MOODY'S
INVESTORS SERVICE

SPECIAL COMMENT

Shifting Ground: Technology Begins to Alter Centuries-Old Business Model for Universities

Massive Open Online Courses Produce Mixed Credit Effects for the Higher Education Sector

Table of Contents:

Analyst Contacts:

NEW YORK +1.212.553.1653

Karen Kedem +1.212.553.3614
Vice President - Senior Analyst
karen.kedem@moodys.com

John E. Puchalla +1.212.553.4026
Vice President - Senior Credit Officer
john.puchalla@moodys.com

John C. Nelson +1.212.553.4096
Managing Director-Public Finance
john.nelson@moodys.com

Edith Behr +1.212.553.0566
Vice President - Senior Credit Officer
edith.behr@moodys.com

Summary

The recent rush by leading universities in North America and Europe to create collaborative networks offering free online courses through Massive Open Online Courses (MOOCs) marks a pivotal development for the higher education sector. MOOCs signal a fundamental shift in strategy by the industry's leaders to use their powerful brand reputations to get ahead of rapid technological changes that could destabilize their residential business models over the long-run. We expect positive credit effects to develop for the higher education sector overall as elite universities offer more classes for an unlimited number of students across the globe through-low cost open courseware platforms. However, there will eventually be negative effects on for-profit education companies and some smaller not-for-profit colleges that may be left out of emerging high reputation online networks.

There are at least six major credit effects likely to emerge from the MOOC and online course movement:

1. New revenue opportunities through fees for certificates, courses, degrees, licensing, or advertisement
2. Improved operating efficiencies due to the lower cost of course delivery on a per student basis
3. Heightened global brand recognition, removing geographic campus-based barriers to attracting students and faculty
4. Enhanced and protected core residential campus experience for students at traditional not-for-profit and public universities
5. Longer term potential to create new networks of much greater scale across the sector, allowing more colleges and universities to specialize while also reducing operating costs
6. New competitive pressure on for-profit, and some not-for-profit, universities that fail to align with emerging high-reputation networks or find a viable independent niche

The extent of longer term credit impacts on individual universities will vary widely. Most universities will likely gravitate to a mixed model that will increasingly feature online course delivery, though some colleges may choose to create a niche by remaining focused solely on the traditional residential-classroom experience. The residential college model will certainly remain viable for reputable undergraduate institutions. Less selective, smaller colleges that are unable to join emerging networks or carve out an independent niche will likely experience credit stress driven by declining student demand.

EXHIBIT 1

Market Segment	Broad Credit Effect	Opportunities/Risks
Global	Positive	» Superior brand reputation strengthens further » Free content offers opportunity for experimentation and supports tax-exempt mission; hedges regulatory risk » Greatest ability to monetize at later stage, but may require sharing of benefits with new technology partners
National	Highly Positive	» Align with global segment to build international presence/ join emerging networks » Leverage scale to keep up with industry trend and reduce operating costs
Regional/ Specialized	Mixed	» Broaden brand recognition through the use of new technology » Operational efficiencies through lower cost of delivery and ability to specialize » Increased competition could weaken market share » Potential need to create partnerships with other less well-known universities/for-profit provider could be a costly new investment
Local/ Commuter	Negative	» Technology dilutes some of the value of physical proximity to student & increases reputation premium » Small size, weak market reputation renders many unattractive partners for emerging networks, may be left out as industry consolidation increases
For-Profit	Highly Negative	» Short-term benefit of legitimizing preferred form of delivery » Long-term threat as more reputable universities enter the online market

New MOOCs Bring Significant Image Upgrade for Online Education

Online education is hardly new, having fueled the explosive growth of for-profit education companies from 1995 to 2010. However, the growth of for-profit online education has stalled dramatically in the face of serious public scrutiny over student qualifications, job placement, and student loan defaults. This has led to increased federal regulatory intervention and consumer scrutiny -- forcing for-profit universities to focus much more on student selection and job placement for graduates. Not-for-profit universities also tried online ventures during this time period, many with limited success, although some have achieved substantial success.[1] The significantly lower cost of entry, differences in scale of class size, technological advances, and pervasive use of technology by prospective students should contribute to more favorable results. The new participation of many of the world's most elite not-for-profit and public universities indicates that this powerful tool will now be central to advancing globalization initiatives, making higher education more economically viable and accessible across geographies and demographics. The efficiencies offered through new technology have the potential to transform a university's operations, academic and social programming, and pedagogical approach.

