

Prospects for Student Housing Investment

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Introduction

Student housing has emerged as an institutional investment category only in the last few years, coinciding with growing college enrollment and an increasingly constrained supply of housing options for students. Demand growth, spurred by demographic and college attendance trends, has been robust since the late-1990s, at the same time that new dormitory capacity has been limited by strained university budgets. Meanwhile, three student housing Real Estate Investment Trusts (REITs) have emerged since 2004, contributing to investor awareness and financial transparency in the sector.

The student housing market is attractive to investors for a number of reasons:

- Demographic trends support increasing demand, in terms of both the magnitude of population growth and matriculation rates, such that the student population is rising twice as fast as the total U.S. population. In addition, attendance is growing most quickly among the types of students more likely to seek institutional-quality student housing: female, full-time (as opposed to part-time) students, attending four-year (as opposed to two-year), and public (as opposed to private) colleges.
- University-owned supply has failed to keep pace with demand growth, leaving a large and growing supply gap, as the private sector has been slow to fill the void. Moreover, much of the existing student housing stock is old and obsolete, and does not meet evolving industry standards or satisfy student preferences in terms of unit design and project amenities. Thus, the effective gap between the units preferred and those actually supplied is magnified.
- Per-unit rents for student housing generally exceed those for conventional apartments, as units have more tenants paying rent. Recent rent growth also has been greater. Rents and occupancy tend to be less sensitive to economic cycles than conventional apartments – falling less in lean years, and rising less during economic expansions.
- Credit-loss at student complexes typically is below that of conventional apartments because leases usually require parental guarantees, yet this product typically commands yields 75 basis points higher than for conventional apartments. Student housing also commands higher prices per square foot.
- Despite a growing institutional presence, the student housing market is still highly fragmented and dominated by small, undercapitalized owners, whose market share would be vulnerable to capture by larger, more professional institutional developers, managers, investors, and owners.

Together, these factors point to significant opportunities for institutional players to develop, manage, and invest in product to meet the underserved demand. However, student housing also presents challenges unique to this product type including a short leasing cycle, an extremely short turnaround time to refurbish units, and high reliance on a single source of

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demand. Also, year-to-year turnover is high and student preferences can be fickle, resulting in greater and different types of marketing expenses and re-leasing risks. In addition, student housing properties require a high level of management and the reputation of the project greatly affects marketing. Finally, most student housing projects have limited re-use potential. All of these risks can be managed to a greater or lesser extent, however, providing potentially outsized returns for the effective operator. Thus, quality, specialized management is even more essential in this market than for conventional apartments.

Product Definition and Characteristics

As used in this paper, “student housing” refers to a new generation of institutional-quality residential communities catering to undergraduates at four-year, primarily public, colleges. These projects typically provide a high level of amenities and services relative to traditional dormitories, but in a more sheltered environment than in conventional apartments. These projects also tend to be much more management intensive than conventional apartments, with “student assistants” (akin to resident assistants in dorms) required to oversee student life in the projects.

Though theoretically open to students in any year of matriculation, in practice most residents are sophomores or juniors – freshmen typically will live in university-owned dormitories on campus, while seniors and especially graduate students will opt for a less structured environment. Projects in weaker markets may be more flexible in allowing non-students to lease rooms they cannot otherwise fill.

Relative to comparable conventional apartments, student housing units will have more bedrooms and parking spaces. Private student housing is usually leased by the bed (room), though some operators lease by the unit and allow one or more students per bedroom. Units typically are furnished. Leases can run nine months, matching the length of the academic year, but increasingly units are rented with 50-week leases, payable in 12 equal monthly installments, to allow units to be refurbished. Leases often require a parental guarantee and a separate lease for each student.

Much of this newer stock is decidedly more upscale and bears little resemblance to the more humble quarters rented by the parents of today’s students during their own college years, with extensive common area amenities and services. However, in most markets there is still also considerable older stock, much of which was converted from conventional apartments, that offer lower-quality, more affordable units with fewer amenities.

