES



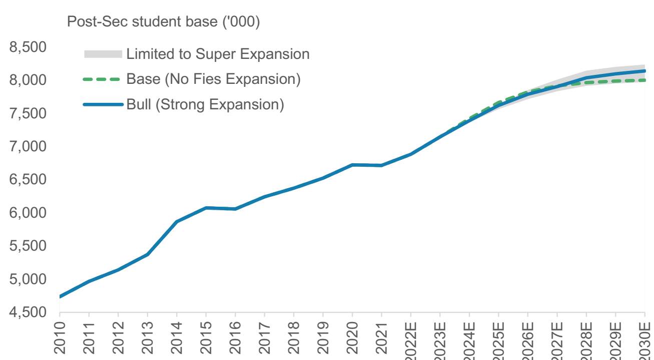
Source: INEP, Morgan Stanley Research

Exhibit 15: DL Enrollments: some price-oriented students migrating to FIES



Source: INEP, Morgan Stanley Research

Exhibit 16: Post-sec Enrollments



Source: INEP, Morgan Stanley Research

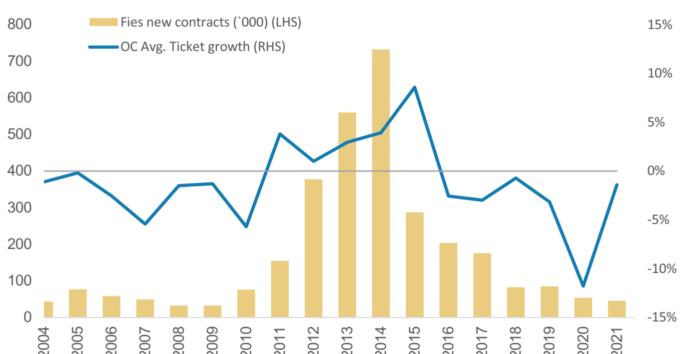
Debate 2: How Much Could Revenue and EBITDA Improve?

It is not only about student volume. FIES had a positive impact on the amount of students accessing post-secondary education in Brazil, helping to improve schools capacity utilization. However, in reality, the most relevant impact was not on volume (OC enrollment grew 21% in 2010-15 vs. 22% in 2005-10), but on prices, or the combination of both.

FIES ended the price war in 2011-14. Tuitions in Brazil have been falling in nominal terms year after year since we have information (2000), with the only exception being FIES boom years, 2011-2014. Funding rules in 2011-14 did not impose tuition, quality or income limits, increasing affordability and inelasticity to prices, allowing companies to "catch up" after decades under price pressure, in many cases charging different tuitions to students sitting in the same classroom.

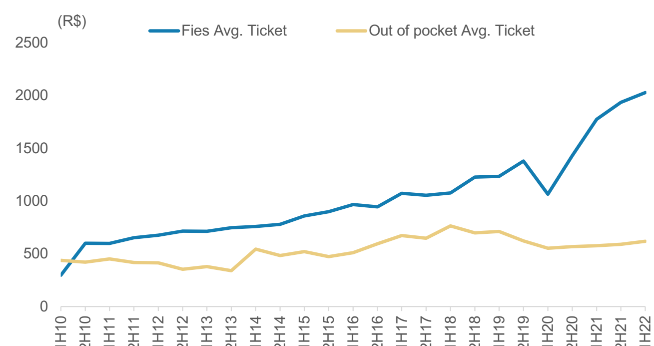
And history could repeat itself, improving pricing dynamics. After the program was cut in 2015, prices became again the most important factor for the students' choice in a commoditized market, declining until this day. Interestingly, Cogna has reported consistent increase in FIES avg. tickets, while tuitions for non-FIES OC students did not grow at the same rate, maybe related to mix.

Exhibit 17: FIES New Contracts and OC prices: FIES ended the price war in 2011-14



Source: FNDE, MEC, Hoper Educacao, Morgan Stanley Research

Exhibit 18: Cogna Avg. Price: FIES tuitions continue increasing



Source: Company data, Morgan Stanley Research

However, several practices could be questioned... We note that the media questioned that some schools were taking advantage of the govt. budget to inflate FIES tuitions, opening a price gap between students funded by the government (based on price lists) and those paying out of pocket (attracted by "discounts"). On top of that, FIES became unsustainable with 50% NPLs, due to the lack of distribution criteria (quality of the student and the institution) and the fact that the students did not have to re-pay any money back before graduation, reducing the capacity to enforce it.

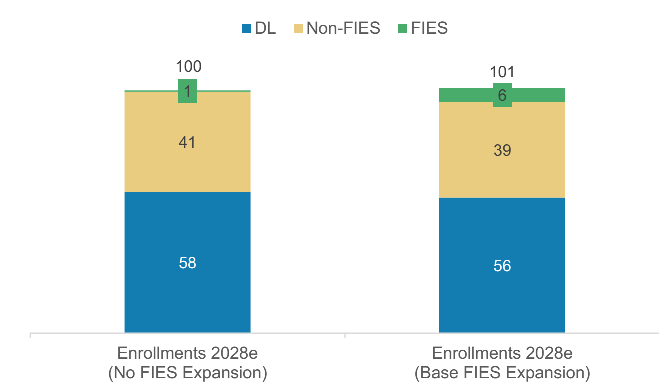
...potentially reducing the benign impact on prices. Should the government decide to expand the program again, it is possible that MEC revisits repayment term, creates more strict distribution criteria and sets a tuition cap depending on the course – there is actually a BRL7.2k limit which is not really relevant; lowering it would increase student "co-payment", automatically limiting overpricing. All in, we think a FIES return could improve price dynamics in the industry, but with a limited impact, far from 2011-14 situation.

Funding should also reduce DL cannibalization. In spite of expanding the addressable market, DL also captures part of the demand of students who would prefer to take OC courses, but choose to pay lower DL tuitions. With access to financing, many of them would be able to afford OC, potentially reducing the industry migration to online alternatives. We would expect less accentuated but similar price dynamics: FIES increasing (less than in 2011-14), OC out-of-pocket stable and DL tuitions falling, with a positive net mix impact.

FIES could lead to a ~10% revenue increase by 2028e... Overall revenues would increase as students who already pay for OC tuitions might opt for FIES, increasing the amount of money on the table. Assuming a new wave of FIES starts in 2024, it would complete a full 5-year cycle in 2028. While we estimate a small change (+1%) in the industry student base (DL is already accessible, a big portion of FIES demand would come from students who would already be in DL instead), the mix would likely favor higher tuition FIES enrollments, potentially leading to a +10% increase in the market revenue.

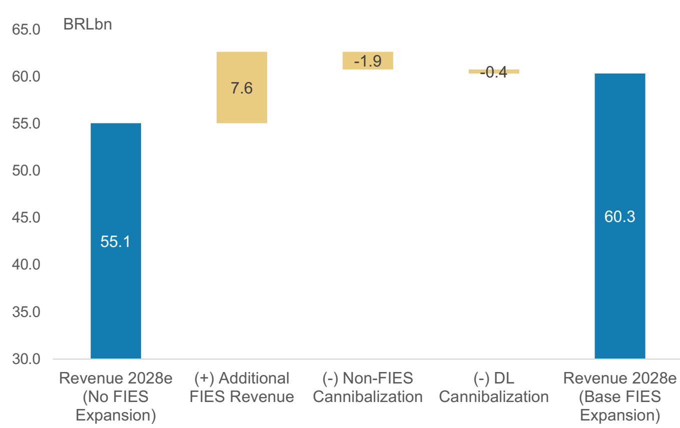
...With a much larger impact on EBITDA. The increase in revenue would need very limited increase in the cost structure, as all schools are running with idle capacity utilization (so no incremental COGS or G&A needed). Assuming a ~10% top-line expansion driven by better volume and FIES higher tuitions, those incremental BRL mn would mostly go directly to EBITDA, implying a relevant expansion in absolute terms. OC margins should expand significantly vs. a scenario of no FIES, driven by operating leverage and cost dilution, while DL margins could stay virtually flat (or decline slightly) due to lower scale (part of DL demand choosing FIES).

Exhibit 19: Pvt. Enrollment Breakdown (2028e): positive mix, but small absolute change (No FIES = 100)



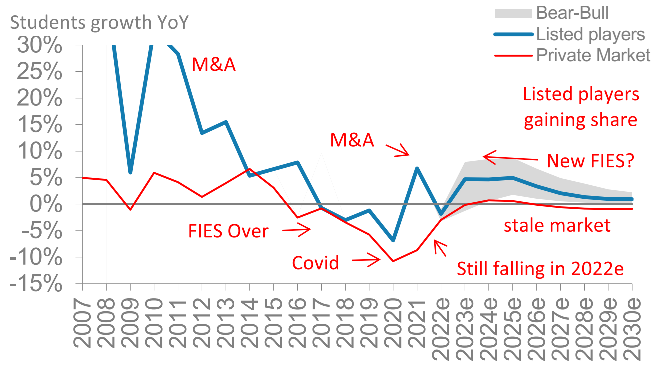
Source: INEP, Morgan Stanley Research

Exhibit 20: Post-sec Revenue Change: potential increase of ~10%



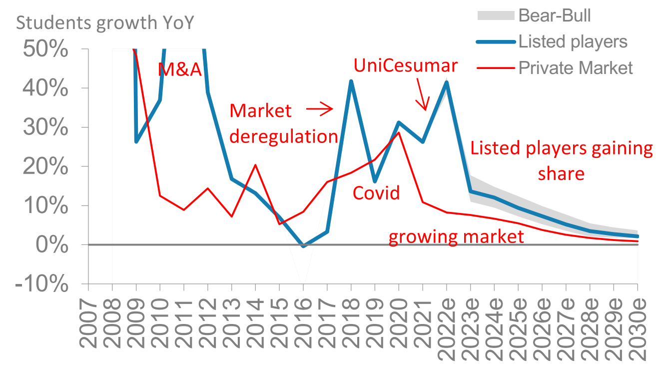
Source: INEP, Morgan Stanley Research

Exhibit 21: On-campus enrollment growth



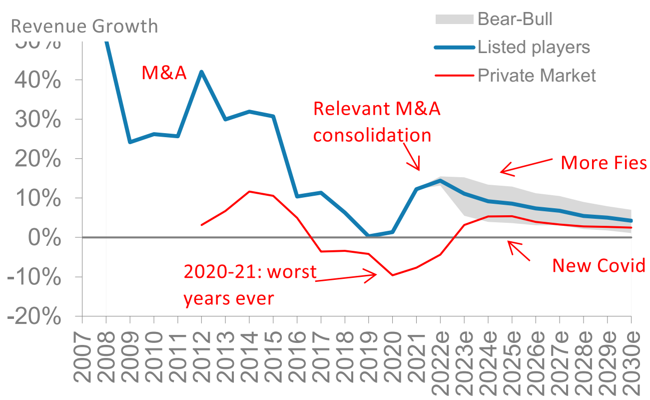
Source: Company data, INEP, Morgan Stanley Research