[1] For example, Liberty University (rated A1) has achieved high revenue growth in the online market and a strong market niche among Evangelical Christian students

Massive Open Online Courses enable colleges to experiment and refine electronic delivery methods, evaluate scalability, identify best suited faculty, gauge the quality of student learning outcomes, and assess demand. MOOCs diverge from traditional online courses which sought to duplicate the classroom experience, including approximate class size. In addition, the availability of open platforms enables a university to post content without incurring the cost of developing and maintaining the platform. Online learning technologies will play an increasing role in creating new efficiencies and lowering the cost per student. Successful adoption enables educators to expand and diversify their student bodies and increase faculty scheduling flexibility and productivity.

Potential new revenue opportunities are clear for the market leaders. Growth potential includes charging tuition for certificates or degrees, selling courses/content to other colleges, attracting paid advertising to the web site, and increased philanthropic/foundation support for these innovative initiatives. The use of proctored exams to verify a student's identity and to reduce cheating paves the way for fee-based certificates or course credits. As an example, Udacity and edX have partnered with Pearson VUE testing centers to certify the learning outcomes of MOOC students, improving the likelihood that the courses can be used towards credentials/degrees.

Growth of collaborative networks offering online course content through MOOCs contributes to increased competition, particularly as geographic barriers are lessened. As more content is offered for academic credit or a degree, colleges with limited brand identities will face increasing pressure. Small, thinly resourced, non-selective colleges will be most at risk of deteriorating student demand and most vulnerable to being left out of collaborative networks. In addition, the rapid pace of the MOOC movement presents the possibility of brand dilution as universities rush to join the trend without controlling the quality of the product/content being posted.

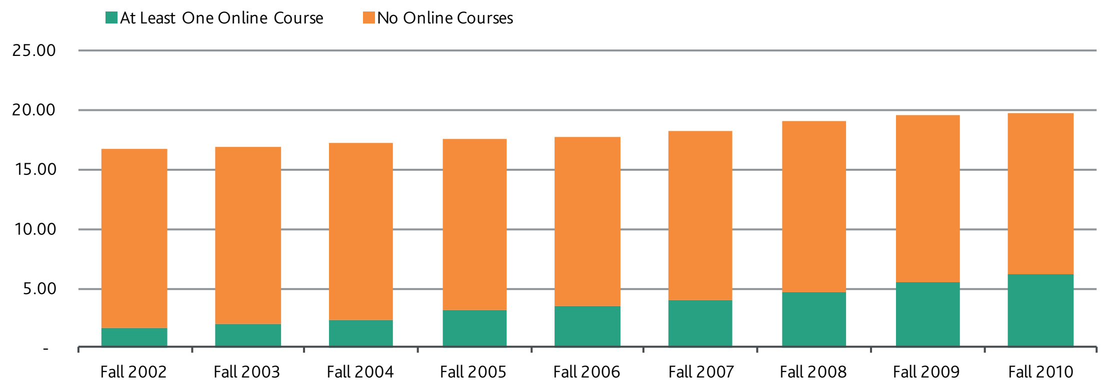
MOOCs Will Contribute to Explosive Growth of Online Education Enrollment

Although online education has its critics and educational outcomes data are closely scrutinized, advancements in technology, online curriculum, and quality controls have made online education a more accepted and marketable tool for educational delivery. According to the Babson Survey Research Group, 31% of all students took at least one online course in fall 2010, up sharply from 10% in 2003, with this growth highlighted in Exhibit 1. The entry of elite universities into this space in a meaningful way will help legitimize this form of delivery and reduce the stigma that has historically been associated with distance education. As other universities attempt to remain competitive and as the cost of entry is lowered by platforms such as Coursera, Udacity, and edX, we expect a flood of courses and content to contribute to the growth of students participating in online education. These trends will augment the growing popularity of other free online educational resources like Ted-Ed and Khan Academy.

