## Equity Report

Megastudy (072870)

## Maintain BUY, with TP of $\mathbf{W} 186,000$

## BUY

Target Price : W186,000
Current Price: $\mathbf{W 1 7 4 , 5 0 0}$
Safety Margin: 6.6\%

Market Cap. : $W 1.11$ trn
ROE : 25.7\%
OP Magin: 31.9\%
PER: 40.1 x
PBR: 9.21 x
Div. Yield: 0.66\%

52wks Beta : 0.60
52wks High : W176,200
52wks Low : $\forall 72,100$
Foreign Shares: 46.87\%
Major Shareholder :
Ju-Eun Sohn (10.00\%)
HSBC Halbis Partners (10.94\%)

## SERT

김경한. Colin K. Kim
김수민. Brian Kim
안세윤. Seyoon Ahn
이유나. Yuna Lee
함소율. Soyul Hahm

Overall, we have optimistic view on Megastudy, thus set TP at W186,000, given 1) enormous room to grow in online education market, 2) expected rapid growth of Mbest, 3) unrivalled brand power of Megastudy, and 4) 2008' new guidelines favorable to Megastudy. As many unpredictable factors which might affect the firm still exist, we suggest investors to keep close eyes on how it pulls out constant success in the market, especially expansion to foreign market.

New cash-cow, Mbest, will be another growth driver
Mbest, acquired by Megastudy in Nov. 2006, has shown dramatic growth over last two years. For the next five years at least, it is also expected to continue its race in the online middle school market, where the market size appears bigger than that of high school, strongly backed by Megastudy's know-how, brand power, and enough cash reserves.

## Planning to tap into foreign market, but unpredictable

According to the recent phone interview with $I \mathbb{R}$ manager, several companies in China and Japan contacted the firm, looking for establishing a JV for online education. The company might face risks such as relatively less-developed internet broadband infrastructure and widespread pirate digital contents. However, expansion to new market can be another long-term growth driver. Nevertheless, we do not take this issue into account until the company announces more specific plan.

## Part I. Opportunity and Risk analysis

- Change in 2008' education policy will emphasize the importance of KSAT

KSAT will be transformed into a basic standard for college entrance exam with 9 grades since 2008, which implies that the exam is likely to get more difficult to differentiate students' academic achievements. As there will be more demand for private education to prepare for harder KSAT, this policy change is expected be beneficial for Megastudy's performance. In addition, many universities are adopting a special type of acceptance, which is only through KSAT scores, students will have to focus more on KSAT.

Presidential election outcome might be favorable, but not for sure.

As Korean education system gets volatile when regime changes, contender's view on education policies will affect future private education market. Current education policies have three main principles that prohibit universities from administering their own entrance exams, disallow high schools from being ranked, and ban universities from accepting students in return for donations. Lee, Park and Son are the three contenders with the highest approval rating, and they are mostly asserting that university's should be guaranteed the autonomy of setting own acceptance guideline. In this sense, they all agree to revive own entrance exams of universities, which has long been blamed for encouraging private education. As Korean education policy has aimed to minimize private education, other measures to mitigate effects of own entrance exams of universities are expected to take place. However, without a breakthrough in education policies to vitalize public education, we can still assume that private education market will never cease to flourish.

- Potential penetration of large corporations does not seem to be formidable.

Currently, the threat from potential conglomerate competitors is not very likely. Many large corporations are recently engaged in education business due to expectation of high growth potential of the industry. For example, Samsung established a B2B education business 'Credu', whose stock price surged after its IPO. However, in high school education market, entrants as SK and KT are not showing satisfying results. SK has merged Etoos, but its monthly clicks are reported to be less than a third of

Megastudy's and the situation is even worse for KT. This implies that even though the barriers of entry seem to be low in e-learning business, the new entrants do not have enough capability to offer popular contents as Megastudy nor they can reach customers well enough.

New media for u-learning can not only be a threat, but also a chance

As new media of digital devices such as PMP have already become popular, any kind of new media that enables ubiquitous learning can be a threat if a new content provider for powerful media emerges. However, Megastudy has demonstrated timely adaptability to new media such as PMP. Therefore, if Megastudy can sustain its powerful contents, Megastudy will be an indispensable contents provider even for the new media.

- Penetration into foreign market will lead long-term growth, but unpredictable

Megastudy has a long-term vision to cover entire private education market, so it has recently made a plan to push into foreign market and expand their business. Lately some of Korean famous institutes, such as Digital Daesung and Jongro have tapped into foreign market, mainly aiming for Korean students abroad. After Korean universities decided to offer less special admission to overseas Korean students, the number of students who want to prepare for KSAT has increased.