Exhibit 22: Distance learning enrollment growth



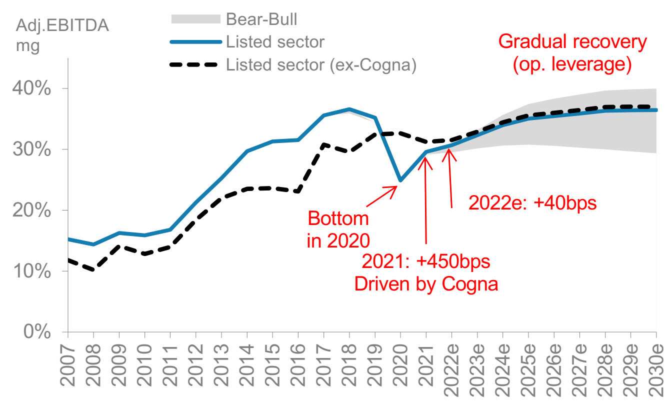
Source: Company data, INEP, Morgan Stanley Research

Exhibit 23: Post-sec revenue growth



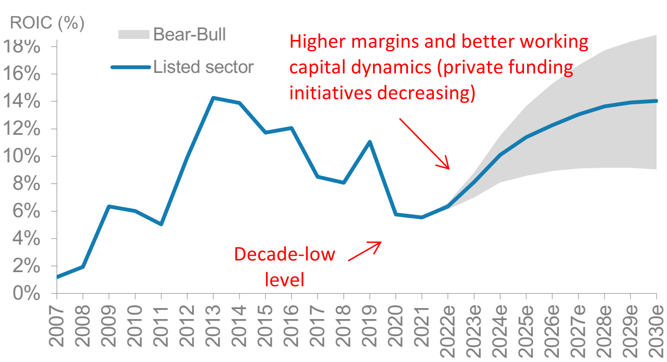
Source: Company data, Morgan Stanley Research

Exhibit 24: Listed players' adj. EBITDA margin



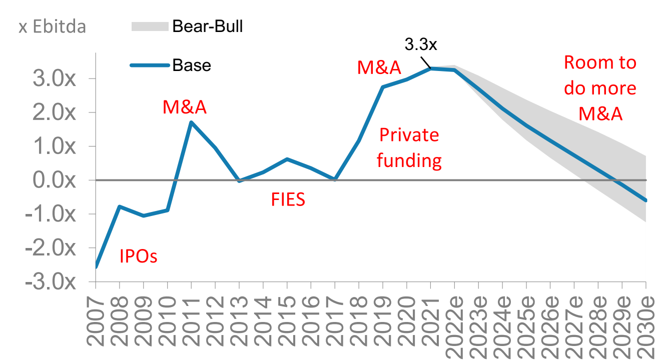
Source: Company data, Morgan Stanley Research

Exhibit 25: Listed players' ROIC



Source: Company data,, Morgan Stanley Research

Exhibit 26: Listed players' net debt / EBITDA



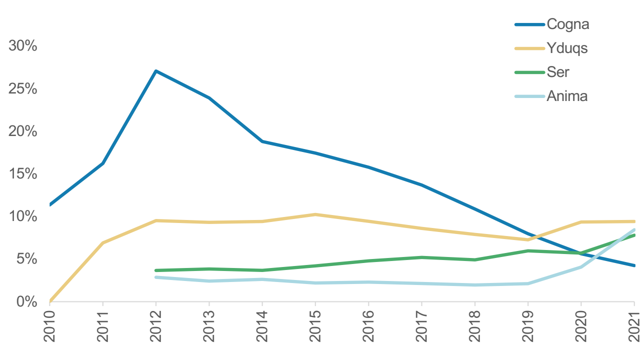
Source: Company data, Morgan Stanley Research

Debate 3: How Could Listed Companies Be Affected?

Listed players benefited the most during the FIES boom. 2011-14 was an exuberant time for the higher education industry, particularly for listed companies (Cogna, YDUQS, Ser, Anima), who were able to capture 35% of the FIES student base in 2014, having just 20% OC market share. As the program did not have a predetermined number of seats, all schools benefited (volume and prices) – but those with larger scale were the best performers with FIES, reaching 40-50% revenue exposure to the program.

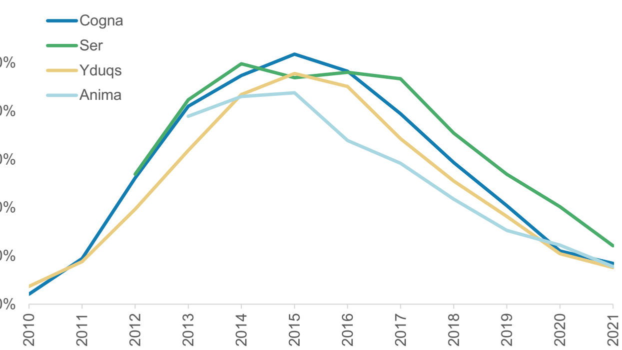
The impact going forward would depend on the distribution rules of the game. Since 2015, FIES has limited seats; however, it never reached full capacity as the loan conditions became more restrictive and less attractive for students and schools. In a potential comeback scenario, we believe the most important aspect would not necessarily be the program budget, but whether the govt. amends the requirements or not. We assume a possible PT administration might redesign FIES, making it more accessible again. In fact, during the last decades, PT was responsible for several measures focusing on increasing higher education penetration among lower income classes, such as creating Prouni and Pronatec, establishing quotas for public universities and boosting FIES with less restrictive rules from 2011. Of course, the larger the budget is, the larger the upside would be.

Exhibit 27: Market Share of FIES enrollments: listed players captured 35% of students



Source: Company data, Morgan Stanley Research

Exhibit 28: FIES Exposure (% of revenue): 40-50% at the FIES peak

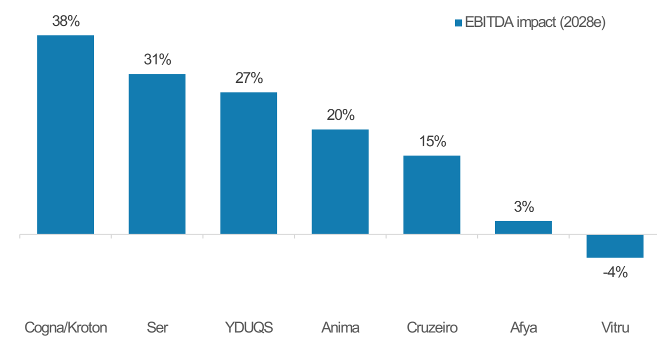


Source: Company data, INEP, Morgan Stanley Research. Note: for Cogna, we use Kroton revenue.

"Commodity" players or "quality" players? It will depend on where the bar is set. The entire industry would benefit from a FIES resumption. In a scenario with larger funds or targeting lower income families, the volume players would be the main beneficiaries: we forecast +38% and +27% increase in Cogna and YDUQS' EBITDA after maturation of FIES (2028e) vs. a scenario of no FIES expansion; Ser has less scale, but a large exposure to lower income regions (Northeast, North) that could be targeted by the new funding, therefore we expect high upside as well (+31%). We think Anima and Cruzeiro could capture a relevant part of students via FIES, but with lower upside (+20% and +15%, respectively); interestingly, they could be the most benefited in case the govt. expands the program while keeping requirements restrictive enough, due to their students profile, but this event seems less likely.

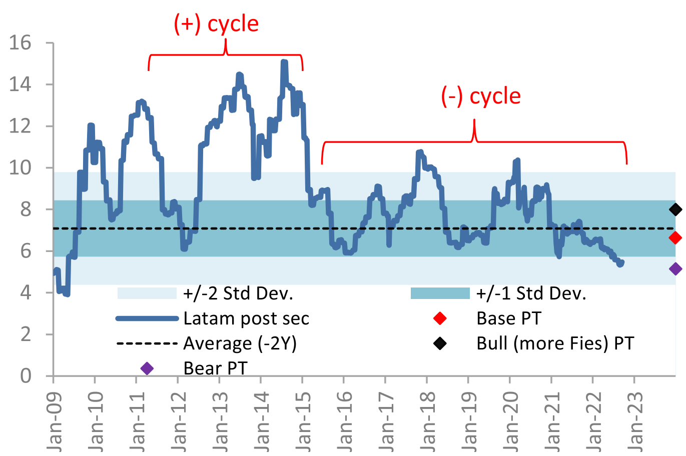
Lower upside for Afya, downside risks for Vitru. FIES medical seats are also regulated and 100% occupied, so the only upside Afya would likely have is in other courses enrollment, which represent a low percentage of consolidated EBITDA (we estimate change of +3% in 2028e). Considering no loans for DL students, Vitru would not be benefited by this measure in our view, and in fact, they could lose some students who would prefer to benefit from FIES. Our analysis assumes a -4% reduction in Vitru's EBITDA, but we do not think FIES would be very disruptive to DL since many students are working adults who would still prefer to study online and DL has a large reach in cities without campuses.

Exhibit 29: Impact on EBITDA (2028e): better for volume-focused players



Source: Morgan Stanley Research. Note: Cogna impact considers only Kroton EBITDA.