The increasing prevalence of MOOCs, with enrollment that is exponentially larger than traditional residential classes or online courses, will drive explosive growth of online enrollment. In fall 2011, Stanford had courses with more than 100,000 students enrolled. While only 10% of the participants completed the courses, a single course reached more students than are typically enrolled in most private colleges and universities (median full-time equivalent enrollment for Moody's rated private universities of 3,439 in fall 2011).

EXHIBIT 2

Online Higher Education Thrives (students, millions)



Source: Going the Distance, Online Education in the United States 2011, Babson Survey Research Group

Leading Universities with Global Presence Experience Positive Credit Impact

The recent proliferation of free online courses offered by elite universities is expected to have short- and long-term positive credit impacts on universities with a global presence. Universities with the strongest brand recognition will experience some direct market benefits from the new platform, although they already attract students, faculty, and donors from across the globe. These universities benefit from favorable publicity, in the form of enhanced name recognition and political good will. The most significant short-term benefit to the top-tier universities is blunting public criticism that wealthy universities do not provide enough service to fulfill their public mission and, therefore, maintain their tax-exempt status in the United States.

Many of these universities previously offered free course content in various forms, such as Stanford University's taped lectures on YouTube, Harvard Open Courses, and MIT's OpenCourseWare. The recent development of growing partnerships to offer online courses will go much further to reduce costs and enable these universities to experiment with pedagogical approaches on a much larger scale than previously possible.

Over the long-term, these leading universities could easily garner material new revenue if they were to monetize these products. The path to revenue enhancement could take both direct and indirect forms via content sales to other colleges and universities in new emerging networks.

Selective Universities with a National Draw Derive the Greatest Credit Benefit

Selective universities with a national student draw are likely to derive the greatest benefit from the growing popularity of MOOCs. These universities, which already have strong brand identities, can greatly enhance and expand their reputations by aligning with the global leaders, reaching new markets that can sample their academic offerings through the use of this technology.

This platform can help national universities build a global presence faster than a traditional marketing and recruiting strategy. New online offerings will, in many cases, reduce or eliminate the need to establish a satellite campus. Partnering with other universities enables national universities with moderate wealth to leverage resources (financial and human capital) and remain competitive in a way they could not on their own.

Credit Implications Mixed for Regional Colleges and Universities

The implications for colleges and universities dependent on local or regional draw of students are the most uncertain. The potential for positive effects for this, the largest segment of the US higher education sector, is clear: the new platform could enable regional universities to broaden brand recognition and diversify geographic draw, provide operational efficiencies, and facilitate pedagogical innovation. Operational efficiencies could be gained by these colleges not only through a lower cost of delivery for an online course, but also by reducing the need to offer their own comprehensive course curriculum. This would likely encourage greater specialization and market niche strategies. Massive online courses could enable a college or university to either purchase content or direct students to courses to fulfill certain requirements instead of maintaining their own faculty for these generic courses, and instead developing or enhancing niche specialties that have market recognition.

While these universities do not have the resources to develop a platform for MOOCs on their own, they are well positioned to create course content to be delivered on open MOOC platforms. Therefore, the explosion of open courseware provides less wealthy regional colleges and universities with the opportunity to keep up with trends and, for some, to facilitate more of a national draw.

Significant risks are also presented by the new technologies, especially to those that lack any perceptible niche specialty and/or are left out of emerging new networks. Over the long-term, they will lose market share to universities with a stronger brand and a national draw.