Megastudy, however, plans to target not only overseas Korean students, but also native students in countries such as China and Japan. According to the recent phone interview with IR manager, several companies in China and Japan contacted the firm, looking for establishing a JV for online education. Nothing seems to have been decided so far, but the firm plans to execute the plan in the near future. It has built a good know-how to create online contents from offline lectures, and accumulated enough capital reserves to invest. However, the company might face risks such as relatively less-developed internet broadband infra-structure and widespread pirate digital contents. Nevertheless, expansion to new market can be another long-term growth driver. We do not take this issue into account until the company announces more specific plan.

## Part II. Market outlook

## Education market never cools down in Korea

Korean education market has been growing fast, which is attributed to incredibly high desire for education and rapid increase in national wealth level. Particularly, the private education market has posted a CAGR of $24 \%$ over the past five years. The size of Korean private education market is approximately $W 16.8$ trnn - W8.8trnn for elementary school students, $W 5$ trnn for middle school and $W 3$ trn for high school. With the constant increase in education spending per capita, the market size is projected to grow steadily by 2010, when the percentage of education spending in household income will be at its peak.

No. of high and middle school students


Annual private education cost per student


Although the online education market has shown significant growth recently, the online education market is still expected to grow more due to low current penetration rate, from W5trn in 2006 to $W 6.8$ trn in 2010 in terms of market size.

Online education market size trend


Education market breakdown by sectors


- Ceaseless growth will continue in online high school market

When it comes to private education for high school, the sizes of overall market and online market are estimated to be $W 2.5$ trn and $W 0.2$ trn, respectively. The high school online education market is expected to increase $20 \%$ per annum for next five years because 1) penetration rate is only $1.7 \%$, based on 2006 estimates, 2 ) online contents have price competitiveness over offline contents, and 3) '2008 college admission guidelines has been revised.

- Middle school market is untapped, but will begin to explode shortly

While private education market for middle school is approximately $W 4.5$ trn, which is bigger than that of high school, W3.0trn, online market is estimated to be only W0.05trn with the penetration rate of $1 \%$. Though it is very hard to say how fast the market will grow and how much penetration rate will be, it is expected to experience three-digit growth for next five years at least, following the similar trend online market for high school have gone through over the past five years.

## Part III. Forecast for Megastudy

Unrivalled in online high school education market

Currently, no one seems to be able to beat this online schooling giant. High quality contents and strong brands have been building customers' loyalty to the company, which consequently has lead constant rise in market share, up to $70 \%$. The firm is likely to uphold the competitive advantage over others going forward. The SERT concludes that current market share will be sustainable and the firm's revenue growth in online high school market will be about $20 \%$, in line with the growth of the market.

## - Short-term OP margin is expected to get lower, due to offline expansion

Megastudy has been establishing lots of offline institutes, including a boarding institute in Namyang-ju, and several branches in Gang-buk and Soowon area. It will pull another
source of revenue, but weaken the profitability of the firm. However, we expect the deteriorating effect would be limited in the short term, and OP margin would be stabilized in time, as further rapid expansion in offline institutes is unlikely. We expect revenue will grow by $50 \%$ in 2007, and slow down to around $10 \%$ going forward.

## - Mbest will be another cash-cow in online middle school market

Established in Oct 2002, Mbest has provided online and offline education services for middle school students. Megastudy decided to acquire Mbest in Sep 2006 through an equity swap. Megastudy had good initiatives to takeover Mbest since the online middle school education market is still on the starting-up stage with strong growth potential, and Mbest is most likely to be the winner, backed by Megastudy's brand power. Moreover, the takeover did not pose much financial burden, and is expected to contribute substantially to Megastudy's earnings.

According to the forecast of Megastudy, Mbest's penetration rate is expected to increase from $1.4 \%$ in 2006 to $7.3 \%$ in 2010. As the middle school online education market will grow by $45 \%$ YoY, the number of Mbest's subscribers will surge by $40.9 \%$ YoY. Although the number of Korean middle school students is expected to decline from 2007, but it will not be a critical issue because Mbest's current penetration rate is extremely low.