Exhibit 30: Latam Education EV/EBITDA: high multiples during FIES boom years



Source: Company data, Morgan Stanley Research

Our thoughts on valuations. FIES growth in 2012-14 made Brazil education one of the most attractive industries worldwide. The program (i) ended the affordability problem, generating demand and price increase; and (ii) boosted the companies profitability due to gains of scale and better working capital. Multiples reached a high (12-15x EV/EBITDA and 15-20x PE), as investors would pay a premium for education names, but then dropped immediately after the program was reduced in 2015. As the market signalized by this week's performance, we believe a FIES comeback would not only accelerate the campus recovery process, but also bring positive perspectives from investors, potentially leading to a re-rating in the next 12-18 months, to 8-12x EV/EBITDA depending on the details (FIES volume and distribution rules).

What if the new FIES fails? We think players have learned. The cut in FIES initiated a crisis in the industry as players were too exposed to it and had to invest in private funding, DL expansion and price reductions as the only way out. In the event of a public funding return, investors might be skeptical about whether it is just a temporary/unsustainable support or not and, if that is the case, to what extent the companies should rely on it. In our view, FIES would mean a larger pie and lower risk for players, so it would certainly be positive news. However, companies are already looking for diversification and differentiation, and should continue to put efforts to expand DL, Medicine and continuing education, with FIES being a means of accelerating the campus recovery, not the core strategy.

Quantifying the Potential Impact

Exhibit 31: Potential change in Estimates After a 5-Cycle (FIES Maturation)

Change in 2028 (vs. No FIES)	Sector	Cogna/Kroton	YDUQS	Ser	Anima	Cruzeiro	Afya	Vitru
Super Expansion								
OC Students	19%	32%	29%	36%	30%	29%	10%	0%
DL Students	-10%	-10%	-11%	-14%	-12%	-11%	n.m.	-5%
Revenue	22%	44%	30%	34%	23%	17%	3%	-7%
EBITDA	n.a.	88%	59%	81%	47%	37%	6%	-18%
EBITDA Margin	n.a.	10.9pp	8.3pp	10.7pp	7.0pp	5.4pp	1.1pp	-4.7pp
Strong Expansion								
OC Students	8%	11%	12%	13%	13%	12%	4%	0%
DL Students	-4%	-4%	-5%	-6%	-5%	-5%	n.m.	-1%
Revenue	10%	19%	14%	13%	10%	7%	1%	-2%
EBITDA	n.a.	38%	27%	31%	20%	15%	3%	-4%
EBITDA Margin	n.a.	5.8pp	4.4pp	4.8pp	3.4pp	2.4pp	0.5pp	-1.1pp
Limited Expansion								
OC Students	3%	2%	4%	3%	5%	4%	1%	0%
DL Students	-3%	-3%	-3%	-4%	-4%	-3%	n.m.	-2%
Revenue	4%	7%	6%	3%	4%	2%	1%	-2%
EBITDA	n.a.	14%	12%	7%	8%	4%	1%	-5%
EBITDA Margin	n.a.	2.2pp	2.0pp	1.1pp	1.4pp	0.6pp	0.2pp	-1.3pp

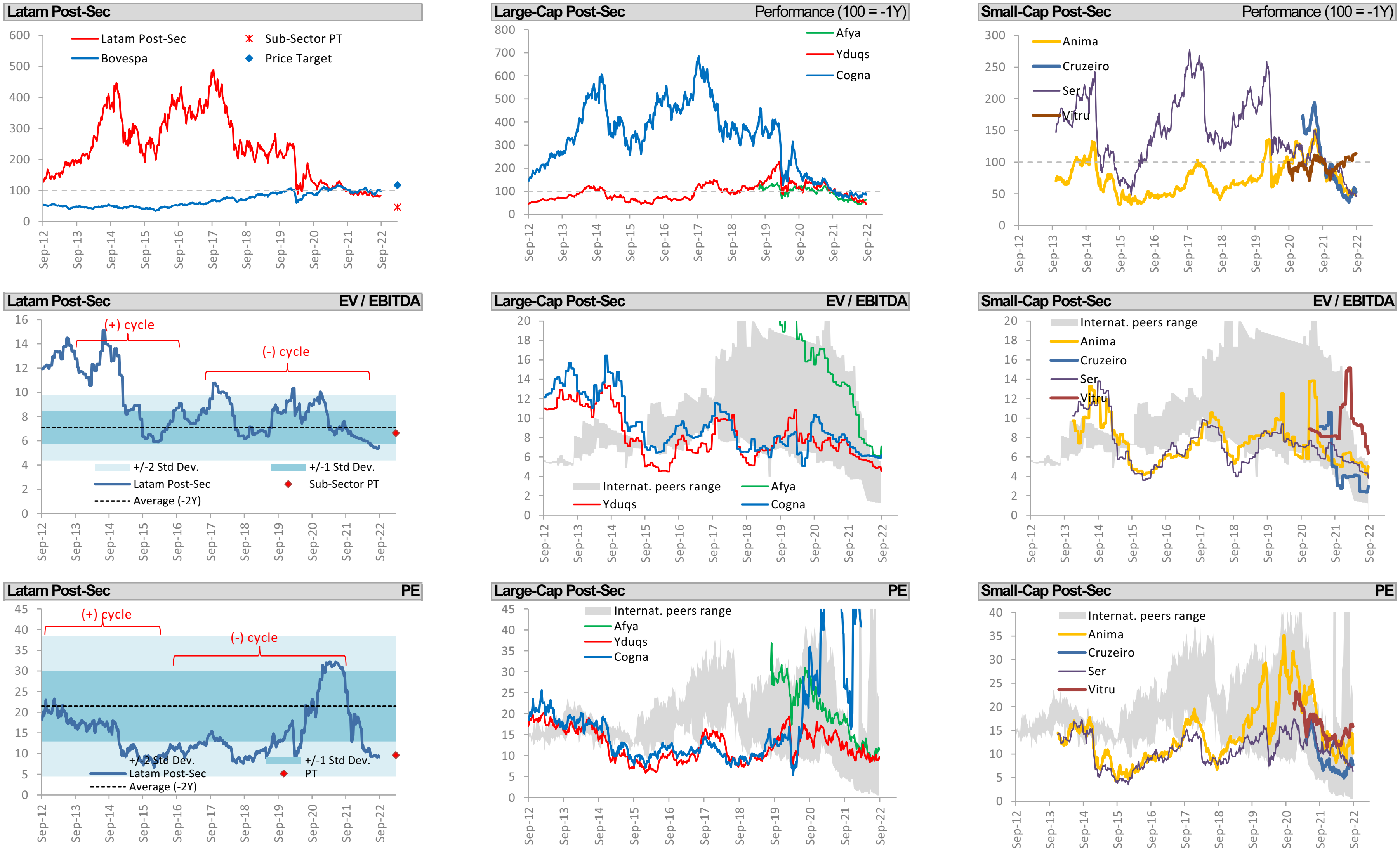
Source: Company data, Morgan Stanley Research

Valuation Update

Exhibit 36: Global Post-Secondary Education Valuation Table

Prices date: September 23, 2022	Crrc.	Mkt Cap US$ mn	Price Last	Price Target	MS Rating	Revenue CAGR 21-23E	EBITDA margin 2022E	EBITDA margin 2023E	ROE 2022E	N.Debt / EBITDA 2022E	1 Year Price Perf.	EV/EBITDA 2022E	EV/EBITDA 2023E	P/E 2022E	P/E 2023E	EV/Revenue 2022E	EV/Revenue 2023E
Post-Secondary Education		**17,323**				**10%**	**26%**	**27%**	**14%**	**1.2x**		**8x**	**7x**	**16x**	**34x**	**2.0x**	**1.8x**
Brazil		**4,705**				**20%**	**30%**	**33%**	**13%**	**2.0x**		**7x**	**6x**	**19x**	**90x**	**2.2x**	**1.9x**
Afya	USD	1,325	14.1	15.0	EW	24%	38%	40%	17%	0.8x		8.4x	7.4x	14x	11x	3.2x	2.9x
Cogna	BRL	1,074	3.0	2.7	UW	1%	26%	29%	n.m.	2.2x		6.7x	5.2x	n.m.	42x	1.7x	1.5x
YDUQS	BRL	806	13.7	17.0	OW	6%	30%	31%	n.m.	1.9x		5.1x	4.6x	n.m.	22x	1.5x	1.4x
Ser	BRL	170	7.0	8.0	UW	15%	21%	27%	n.m.	3.5x		5.9x	4.3x	n.m.	6x	1.3x	1.2x
Cruzeiro do Sul	BRL	336	4.6	6.0	OW	9%	29%	30%	4%	0.3x		3.4x	3.0x	28x	12x	1.0x	0.9x
Anima	BRL	441	5.7	6.5	EW	20%	30%	31%	n.m.	2.2x		4.4x	3.8x	n.m.	762x	1.3x	1.2x
Vitru	USD	553	19.3	23.5	OW	73%	26%	33%	10%	5.2x		13.7x	7.1x	28x	10x	3.6x	2.4x
Mexico & Peru		**1,857**				**11%**	**26%**	**28%**	**13%**	**-0.2x**		**6x**	**5x**	**13x**	**10x**	**1.5x**	**1.3x**
Laureate	USD	1,857	11.3	15.5	OW	11%	26%	28%	13%	-0.2x		5.6x	4.5x	13x	10x	1.5x	1.3x
US		**9,995**				**6%**	**23%**	**24%**	**15%**	**0.9x**		**9x**	**8x**	**15x**	**13x**	**2.0x**	**1.9x**
Adtalem	USD	1,602	35.5	N.C.	N.C.	13%	n.a.	25%	n.m.	n.a.		n.a.	5.9x	10x	9x	1.5x	1.5x
Grand Canyon	USD	2,549	79.7	N.C.	N.C.	3%	31%	31%	n.a.	-1.0x		8.4x	7.9x	14x	13x	2.6x	2.5x
Bridgepoint	USD	5	0.2	N.C.	N.C.	-4%	n.m.	2%	n.a.	n.a.		2.5x	n.m.	n.m.	n.m.	n.m.	n.m.
American P. Educ.	USD	178	9.4	N.C.	N.C.	22%	9%	9%	n.a.	n.a.		2.8x	2.6x	9x	9x	0.2x	0.2x
Strayer	USD	1,535	62.3	N.C.	N.C.	-1%	16%	18%	n.a.	-1.1x		8.3x	7.2x	23x	18x	1.3x	1.3x
ITT	USD	4,126	16.8	25.0	EW	7%	21%	23%	15%	2.8x		10.0x	9.1x	15x	12x	2.1x	2.1x
Others		**765**				**3%**	**18%**	**21%**	**n.a.**	**4.1x**		**7x**	**5x**	**n.a.**	**n.a.**	**1.2x**	**1.1x**
2U	USD	448	5.8	12.00	EW	3%	18%	21%	n.m.	4.1x		6.7x	5.2x	n.m.	n.m.	1.2x	1.1x
Shanghai	CNY	317	7.8	N.C.	N.C.	n.m.	n.a.	n.a.	n.a.	n.a.		n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Exhibit 37: Latam Performance and Absolute Valuation Multiples Summary



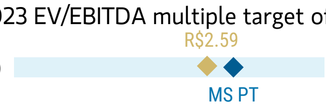
Source: Datastream (based on consensus), Morgan Stanley Research.