Market Dynamics

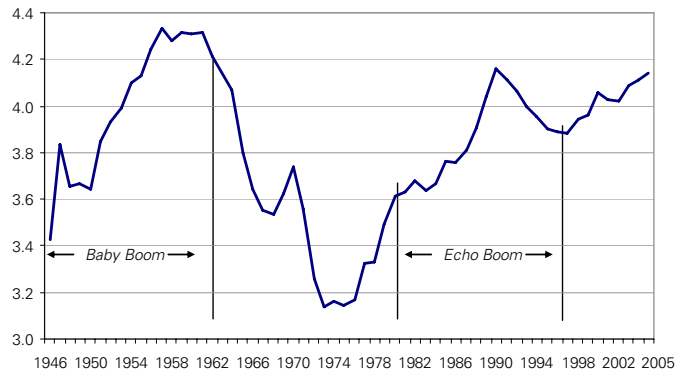
Demand for Student Housing

Demand for student housing is growing rapidly due to several factors:

- Rapid population growth in the college-age cohorts
- Rising college attendance rates
- Inability of students to graduate within the traditional timeframe (four years)
- Changing composition of college students toward those groups that especially seek dedicated student housing

Birth Rates. During most of the 1990s, college enrollment levels were relatively level, as a declining number of 18- to 24-year olds was offset by increasing rates of college attendance. College enrollment has grown rapidly since the late 1990s, however, as the Echo Baby Boom has begun to reach 18 years of age, and ever increasing proportions of young adults pursue college educations (Exhibit 1).

**Exhibit 1
Births in the U.S.
1946 to 2005**



Sources: National Center for Health Statistics, RREEF

The Echo Baby Boom, namely the children of the Baby Boomers (people born in the post-war years of 1946-64) is generally defined as beginning in 1982 and continuing through the end of the century. Just over 74 million children were born in the U.S. during the period, rivaling the 76 million of the post-war Baby Boom. Births actually peaked in 1991 and dipped through 1997, but have since topped the four million mark in 2001 and are still continuing to rise. The oldest of these Echo Boomers are now finishing college, so the surge will continue for at least another decade – an average of over 4.2 million children turning 18 each year.

Matriculation Rates. College attendance rates have risen substantially during the last 40 years, as a college degree is increasingly viewed as vital for career success. The proportion of high school graduates continuing on to college has increased from 45% in 1960 to 67% as of 2004, meaning almost three million students will enter college each year in the next decade.

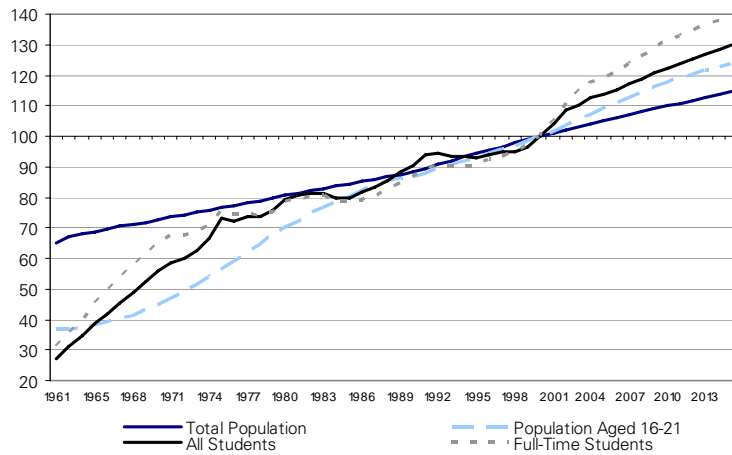
“Time to Complete” Degree. Few students today graduate within the timeframe for which “four-year colleges” are named – barely half graduate within even five years of entry, and the rate at public institutions is substantially lower.¹ Among the reasons: the need for more students to work part time to afford school; the frequency of students getting “shut out” of required courses when needed; the greater prevalence of transfer students, which extends time to graduation when courses are not accepted at the new school; and poorer preparation for college among incoming students, who require more remedial coursework. The result: students matriculate longer, further increasing the need for student housing.