Local Colleges Lacking a Significant Residential Component or Market Niche Likely to Experience Credit Pressure over the Long-Term

Colleges that attract students primarily because of local proximity and low price are highly vulnerable to credit pressure. This risk increases if more reputable universities award credit or degrees for MOOCs, especially if new exclusive networks form. As geographic barriers are removed and the cost of delivery is reduced, students may have reduced incentive to attend a local college without a distinct niche or an identifiable brand. In the short-term, these colleges could benefit from the use of the limited barriers to entry of open course platforms – infrastructure that they could not build on their own. Some of these colleges could derive the benefit of increased efficiencies and pedagogical innovation through the use of the platform. However, these colleges are also vulnerable to being excluded from collaborative networks because of their weak market positions and, in the long-term, the challenges of increased competition will likely outweigh the benefits to this segment of the market.

For-Profits Face Longer Term Negative Impact

While this trend helps reduce the remaining stigma of online education, a form of delivery central to the for-profit business model, growing availability of MOOCs is a long-term credit negative for the for-profit industry. The magnitude of the effect could vary widely. We believe that the long-term effects on for profit institutions will be dictated by the breadth and nature of the career-oriented offerings, ultimate cost to students, type of academic credit received, and value of that academic credit to potential employers.

There is some overlap between online course offerings from companies such as Coursera and the fields of study most prevalent at for-profit colleges (including information technology and business administration). We expect increased subject matter overlap in other for-profit course mainstays such as nursing, criminal justice, legal/paralegal studies, and art. As more prestigious not-for-profit universities offer courses that overlap more with the for-profit industry, demand in the for-profit industry will likely diminish.

While greater competition is likely inevitable for the for-profit sector, the competitive threat will become much greater when students are given academic credit toward a degree and if new online networks form around leading not-for-profit and public universities. At a minimum, such offerings would encroach on the online, professional and career-oriented offerings that top-tier universities have until now ceded to other players. In addition, some students enrolled at universities other than the MOOC provider are able to get credit for such classes, according to Coursera's web site. The downstream effect is more competition.

For-profits have grown by targeting areas where traditional schools have largely not bothered to focus heavily: online offerings, programs of study designed around specific career paths, and so-called non-traditional students that do not enroll in college straight out of high school. The competitive threat from MOOCs and other new delivery models offered by traditional colleges are likely to take time to play out. However, threats to the for-profit business model are beginning to increase, with companies such as Straighterline.com pricing courses closer to cost than current market rate. We believe for-profit companies will find it difficult to compete strictly on their reputation, and that they will need to enhance student services and demonstrate positive student outcomes in the classroom and job market to avoid pressure on enrollment. While for-profit institutions have the ability to adjust their strategies to changes in the competitive landscape, greater online competition will likely alter the for-profit business model and profitability. Pressure on pricing and the heightened challenge to attract and retain students contributes to our negative outlook for the for-profit education industry.

EXHIBIT 3

Elite Universities Join Collaborative Networks to Offer MOOCs (as of September 11, 2012)

Coursera	edX
California Institute of Technology	Harvard University
Duke University	Massachusetts Institute of Technology
Ecole Polytechnique Federale de Lausanne	University of California- Berkley
Georgia Institute of Technology	
Indian Institute of Technology Delhi	
Indraprastha Institute of Information Technology Delhi	
Johns Hopkins University	
Princeton University	
Rice University	
Stanford University	
University of California (Berkley and San Francisco)	
University of Edinburgh	
University of Illinois at Urbana-Champaign	
University of Michigan	
University of Pennsylvania	
University of Toronto	
University of Virginia	
University of Washington	

Moody's Related Research

Industry Outlook:

» US Higher Education 2012 Mid-Year Outlook Remains Mixed, July 2012 (144084)

To access any of these reports, click on the entry above. Note that these references are current as of the date of publication of this report and that more recent reports may be available. All research may not be available to all clients.

Report Number: 144483

Authors
Karen Kedem
John E. Puchalla

Editor
John Nelson

Production Associate
Miki Takase

MOODY'S
INVESTORS SERVICE