Risk Reward – COGNA EDUCACAO (COGN3.SA)

Another complex year with pressured EPS

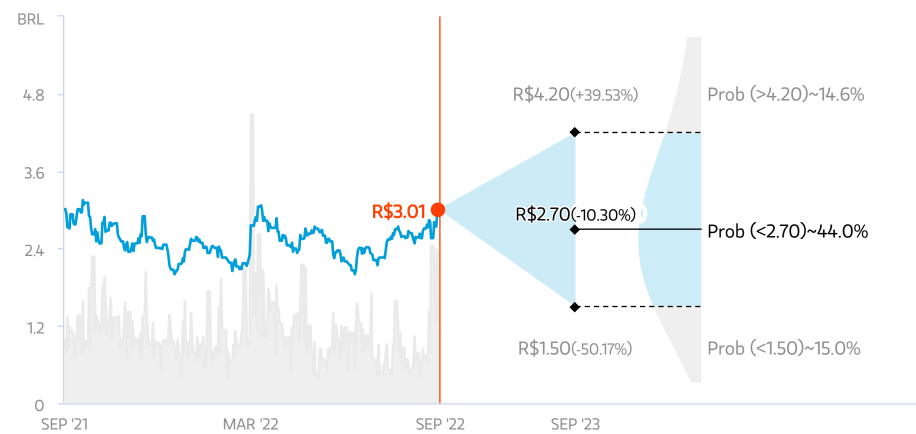
PRICE TARGET R$2.70

Derived from our base case, which is based on an 2023 EV/EBITDA multiple target of 7.1x.

Consensus Price Target Distribution R$1.80  R$3.10

Source: Refinitiv, Morgan Stanley Research

RISK REWARD CHART AND OPTIONS IMPLIED PROBABILITIES (12M)



Key: Historical Stock Performance ● Current Stock Price ◆ Price Target

Source: Refinitiv, Morgan Stanley Research, Morgan Stanley Institutional Equities Division. The probabilities of our Bull, Base, and Bear case scenarios playing out were estimated with implied volatility data from the options market as of 23 Sep, 2022. All figures are approximate risk-neutral probabilities of the stock reaching beyond the scenario price in either three-months' or one-years' time. View explanation of Options Probabilities methodology here

UNDERWEIGHT THESIS

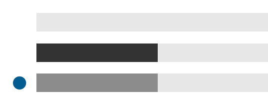
Material re-structuring at Kroton. Cogna re-sized its on-campus operations. Correct strategy, but creates additional short-term growth headwinds.

~35% of the value comes from Vasta. We prefer to play that directly through VSTA.

Weak short-term earnings momentum. On-campus re-sizing, PEP extinguished and high leverage.

Negative 2022e EPS. Revenues pressures, high D&A and leverage could lead to another year of negative bottom line.

Consensus Rating Distribution



0% Overweight
50% Equal-weight
50% Underweight

● MS Rating

Source: Refinitiv, Morgan Stanley Research

Risk Reward Themes

Market Share: *Positive*

View descriptions of Risk Rewards Themes here

BULL CASE R$4.20

8.8x Bull Case 2023e EV/EBITDA

High single-digit revenue growth, and higher long term margins. Revenue growing at a 8% 2021-25 CAGR and Adj. EBITDA margin from 12% in 2020 to 28% in 2022e, normalizing at 40% in 2030e.

BASE CASE R$2.70

7.1x Base Case 2023e EV/EBITDA

Single digit revenue growth and gradual margin expansion. Revenue growing at a 5% 2021-25 CAGR and Adj. EBITDA margin increases from 12% in 2020 to 28% in 2022e, normalizing at 35% in 2030e

BEAR CASE R$1.50

6.0x Bear Case 2023e EV/EBITDA

Low single digit revenue growth. Revenue growing at a 2% 2021-25 CAGR and adj. EBITDA margin increases from 12% in 2020 to 27% in 2022e, normalizing at 25% in 2030e.

Risk Reward – COGNA EDUCACAO (COGN3.SA)

KEY EARNINGS INPUTS

Drivers	2021	2022e	2023e	2024e
Post Sec Student Base YoY Growth (%) (%)	4.9	12.9	13.5	10.0
Prices Post Sec (Avg R$/Student/month) growth (%)	(15.3)	(9.5)	(7.4)	(4.0)
Post Sec Revenues Growth (%)	(13.4)	(1.3)	4.9	7.1
EBITDA margin (%)	23.0	25.9	29.1	31.1

INVESTMENT DRIVERS

Employment and inflation in Brazil. Key Post-Sec cycle drivers, still tough outlook.

Quarterly earnings delivery. Intake, dropouts, PDA, margins and free cash flow.

Liability management. Focus on deleveraging and reducing cost of debt.

GLOBAL REVENUE EXPOSURE

● 100% Latin America

Source: Morgan Stanley Research Estimate
View explanation of regional hierarchies here

SUSTAINABILITY & ESG

		+1.0	-1.0
Indicator of Change	-0.56		
Disclosure Rate	50%		

RISKS TO PT/RATING

RISKS TO UPSIDE

- **Top line.** Higher intakes (currently impacted by macro) and prices (impacted by competition).
- **Margins.** High margins driven by DL scalability.

RISKS TO DOWNSIDE

- **PDA.** Returning to previous levels.
- **Weak macro environment.** Driving lower demand and higher competition.
- **Leverage and weak earnings momentum.** Leading to further downside revisions.

OWNERSHIP POSITIONING

Inst. Owners, % Active 77.8%

Source: Refinitiv, Morgan Stanley Research

MS ESTIMATES VS. CONSENSUS

FY Dec 2022e

	Low	Morgan Stanley Estimates	Mean	High
Sales / Revenue (R$, mm)	4,619	4,934	4,949	5,151
EBITDA (R$, mm)	1,279	1,279	1,368	1,540
Net income (R$, mm)	(558)	(337)	(248)	102
EPS (R$)	(0.20)	(0.18)	(0.09)	0.05

◆ Mean ◆ Morgan Stanley Estimates

Source: Refinitiv, Morgan Stanley Research

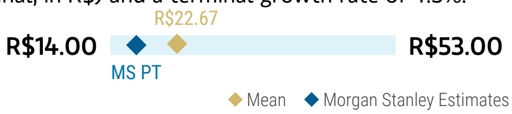
Risk Reward – YDUQS PART (YDUQ3.SA)

Compelling valuation and exposure to main growth drivers: DL, Medicine and M&A

PRICE TARGET R$17.00

Derived from our base case scenario, which is based on a discounted free cash flow to firm, assuming an average WACC of 16.4% (nominal, in R$) and a terminal growth rate of 4.5%.

Consensus Price Target Distribution



Source: Refinitiv, Morgan Stanley Research

RISK REWARD CHART

Source: Refinitiv, Morgan Stanley Research

OVERWEIGHT THESIS

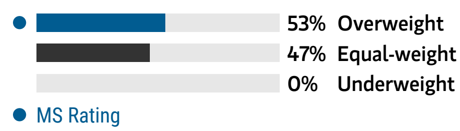
Premium segment (IBMEC + Medicine) and DL maturation. Likely to drive strong revenue and EBITDA growth in the medium term.

Short-term results challenged. YDUQS is facing pressures from the high number of discounts conceded in 2022, causing less cost dilution and lower margins, gradually fading as macro conditions and affordability normalize.

Margin expansion potential. (i) Teaching costs, with hybridity, med schools and efficiency; (ii) dropout, probably where Yduqs has more low hanging fruit to capture; (iii) marketing expenses, normalizing.

M&A upside. Potential to acquire companies to expand portfolio and geographical exposure in 2023-24.

Consensus Rating Distribution



Source: Refinitiv, Morgan Stanley Research

Risk Reward Themes

Market Share: *Positive*

View descriptions of Risk Rewards Themes here

BULL CASE R$22.00

6.8x 2023e Bull Case EV/EBITDA

Long-term margins of ~40%. Revenue growing at a 12% 2021-25e CAGR, driven by volumes at +14% (+6% on-campus, +16% in distance learning). MS EBITDA margin keeps expanding to a longer term sustainable level of 40%.

BASE CASE R$17.00

6.4x 2023e Base Case EV/EBITDA

Long-term margins of ~36%. Revenue growing +8% 2021-25e CAGR, driven by volumes +7% (+3% on-campus, +9% in distance learning). MS EBITDA margin at 30% in 2022, stabilizing long term at a sustainable level of 36%

BEAR CASE R$9.00

5.3x 2023e Bear Case EV/EBITDA

Long-term margins of ~30%. Revenue growing +2% 2021-25e CAGR, driven by +4% volumes (-2% on-campus, +6% in distance learning). MS EBITDA margin at 29% in 2022, stabilizing at 30%.