Estimates of middle school population


Mbest's subscribers and penetration rate


According to Goodmorning Shinhan Securities' estimation, Mbest will show strong earnings improvement. Mbest recorded sales of $W 26.1$ bn in 2006, with an increase of $102.3 \%$ YoY. The NP during the fiscal 2006 recorded $W 2.2 b n$, an increase of $307.2 \%$ over 2005. Three-year CAGR of $65.5 \%$ is expected thanks to the rapid growth of the online education market and Mbest's successful launch in 2006 of a flat-rate system.


Flat-rate system offers unlimited lectures to Mbest's subscribers during the subscription period. Mbest currently charges $W 760,000$ for a six-month subscription and W1,280,000 for 12 months, while it is charging $W 60,000$ for a single course takes 2 months on average. The fact that middle school students have to take more subjects than high school students makes a flat-rate system much more attractive because it will be less expensive than covering all these subjects with private tutoring. Among the many advantages of Flat-rate system, higher ARPU is expected to be most beneficial to Mbest. Before launching Flat-rate system, Mbest's ARPU was W220,000, similar to Megastudy’s W200,000. After launching it, Mbest's ARPU went up by $54.3 \%$ to W330,000 in 2006. Moreover, Mbest's ARPU should increase by $12.0 \%$ to $W 370,000$ in 2007, which will contribute to the increase of Megastudy's sales.

Mbest improves Megastudy's sales mix by reducing Megastudy's dependence on highschool online education market. Megastudy's regulatory risk declined as middle-school education is relatively free from regulatory constraints compared with high-school education.

There have been some concerns over the Mbest. Its OP margin is lower than Megastudy's, as VOD lectures are shot in its offline Megastudy's classrooms, while Mbest's online lectures are shot in studios, incurring additional expenses. Here is another one. Although the private online schooling market for middle school students is larger than high school's, it is not certain how many middle school students will choose online education, since its market is still in the early stage of development. There are uncertainties about how the private online schooling market for middle school students will unfold.

Part IV. Valuation

## DCF method with Free Cash Flow

We have made key assumptions deriving the target price of Megastudy as follows:
$\checkmark$ Revenues from online high school market will grow by $20 \%$ for the next five years, then $5 \%$ perpetually as the market goes into maturity.
$\checkmark$ Revenues from online studying materials will increase in coordinate with the growth of online high school market.
$\checkmark$ Revenues from offline institutes will be temporarily high in 2007, growing slower afterwards; the growth rate will be $10 \%$ for 3 years, and then stabilized to $5 \%$.
$\checkmark$ Revenues from Mbest will surge dramatically for the first four years, with growth rate of $45 \%$ per annum, then will slow down as high school market has been.
$\checkmark$ Perpetual growth rate is $5 \%$
$\checkmark$ WACC, which is $11.3 \%$, is used as a discount rate.

| DCF with Free Cash Flow |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: |
|  | 2006 | 2007 | 2008 | 2009 | 2010 |
| NOPLAT | 23387 | 35634 | 43117 | 52603 | 64754 |
| Free Cash Flow | 17493 | 35873 | 43805 | 52910 | 64618 |


| Continuing value calculation |  |
| :--- | ---: |
| FCF growth (2017 -normalized FCF) | $5.0 \%$ |
| Perpetual growth g (\%) | $5.0 \%$ |
| WACC | $11.3 \%$ |


| Present value of forecasted FCF | 415205 |
| :--- | :---: |
| Present value of continuing value | 672439 |
| Sum | 1087645 |
|  |  |
| Equity value per share (Won) | $\mathbf{1 8 6 3 5 9}$ |
| Current price (20070406) | 172200 |


| Forecast by Sectors |  |  |  |  |  |  |  |  |  |  |  |  |
| :--- | :---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
|  | $\mathbf{2 0 0 6}$ | $\mathrm{Ch}(\%)$ | $\mathbf{2 0 0 7}$ | $\mathrm{Ch}(\%)$ | $\mathbf{2 0 0 8}$ | $\mathrm{Ch}(\%)$ | $\mathbf{2 0 0 9}$ | $\mathrm{Ch}(\%)$ | $\mathbf{2 0 1 0}$ | $\mathrm{Ch}(\%)$ | $\mathbf{2 0 1 1}$ | $\mathrm{Ch}(\%)$ |
| Online lectures | 59.0 | $20 \%$ | 70.8 | $20 \%$ | 85.0 | $20 \%$ | 102.0 | $20 \%$ | 122.3 | $20 \%$ | 146.8 | $5 \%$ |
| Online materials | 19.0 | $20 \%$ | 22.8 | $20 \%$ | 27.4 | $20 \%$ | 32.8 | $20 \%$ | 39.4 | $20 \%$ | 47.3 | $5 \%$ |
| Offline lectures | 31.0 | $50 \%$ | 46.5 | $10 \%$ | 51.2 | $10 \%$ | 56.3 | $10 \%$ | 61.9 | $10 \%$ | 68.1 | $5 \%$ |
| Mbest |  | $45 \%$ | 25.0 | $45 \%$ | 36.3 | $45 \%$ | 52.6 | $45 \%$ | 76.2 | $20 \%$ | 91.5 | $20 \%$ |
| Total Sales | 109.0 | $51.5 \%$ | 165.1 | $21.0 \%$ | 199.7 | $22.0 \%$ | 243.6 | $23.1 \%$ | 299.8 | $17.9 \%$ | 353.6 | $8.9 \%$ |