Risk Reward – YDUQS PART (YDUQ3.SA)

KEY EARNINGS INPUTS

Drivers	2021	2022e	2023e	2024e
Students growth (%) (%)	63.1	6.4	8.9	7.2
Intake growth (YoY %) (%)	13.2	22.7	10.7	7.1
Drop-out rate (%) (%)	31.1	32.0	30.8	29.7
Average Net Ticket Growth (YoY %) (%)	(24.3)	(19.2)	1.8	0.8
EBITDA margin (%) (%)	27.9	29.6	30.5	31.7

INVESTMENT DRIVERS

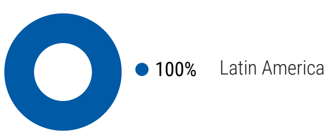
Quarterly earnings. Focus on top line and margin growth.

Distance Learning opportunity. YDUQS is investing heavily on digital transformation and DL growth.

On-campus recovery. As macro conditions normalize.

M&A activity. Focus on price and IRR.

GLOBAL REVENUE EXPOSURE



Source: Morgan Stanley Research Estimate
View explanation of regional hierarchies here

SUSTAINABILITY & ESG

		+1.0	-1.0
Indicator of Change	0.55		
Disclosure Rate	70%		

RISKS TO PT/RATING

RISKS TO UPSIDE

- **Long-term margins.**
- **Top-line evolution** (both intakes and prices).
- **Potential M&A.**

RISKS TO DOWNSIDE

- **EBITDA adjustments.**
- **Delinquency** (and its impacts on provisions and dropouts).
- **Pricing power deterioration.**

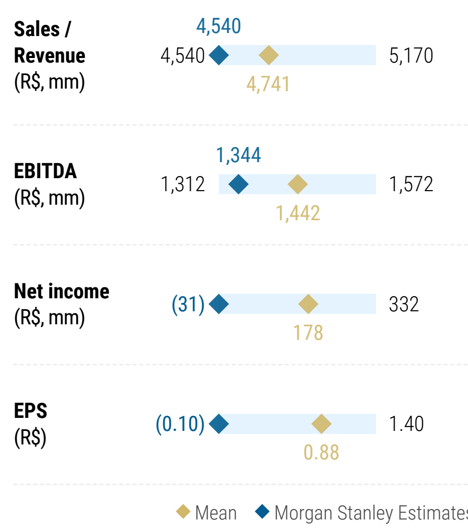
OWNERSHIP POSITIONING

Inst. Owners, % Active 86.7%

Source: Refinitiv, Morgan Stanley Research

MS ESTIMATES VS. CONSENSUS

FY Dec 2022e



Source: Refinitiv, Morgan Stanley Research

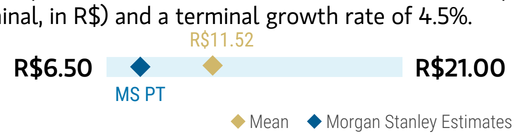
Risk Reward – Ser Educacional SA (SEER3.SA)

Unfavorable risk-reward

PRICE TARGET R$8.00

Our PT is derived from our base case scenario, which is based on a discounted free cash flow, assuming an average WACC of 19.0% (nominal, in R$) and a terminal growth rate of 4.5%.

Consensus Price Target Distribution



Source: Refinitiv, Morgan Stanley Research

RISK REWARD CHART

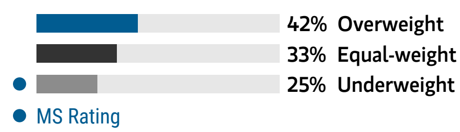
Source: Refinitiv, Morgan Stanley Research

UNDERWEIGHT THESIS

Mixed FY22 for Ser... Driven by (i) disappointing DL intake, (ii) margin headwinds due to discounts, cost inflation and M&A. On the other hand, the company is leveraged to the on-campus improvement from now on.

...and there are uncertainties for the future. Moving in the right direction by building a broad digital learning ecosystem, however successful M&A integration and DL expansion may not materialize.

Consensus Rating Distribution



Source: Refinitiv, Morgan Stanley Research

Risk Reward Themes

Market Share: *Positive*

View descriptions of Risk Rewards Themes here

BULL CASE R$9.50

4.7x Bull Case '23e EV/EBITDA

Strong volume growth and significant margin expansion. Revenue growing at a 15% 2021-25e CAGR, driven by volumes at 20% and prices at -4%. MS EBITDA margin at 22% in 2022e, stabilizing at a level of 35%.

BASE CASE R$8.00

4.5x Base Case '23e EV/EBITDA

Double digit revenue growth and gradual margin recovery. Revenue growing at a 11% 2021-25 CAGR, driven by volumes at 17% and prices at -6%. MS EBITDA margin at 21% in 2022e and stabilizing at a level of 30% in 2030e.

BEAR CASE R$4.00

3.9x Bear Case '23e EV/EBITDA

Single digit revenue growth and very gradual margin recovery. Top line growing 6% 2021-25e CAGR, driven by volumes at 12% and prices at -7%. EBITDA margin at 21% in 2022e and stabilizing at a level of 27% in 2030e.

Risk Reward – Ser Educacional SA (SEER3.SA)

KEY EARNINGS INPUTS

Drivers	2021	2022e	2023e	2024e
Students Growth (%) (%)	16.9	44.4	10.1	9.2
Intake growth (YoY %) (%)	38.2	13.7	10.2	4.4
Drop-out rate (%) (%)	30.2	32.5	27.0	25.2
Average Net Ticket Growth (%) (%)	2.0	(7.5)	(12.5)	(0.9)
EBITDA margin (%) (%)	25.7	21.4	27.1	28.0

INVESTMENT DRIVERS

- **Potential M&A.** Still has balance sheet.
- **Quarterly earnings delivery.** Intakes, drop-outs, prices, provisions, margins.
- **Distance learning expansion.** Synergies with Fael, DL execution, investments in new businesses (e.g. fintech, online platform).

GLOBAL REVENUE EXPOSURE

100% Latin America

Source: Morgan Stanley Research Estimate
View explanation of regional hierarchies here

SUSTAINABILITY & ESG

		+1.0	-1.0
Indicator of Change	0.00		
Disclosure Rate	60%		

RISKS TO PT/RATING

RISKS TO UPSIDE

- **Top-line evolution.** Both intake and prices.
- **Margin expansion.** Driven by capacity utilization, prices and cost reduction initiatives.
- **Successful M&A integration.** Ser becomes the leader in continuing education.

RISKS TO DOWNSIDE

- **Delinquency.** Impact on provision and dropouts.
- **Unsuccessful DL expansion plan.**

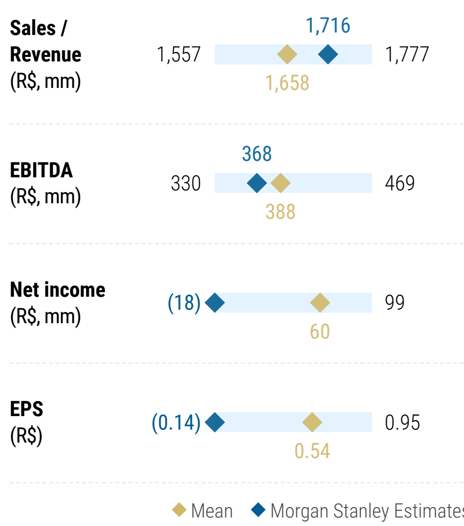
OWNERSHIP POSITIONING

Inst. Owners, % Active 93.1%

Source: Refinitiv, Morgan Stanley Research

MS ESTIMATES VS. CONSENSUS

FY Dec 2022e



Source: Refinitiv, Morgan Stanley Research

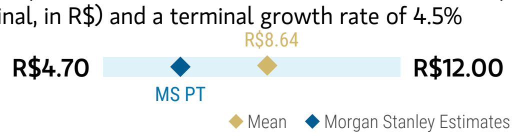
Risk Reward – Anima Educacao (ANIM3.SA)

Resilient high-quality schools, but liability management still a concern

PRICE TARGET R$6.50

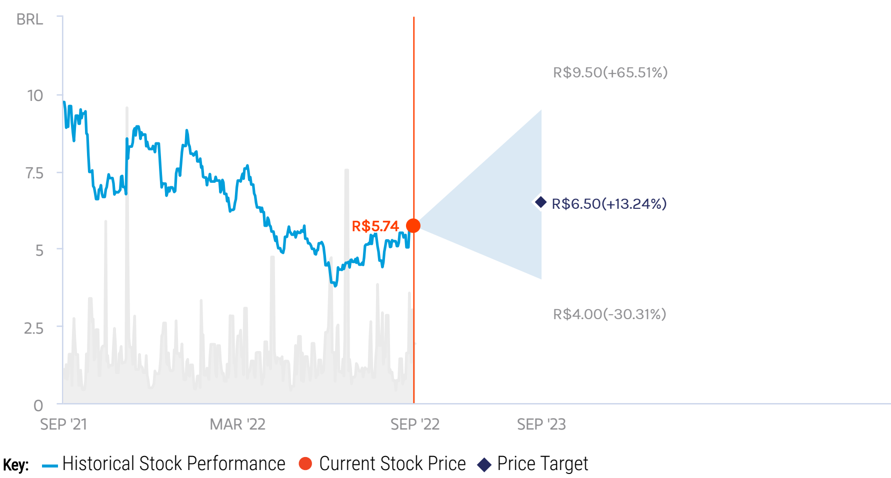
Our PT is derived from our base case scenario, which is based on a discounted free cash flow, assuming an average WACC of 16.5% (nominal, in R$) and a terminal growth rate of 4.5%

Consensus Price Target Distribution



Source: Refinitiv, Morgan Stanley Research

RISK REWARD CHART



Source: Refinitiv, Morgan Stanley Research

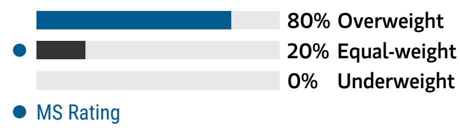
EQUAL-WEIGHT THESIS

Smooth integration with LAUR BZ assets. ANIM has been showing decent synergies capture, with room for further improvements and margin expansion.

Disruptive deal with DNA Capital. Reducing net debt and expanding Inspirali medical education growth avenues.

Still need to focus on deleveraging. We do not see potential for strong re-rating due to high net debt, which extracts most of Anima's value and pressures EPS.

Consensus Rating Distribution



Source: Refinitiv, Morgan Stanley Research

Risk Reward Themes

Market Share: *Positive*

View descriptions of Risk Rewards Themes here

BULL CASE R$9.50

6.0x Bull Case '23e EBITDA

Strong volume growth and significant margin expansion. Revenue growing at a 17% 2021-25e CAGR, driven by volumes at 8% and prices at 10%. MS EBITDA margin at 30% in 2022e, stabilizing at a level of 39%.

BASE CASE R$6.50

5.8x Base Case '23e EBITDA

Solid revenue growth. Revenue growing at a 14% 2021-25e CAGR, driven by volumes at 6% and prices at 9%. MS EBITDA margin at 30% in 2022e, stabilizing at a level of 37%

BEAR CASE R$4.00

5.8x Bear Case '23e EBITDA

Margins flat. Revenue growing at a 8% 2021-25e CAGR, driven by volumes at 3% and prices at 5%. MS EBITDA margin at 29% in 2022e, stabilizing at a level of 29%.

Risk Reward – Anima Educacao (ANIM3.SA)

KEY EARNINGS INPUTS

Drivers	2021	2022e	2023e	2024e
Students growth (YoY %) (%)	191.2	3.0	6.2	6.8
Intake growth (YoY %) (%)	55.3	43.5	0.6	2.1
Drop-out rate (%) (%)	38.7	28.7	27.3	26.2
Average Net Ticket Growth (YoY %) (%)	(37.2)	31.9	3.5	1.8
EBITDA margin (%) (%)	26.6	29.7	31.3	33.5

INVESTMENT DRIVERS

- **Quarterly earnings delivery.** Prices, intakes, dropouts, provisions and margins.
- **Synergies with LAUR BZ assets.**
- **Deleveraging plan.**

GLOBAL REVENUE EXPOSURE

100% Latin America

Source: Morgan Stanley Research Estimate
View explanation of regional hierarchies here

SUSTAINABILITY & ESG

Indicator of Change	-1.00	+1.0 / -1.0
Disclosure Rate	60%	

RISKS TO PT/RATING

RISKS TO UPSIDE

- **Employment in Brazil.** Key cycle driver.
- **Top-line evolution.** Resilient assets protecting both intakes and prices.
- **Long-term margins.** Synergies ahead of guidance and expectations.

RISKS TO DOWNSIDE

- **Weak intake cycle.** Driven by poor economic scenario in Brazil.
- **High debt.** Deleveraging process takes more time.
- **M&A integration execution.** Below expected synergies delivery.

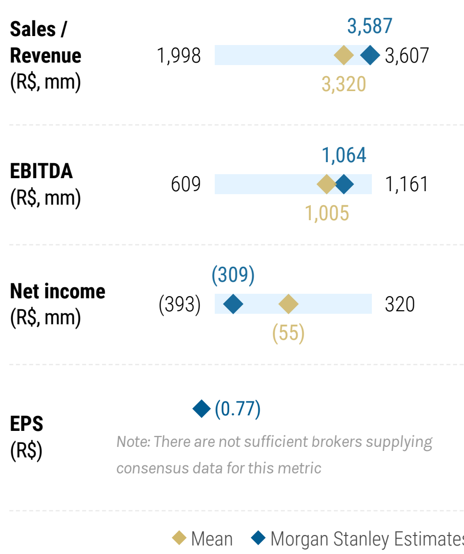
OWNERSHIP POSITIONING

Inst. Owners, % Active 93.4%

Source: Refinitiv, Morgan Stanley Research

MS ESTIMATES VS. CONSENSUS

FY Dec 2022e



Source: Refinitiv, Morgan Stanley Research

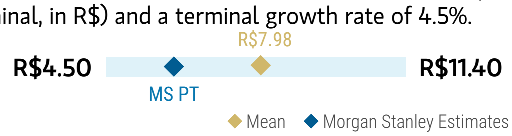
Risk Reward – Cruzeiro do Sul (CSED3.SA)

Regional leader with differentiated assets at compelling valuation

PRICE TARGET R$6.00

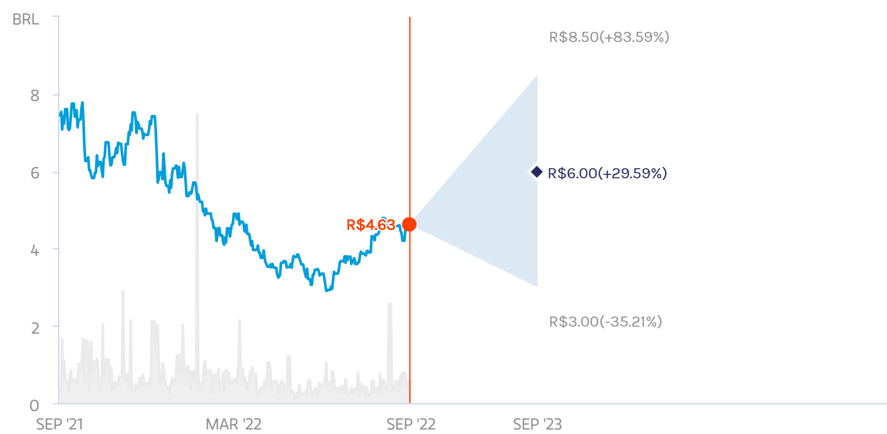
Derived from our base case scenario, which is based on a discounted free cash flow to firm, assuming an average WACC of 20.4% (nominal, in R$) and a terminal growth rate of 4.5%.

Consensus Price Target Distribution



Source: Refinitiv, Morgan Stanley Research

RISK REWARD CHART



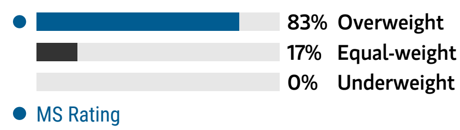
Key: Historical Stock Performance, Current Stock Price, Price Target

Source: Refinitiv, Morgan Stanley Research

OVERWEIGHT THESIS

- **Leveraged to On-campus recovery, DL expansion and M&A...** Strong brands, solid DL footprint, M&A track record. Well positioned to capture inorganic growth opportunities.
- **...but disappointing FY21.** Sequential quarters of underdelivery in its IPO year led us to lower our estimates significantly.
- **Still trading at compelling valuation.** Inexpensive, trading at 6x EV/EBITDA 2023e

Consensus Rating Distribution



Source: Refinitiv, Morgan Stanley Research

Risk Reward Themes

Market Share: *Positive*

View descriptions of Risk Rewards Themes here

BULL CASE R$8.50

16x Bull Case '23e MS EPS

Long-term margins of ~36%. Revenue growing at a 12% 2021-25e CAGR, driven by volumes at +12% (+7% on-campus, +15% in distance learning) and prices at +0% (mix). MS EBITDA margin keeps expanding to a longer term sustainable level of 36%.

BASE CASE R$6.00

15x Base Case '23e MS EPS

Long-term margins of ~31%. Revenue growing at a 9% 2021-25e CAGR, driven by volumes at +8% (+4% on-campus, +10% in distance learning) and prices at +0% (mix). MS EBITDA margin increases slowly, reaching 31% longer term

BEAR CASE R$3.00

15x Bear Case '23e MS EPS

Long-term margins of ~25%. Revenue growing at a 5% 2021-25e CAGR, driven by volumes at +6% (+1% on-campus, +8% in distance learning) and prices at -1% (mix). MS EBITDA margin decreases to a longer term sustainable level of 25%.

Risk Reward – Cruzeiro do Sul (CSED3.SA)

KEY EARNINGS INPUTS

Drivers	2021	2022e	2023e	2024e
Students growth (%) (%)	9.6	7.1	7.7	9.3
Intake growth (YoY %) (%)	17.1	12.2	7.2	7.3
Drop-out rate (%) (%)	35.4	37.3	37.0	35.8
Average Net Ticket Growth (YoY %) (%)	(7.7)	3.4	(0.4)	(0.9)
EBITDA margin (IAS17) (%) (%)	20.0	20.4	21.3	22.3

INVESTMENT DRIVERS

Quarterly earnings. Focus on intake and margins.

Distance Learning. Remains the growth segment.

On-Campus. Assets resiliency and student base recovery.

New potential M&A activity. With focus on price paid.

GLOBAL REVENUE EXPOSURE

100% Latin America

Source: Morgan Stanley Research Estimate
View explanation of regional hierarchies here

SUSTAINABILITY & ESG

Indicator of Change	-1.00	+1.0 / -1.0
Disclosure Rate	30%	

RISKS TO PT/RATING

RISKS TO UPSIDE

Top line growth. Solid OC enrollment and pricing recovery, and DL penetration.
Further margin expansion. We already assume conservative expansion.
M&A. Raised BRL1bn on its IPO to consolidate the market.

RISKS TO DOWNSIDE

Intake cycle. Weak intake and many dropouts in 2022-23.
Flat margins. CSED is not able to capture gains of scale and M&A synergies.
M&A. Higher than expected multiples paid on acquisitions.