We derived the target price of KRW 186,000 using DCF method by free cash flow. As the current share price is KRW 172,200 as of Apr 6th, the safety margin seems to be very low.

## Price multiple method

In determining the fair P/E ratio for Megastudy, we could not simply use the industry average because Megastudy is quite different, in both terms of profitability and growth potential, from companies that mainly focus on offline education. Instead, we found there has been strong correlation between ROE and PER in education industry. Correlating ROE with PER of companies in Korean education industry, we calculated the fair P/E ratio of $30.2 x$ for Megastudy. 2007 EPS, which is expected to be KRW 6,107, multiplied by PER of 27.3 equals to KRW 184,000.

## Maintain BUY, with TP of KRW 186,000

We maintain our opinion BUY, with the target price of KRW 186,000. Furthermore, as lots of unpredictable factors which might affect the firm exist, we strongly suggest investors to keep close eyes on how it pulls out constant success in the market, especially in the online middle schooling.

| Income statement |  |  | (Mn.won) |
| :---: | :---: | :---: | :---: |
|  | 2004A | 2005A | 2006A |
| Sales | 50,259 | 71,043 | 101,275 |
| Sales growth \% | 9.3 | 41.4 | 42.6 |
| Cost of sales | 18,161 | 27,096 | 38,188 |
| Gross profit | 32,098 | 43,946 | 63,088 |
| SG\&A cost | 12,335 | 19,251 | 30,756 |
| Operating profit | 19,763 | 24,696 | 32,332 |
| Operating margin \% | 39.3 | 34.8 | 31.9 |
| Non-operating income | 1,243 | 4,182 | 4,954 |
| Interest income | 989 | 1,067 | 1,013 |
| FX transaction/translation | 0 | 0 | 0 |
| Non-operating expense | 47 | 14 | 696 |
| Interest expense | 0 | 1 | 1 |
| FX transaction/translation | 0 | 0 | 0 |
| Recurring profit | 20,960 | 28,864 | 36,591 |
| Net extraordinaries | 0 | 0 | 0 |
| Pre-tax profit | 20,960 | 28,864 | 36,591 |
| Income tax | 6,116 | 7,874 | 10,124 |
| Net profit | 14,843 | 20,990 | 26,467 |
| EPS | 3,112 | 3,464 | 4,347 |


| Cash flow statement |  |  | (Mn.won) |
| :---: | :---: | :---: | :---: |
|  | 2004A | 2005A | 2006A |
| Operating cashflows | 11,637 | 20,345 | 31,402 |
| Net profit | 14,843 | 20,990 | 26,467 |
| Depreciation | 603 | 1,073 | 1,901 |
| Amortization | 140 | 214 | 231 |
| Chg in operating assets/ liabilities | -4,034 | 521 | 502 |
| Investing cashflows | -29,668 | -29,918 | -21,918 |
| Change in investment assets | $-28,243$ | -13,707 | -13,391 |
| Change in tangible assets | -1,107 | -16,110 | -8,421 |
| Change in intangible assets | -319 | -120 | -106 |
| Financing cashflows | 23,979 | 0 | -4,545 |
| Change in short-term debts | 0 | 0 | 0 |
| Change in bonds | 0 | 0 | 0 |
| Change in long-term debts | 0 | 0 | 0 |
| Change in CPLT. | 0 | 0 | 0 |
| Change in paid-in capital | 25,046 | 0 | 0 |
| Dividend | 0 | 0 | -4,545 |
| Net cashflows | 5,948 | -9,572 | 4,938 |
| Beginning cash | 18,613 | 24,561 | 14,989 |
| Ending cash | 24,561 | 14,989 | 24,639 |