OWNERSHIP POSITIONING

Inst. Owners, % Active 99.6%

Source: Refinitiv, Morgan Stanley Research

MS ESTIMATES VS. CONSENSUS

FY Dec 2022e

	Low	Morgan Stanley Estimates	Mean	High
Sales / Revenue (R$, mm)	1,991	2,018	2,009	2,022
EBITDA (R$, mm)	543	579	583	605
Net income (R$, mm)		63		
EPS (R$)	0.16	0.16	0.37	0.60

Note: There are not sufficient brokers supplying consensus data for this metric (Net income)

◆ Mean ◆ Morgan Stanley Estimates

Source: Refinitiv, Morgan Stanley Research

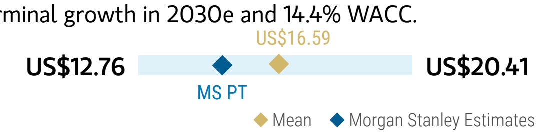
Risk Reward – Afya Ltd (AFYA.O)

Strong execution already priced-in

PRICE TARGET US$15.00

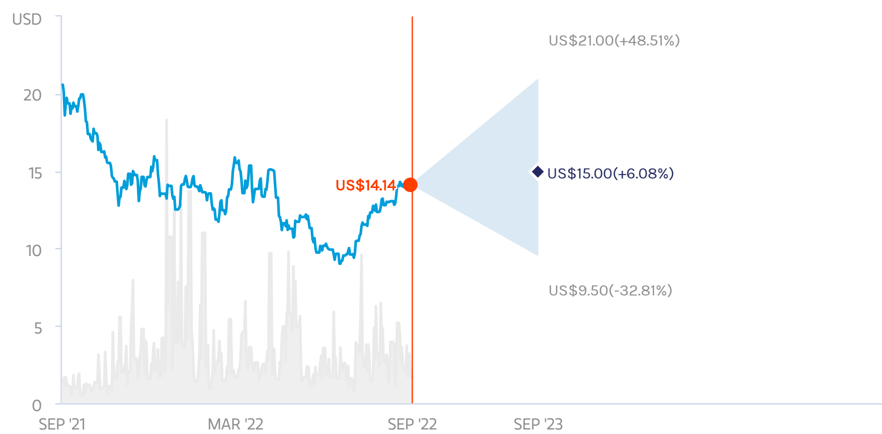
Our PT is derived via DCF, using 4.5% terminal growth in 2030e and 14.4% WACC.

Consensus Price Target Distribution



Source: Refinitiv, Morgan Stanley Research

RISK REWARD CHART



Key: Historical Stock Performance ● Current Stock Price ◆ Price Target

Source: Refinitiv, Morgan Stanley Research

EQUAL-WEIGHT THESIS

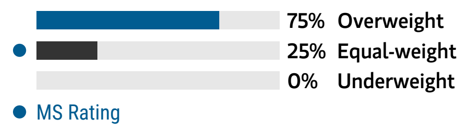
Attractive story. Leading all key themes in Brazil education – med schools, ed-techs and M&A.

Competitive advantages. Medicine focus, technological DNA and scale.

High growth and high profitability, already priced in. EBITDA margin with potential room to approach ~39%, when growth normalizes.

Digital services. There are execution risks involving new M&A, consolidation and integration of those assets into a single platform.

Consensus Rating Distribution



Source: Refinitiv, Morgan Stanley Research

Risk Reward Themes

Pricing Power: *Positive*
Market Share: *Positive*

View descriptions of Risk Rewards Themes here

BULL CASE US$21.00

17x 2023e PE

Stronger digital services and higher margins. Revenue growing at a 19% 2021-25e CAGR, driven by volumes at +1% BU1 and +39% Digital Services and prices at +8% and +1% respectively. Adj. EBITDA margin to reach 44% longer term and 27% ROIC.

BASE CASE US$15.00

13x 2023e MS PE

Long-term margins of ~39%. Revenue growing at a 17% 2021-25e CAGR, driven by volumes at +1% BU1 and +35% Digital Services and prices at +7% and +1% respectively. Adj. EBITDA margin to reach 39% longer term and 19% ROIC.

BEAR CASE US$9.50

10x 2023e PE

Digital services does not pick-up and lower margins. Revenue growing at a 12% 2021-25e CAGR, driven by volumes at +0% BU1 and +24% Digital Services and prices at +4% and -1% respectively. Adj. EBITDA margin to reach 36% longer term and 13% ROIC.

Risk Reward – Afya Ltd (AFYA.O)

KEY EARNINGS INPUTS

Drivers	2021	2022e	2023e	2024e
Medical students growth (%)	45.2	18.6	3.6	0.8
% of medical students (%)	26.2	29.8	30.9	31.2
Revenues growth (YoY %) (%)	43.1	38.9	11.2	9.2
Adj. EBITDA margin (%)	43.9	40.8	41.9	42.9

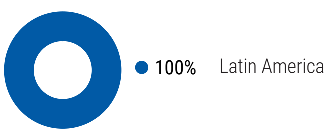
INVESTMENT DRIVERS

Potential M&A announcements. Both medical seats and edtechs.

B2B strategy execution. White space to connect physicians with HC industry's needs.

Regulatory newsflow. Mais Medicos constitutionality vs. med schools de-regulation.

GLOBAL REVENUE EXPOSURE



Source: Morgan Stanley Research Estimate
View explanation of regional hierarchies here

SUSTAINABILITY & ESG

		+1.0	-1.0
Indicator of Change	-0.33		
Disclosure Rate	60%		

RISKS TO PT/RATING

RISKS TO UPSIDE

M&A delivery. Accretive acquisition multiples, despite competition.
Synergies extraction. Afya can integrate companies successfully.
New medical seats. Through new Mais Medicos program and seats pending approval.

RISKS TO DOWNSIDE

Regulation. A complete de-regulation unlikely.
Brazil macro risk. Including FX (financials are in BRL, but trades in USD).
B2B solutions fail. Does not add value for the HC industry.

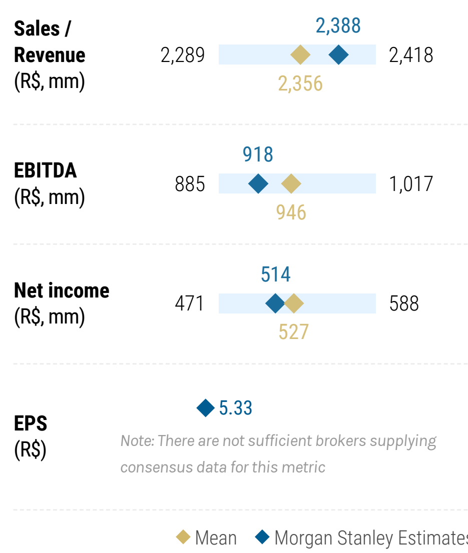
OWNERSHIP POSITIONING

Inst. Owners, % Active	95.8%
HF Sector Long/Short Ratio	1.4x
HF Sector Net Exposure	8.7%

Refinitiv; MSPB Content. Includes certain hedge fund exposures held with MSPB. Information may be inconsistent with or may not reflect broader market trends. Long/Short Ratio = Long Exposure / Short exposure. Sector % of Total Net Exposure = (For a particular sector: Long Exposure - Short Exposure) / (Across all sectors: Long Exposure – Short Exposure).

MS ESTIMATES VS. CONSENSUS

FY Dec 2022e



Source: Refinitiv, Morgan Stanley Research

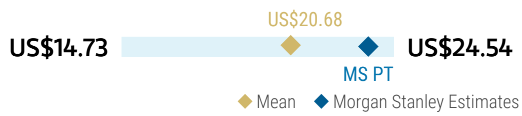
Risk Reward – Vitru Ltd (VTRU.O)

Best-positioned player to consolidate the DL segment in Brazil

PRICE TARGET US$23.50

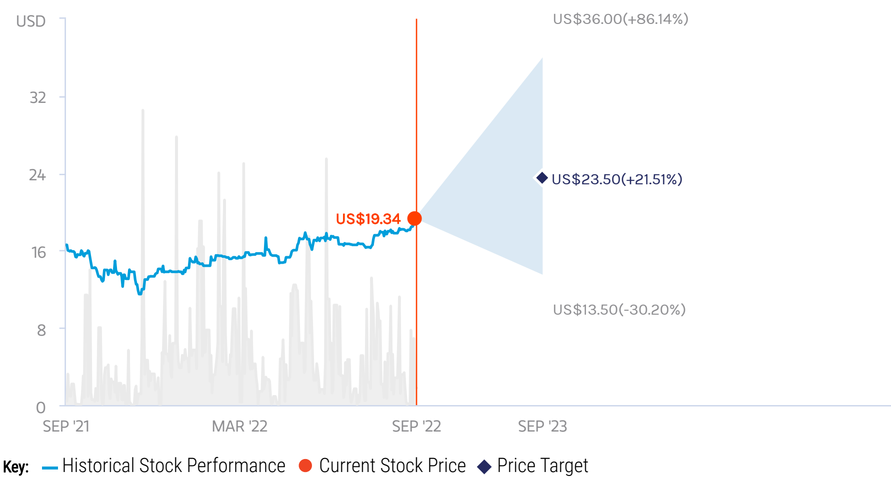
Derived from our base case scenario, which is based on a DCF, assuming 15.8% WACC (nominal in R$) and 4.5% terminal growth

Consensus Price Target Distribution



Source: Refinitiv, Morgan Stanley Research

RISK REWARD CHART



Source: Refinitiv, Morgan Stanley Research

OVERWEIGHT THESIS

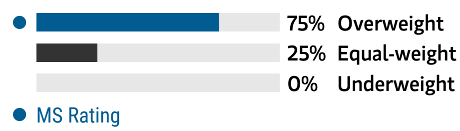
Double-digit growth for many years... Well-positioned to gain share in a growing market, delivering +15% revenue CAGR 2021-25e, driven by strong opening and maturation of hubs.

...with a winning business model. VTRU's hybrid model, differently from the traditional 100% online DL, is more engaging, with weekly in-person meetings and ability to raise tuitions while most peers reduce prices. Unicesumar offers a complementary portfolio of courses, focused on high quality and retention management.

Margins should expand. Strong opex synergies guidance. Also, gains of scale should dilute costs and SG&A, driving margins up.

High leverage. At ~4x EBITDA 23e, but med school divestiture optionality.

Consensus Rating Distribution



Source: Refinitiv, Morgan Stanley Research

Risk Reward Themes

Market Share: *Positive*

View descriptions of Risk Rewards Themes here

BULL CASE US$36.00

17x Bull Case '23e MS EPS

Implies: +17% revenue CAGR 2021-25e (proforma), Adj. EBITDA margin at 38% in 2023e, reaching 45% in 2030e.

BASE CASE US$23.50

14x Base Case '23e MS EPS

Implies: +15% revenue CAGR 2021-25e (proforma), Adj. EBITDA margin at 35% in 2023e, reaching 42% in 2030e.

BEAR CASE US$13.50

11x Bear Case '23e MS EPS

Implies: +12% revenue CAGR 2021-25e (proforma), Adj. EBITDA margin at 33% in 2023e, reaching 37% in 2030e.

Risk Reward – Vitru Ltd (VTRU.O)

KEY EARNINGS INPUTS

Drivers	2021	2022e	2023e	2024e
Students Growth (YoY) (%)	19.1	127.0	16.3	14.2
Intake Growth (%)	29.6	68.3	58.6	13.3
Drop-out-rate (%)	44.1	48.8	39.7	38.5
Average Net Ticket Growth (%)	2.3	(2.7)	1.0	1.3
Adj. EBITDA margin (%)	28.9	31.5	35.1	37.9

INVESTMENT DRIVERS

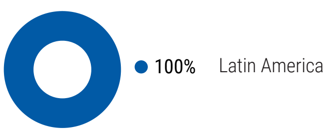
Competition. DL market has been competitive, driving lower prices.

Quarterly results. Eyes on delivery of synergies capture.

EBITDA margin. Maturation of hubs should drive EBITDA margin expansion.

Regulatory changes. New courses at DL.

GLOBAL REVENUE EXPOSURE



Source: Morgan Stanley Research Estimate
View explanation of regional hierarchies here

RISKS TO PT/RATING

RISKS TO UPSIDE

LT margins. Gains of scale diluting costs.
New DL courses. Well-positioned to capture the DL shift opportunity.
Smooth integration. Fast cost synergies capture; also commercial synergies as an upside.

RISKS TO DOWNSIDE

Competition/cannibalization. Entering in more competitive regions.
Delinquency. Impacts on provisions and dropouts.
Dilution post-transaction. Company might need to raise capital to help deleverage.

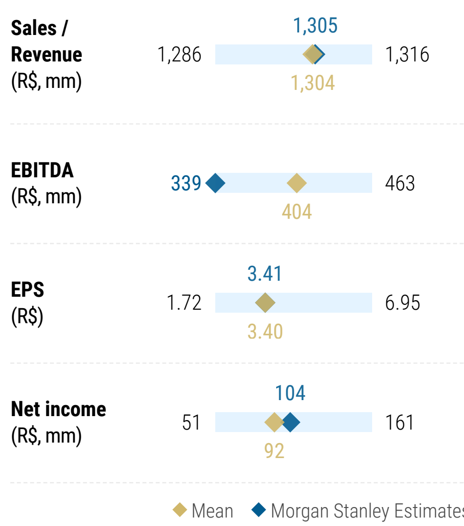
OWNERSHIP POSITIONING

Inst. Owners, % Active	99.9%
HF Sector Long/Short Ratio	1.4x
HF Sector Net Exposure	8.7%

Refinitiv; MSPB Content. Includes certain hedge fund exposures held with MSPB. Information may be inconsistent with or may not reflect broader market trends. Long/Short Ratio = Long Exposure / Short exposure. Sector % of Total Net Exposure = (For a particular sector: Long Exposure - Short Exposure) / (Across all sectors: Long Exposure – Short Exposure).

MS ESTIMATES VS. CONSENSUS

FY Dec 2022e



Source: Refinitiv, Morgan Stanley Research

Disclosure Section

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The following analysts hereby certify that their views about the companies and their securities discussed in this report are accurately expressed and that they have not received and will not receive direct or indirect compensation in exchange for expressing specific recommendations or views in this report: Javier Martinez de Olcoz Cerdan.
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Within the last 12 months, Morgan Stanley managed or co-managed a public offering (or 144A offering) of securities of S&P Global Inc, Sterling Check Corp..
Within the last 12 months, Morgan Stanley has received compensation for investment banking services from Aramark Holdings Corporation, Clarivate Plc., Global Business Travel Group Inc, Loyalty Ventures Inc, MSCI Inc., S&P Global Inc, Sterling Check Corp., Thomson Reuters Corp., Verisk Analytics, Inc..
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Global Stock Ratings Distribution

(as of August 31, 2022)
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	COVERAGE UNIVERSE		INVESTMENT BANKING CLIENTS (IBC)			OTHER MATERIAL INVESTMENT SERVICES CLIENTS (MISC)	
STOCK RATING CATEGORY	COUNT	% OF TOTAL	COUNT	% OF TOTAL IBC	% OF RATING CATEGORY	COUNT	% OF TOTAL OTHER MISC
Overweight/Buy	**1356**	**38%**	**304**	**41%**	**22%**	**596**	**39%**
Equal-weight/Hold	**1589**	**45%**	**349**	**47%**	**22%**	**716**	**47%**
Not-Rated/Hold	**0**	**0%**	**0**	**0%**	**0%**	**0**	**0%**
Underweight/Sell	**610**	**17%**	**90**	**12%**	**15%**	**225**	**15%**
TOTAL	**3,555**		**743**			**1537**	

Data include common stock and ADRs currently assigned ratings. Investment Banking Clients are companies from whom Morgan Stanley received investment banking compensation in the last 12 months. Due to rounding off of decimals, the percentages provided in the "% of total" column may not add up to exactly 100 percent.

Analyst Stock Ratings

Overweight (O or Over) - The stock's total return is expected to exceed the total return of the relevant country MSCI Index, on a risk-adjusted basis over the next 12-18 months.
Equal-weight (E or Equal) - The stock's total return is expected to be in line with the total return of the relevant country MSCI Index, on a risk-adjusted basis over the next 12-18 months.
Not-Rated (NR) - Currently the analyst does not have adequate conviction about the stock's total return relative to the relevant country MSCI Index on a risk-adjusted basis, over the next 12-18 months.
Underweight (U or Under) - The stock's total return is expected to be below the total return of the relevant country MSCI Index, on a risk-adjusted basis, over the next 12-18 months.
Unless otherwise specified, the time frame for price targets included in Morgan Stanley Research is 12 to 18 months.

Analyst Industry Views

Attractive (A): The analyst expects the performance of his or her industry coverage universe over the next 12-18 months to be attractive vs. the relevant broad market benchmark, as indicated below.
In-Line (I): The analyst expects the performance of his or her industry coverage universe over the next 12-18 months to be in line with the relevant broad market benchmark, as indicated below.
Cautious (C): The analyst views the performance of his or her industry coverage universe over the next 12-18 months with caution vs. the relevant broad market benchmark, as indicated below.
Benchmarks for each region are as follows: North America - S&P 500; Latin America - relevant MSCI country index or MSCI Latin America Index; Europe - MSCI Europe; Japan - TOPIX; Asia - relevant MSCI country index or MSCI sub-regional index or MSCI AC Asia Pacific ex Japan Index.

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INDUSTRY COVERAGE: Brazil Education Services

COMPANY (TICKER)	RATING (AS OF)	PRICE* (09/23/2022)
Javier Martinez de Olcoz Cerdan		
Afya Ltd (AFYA.O)	E (07/21/2021)	US$14.14
Anima Educacao (ANIM3.SA)	E (05/31/2022)	R$5.74
Arco Platform Ltd (ARCE.O)	O (05/06/2021)	US$11.74
COGNA EDUCACAO (COGN3.SA)	U (07/21/2021)	R$3.01
Cruzeiro do Sul (CSED3.SA)	O (03/22/2021)	R$4.63
Ser Educacional SA (SEER3.SA)	U (05/31/2022)	R$6.95
Vasta Platform Ltd (VSTA.O)	O (08/25/2020)	US$5.50
Vitru Ltd (VTRU.O)	O (10/13/2020)	US$19.34
YDUQS PART (YDUQ3.SA)	O (04/07/2020)	R$13.72

Stock Ratings are subject to change. Please see latest research for each company.
* Historical prices are not split adjusted.

INDUSTRY COVERAGE: Business & Education Services

COMPANY (TICKER)	RATING (AS OF)	PRICE* (09/23/2022)
Greg Parrish, CFA		
Stride Inc (LRN.N)	O (08/25/2022)	US$41.01
Javier Martinez de Olcoz Cerdan		
Laureate Education Inc (LAUR.O)	O (09/09/2021)	US$11.28
Toni Kaplan		
ADT Inc (ADT.N)	++	US$7.70
Advantage Solutions Inc (ADV.O)	E (04/01/2021)	US$2.40
Aramark Holdings Corporation (ARMK.N)	E (08/10/2016)	US$33.58
Bright Horizons Family Solutions Inc (BFAM.N)	U (04/07/2021)	US$58.41
Cintas Corp (CTAS.O)	E (01/06/2021)	US$389.89
Clarivate Plc. (CLVT.N)	O (03/08/2021)	US$10.23
Equifax Inc (EFX.N)	E (08/16/2022)	US$174.91
FactSet Research Systems Inc. (FDS.N)	U (07/16/2019)	US$392.67
Gartner Inc. (IT.N)	E (11/03/2021)	US$276.06
Global Business Travel Group Inc (GBTG.N)	E (09/14/2022)	US$5.90
Loyalty Ventures Inc (LYLT.O)	E (02/25/2022)	US$1.55
Moody's Corp (MCO.N)	E (01/07/2020)	US$254.69
MSCI Inc. (MSCI.N)	E (03/24/2014)	US$422.33
Nielsen Holdings NV (NLSN.N)	E (03/29/2022)	US$27.80
Republic Services Inc. (RSG.N)	O (07/13/2021)	US$140.51
S&P Global Inc (SPGI.N)	O (03/18/2021)	US$317.86
Sterling Check Corp. (STER.O)	E (04/11/2022)	US$19.48
Terminix Global Holdings Inc (TMX.N)	E (08/07/2020)	US$39.58
Thomson Reuters Corp. (TRI.N)	E (02/02/2021)	US$104.48
TransUnion (TRU.N)	E (02/23/2022)	US$63.17
Verisk Analytics, Inc. (VRSK.O)	++	US$175.20
Waste Connections Inc. (WCN.N)	O (10/13/2020)	US$139.72
Waste Management, Inc. (WM.N)	E (10/13/2020)	US$165.74

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