| Balance sheet |  |  | (Mn.won) | Financial ratios |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2004A | 2005A | 2006A |  | 2004A | 2005A | 2006A |
| Cash \& cash equivalents | 24,561 | 14,989 | 24,639 | Current ratio \% | 710.8 | 462.9 | 326.1 |
| Investment \& securities | 28,177 | 35,605 | 36,044 | Quick ratio \% | 710.8 | 462.9 | 325.8 |
| Accounts receivable | 1,479 | 2,032 | 4,242 | Debt ratio \% | 13.0 | 16.2 | 24.3 |
| Inventories | 0 | 0 | 84 | Debt/Equity \% | 0.0 | 0.0 | 0.0 |
| Current assets | 56,061 | 57,067 | 73,131 | Debt/Total asset \% | 0.0 | 0.0 | 0.0 |
| Investment assets | 8,192 | 23,914 | 38,977 | Net debt/Equity \% | -81.0 | -55.9 | -52.6 |
| Tangible assets | 8,692 | 23,725 | 30,673 | Reserve ratio \% | 2,048.9 | 2,888.0 | 3,538.5 |
| Intangible assets | 634 | 540 | 661 | Sales growth \% | 9.3 | 41.4 | 42.6 |
| Total assets | 73,579 | 105,246 | 143,442 | EBITDA growth \% | -2.1 | 26.7 | 32.6 |
| Accounts payable | 624 | 1,112 | 1,678 | Operating profit growth \% | -3.6 | 25.0 | 30.9 |


| Short-term debts | 0 | 0 | 0 | Recurring profit growth \% | -0.9 | 37.7 | 26.8 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Current portion of Lt. debts | 0 | 0 | 0 | Net profit growth \% | -2.0 | 41.4 | 26.1 |
| Current liabilities | 7,887 | 12,329 | 22,423 | EPS growth \% | -3.8 | 11.3 | 25.5 |
| Bonds | 0 | 0 | 0 | Total asset growth \% | 110.9 | 43.0 | 36.3 |
| Long-term debts | 0 | 0 | 0 | Invested capital growth \% | 177.1 | 286.6 | 16.0 |
| Long-term liabilities | 579 | 2,382 | 5,665 | EBITDA margin \% | 40.8 | 36.6 | 34.0 |
| Total liabilities | 8,466 | 14,712 | 28,088 | Operating profit margin \% | 39.3 | 34.8 | 31.9 |
| Paid-in capital | 3,030 | 3,030 | 3,170 | Recurring profit margin \% | 41.7 | 40.6 | 36.1 |
| Capital surplus | 24,076 | 24,076 | 28,333 | Pre-tax profit margin \% | 41.7 | 40.6 | 36.1 |
| Retained earnings | 37,667 | 58,657 | 80,539 | Net profit margin \% | 29.5 | 29.5 | 26.1 |
| Total shareholders' equity | 65,113 | 90,535 | 115,354 | Interest coverage x |  | 24,069.9 | 51.3 |


| Valuation guide |  |  |  | Per share data |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2004A | 2005A | 2006A |  | 2004A | 2005A | 2006A |
| ROE \% | 32.6 | 27.0 | 25.7 | EPS | 3,112 | 3,464 | 4,347 |
| COE \% | 4.4 | 10.6 | 5.7 | PER $x$ | 7.9 | 16.5 | 31.6 |
| ROE-COE \% | 28.2 | 16.4 | 20.0 | CFPS | 3,268 | 3,676 | 4,697 |
| ROE/COE $x$ | 7.5 | 2.5 | 4.5 | PCFR $x$ | 7.5 | 15.6 | 29.2 |
| EBIT | 19,763 | 24,696 | 32,332 | BPS | 10,745 | 14,940 | 18,193 |
| NOPLAT | 13,996 | 17,959 | 23,387 | PBR x | 2.3 | 3.8 | 7.5 |
| Pre-tax ROIC \% | 609.9 | 213.2 | 162.6 | SPS | 10,539 | 11,723 | 16,632 |
| ROIC \% | 431.9 | 155.0 | 117.6 | PSR x | 2.3 | 4.9 | 8.3 |
| ROIC-WACC \% | 427.6 | 144.4 | 111.9 | EBITDA/share | 4,300 | 4,288 | 5,660 |
| ROIC/WACC x | 99.3 | 14.6 | 20.6 | P/EBITDA $x$ | 5.7 | 13.3 | 24.3 |

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