In short, the student population will continue to grow rapidly over the next decade and beyond. Projections by the National Center for Education Statistics (NCES) show post-

¹ According to the ACT Institutional Data File, 2004, the proportion of students graduating within five years is 57.4% at private universities, 42.3% at public schools, and 51.8% overall.

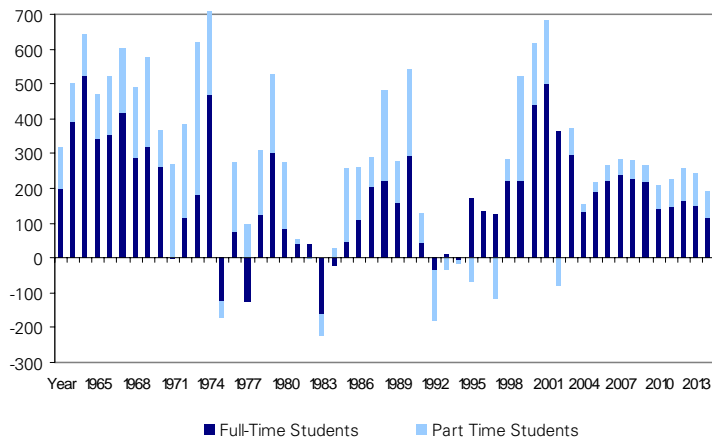
secondary enrollment will continue to rise through at least 2015. The NCES forecasts college enrollment of 19.5 to 20.3 million in 2015, representing a two to three million student increase from the estimated 17.5 million in 2006. In fact, the student population has been rising twice as fast as the total U.S. population – the college population is projected to increase almost 30% between 2000 and 2015, compared to 14% for the nation as a whole (Exhibit 2a). Growth beyond 2007 is anticipated to be strong, if somewhat less than earlier in the decade, in part because universities are facing capacity limits (Exhibit 2b).

Exhibit 2a
Population vs. Post-Secondary Enrollment
1961 to 2015 (Year 2000 = 100)



Sources: National Center for Education Statistics, U.S. Census Bureau, RREEF Research

Exhibit 2b
Net Additional Post-Secondary Students
1963 to 2015 (000s)



Sources: National Center for Education Statistics, U.S. Census Bureau, RREEF Research

Student Composition. Also important, the changing composition of the student body favors increased levels of student housing demand. Universities are experiencing a rising proportion of female students and full-time (vs. part-time) students, while enrollment is growing faster at four-year schools (vs. two-year) and at public (vs. private) universities. All of these trends increase the proportion of students seeking dedicated student housing (Exhibits 2b and 3).

Exhibit 3
Undergraduate Enrollment Trends Annual Growth Rates

	1980-1990	1990-2000	2000-2007e	2007e-2012f
Total	1.3%	1.0%	2.2%	1.3%
Male	0.7%	0.7%	1.7%	1.1%
Female	1.9%	1.2%	2.6%	1.5%
Full-time	0.9%	1.3%	3.0%	1.6%
Part-time	1.9%	0.5%	0.9%	0.9%
4-Year	1.2%	0.7%	2.5%	1.5%
2-Year	1.5%	1.3%	1.8%	1.1%
Public	1.4%	0.8%	2.0%	1.3%
Private	1.0%	1.5%	2.9%	1.5%

Sources: National Center for Education Statistics, RREEF Research

First is the **greater proportion of females** in college. College attendance rates among women have been surging for over a generation now, with female undergraduate students outnumbering male students beginning in 1978; female attendance has continued to grow more rapidly, and females now account for 57% of all undergraduate students. Preferences among female students (or their parents) for a more secure housing environment translates into greater demand for institutional-quality student housing.

Two other relevant trends are the rising proportion of **full-time students** and the greater growth among the so-called **four-year schools** relative to two-year schools (community colleges). Both trends represent reversals of patterns in the 1980s, when part-time enrollment was growing more rapidly than full-time, and two-year schools were growing faster than four-year. With demand for student housing much greater among full-time students at four-year schools, these trends will further spur demand for on- and near-campus student housing.

Finally, enrollment is growing much more at **public universities** than at private ones. Public schools commonly aim to educate as many students as want to attend, and therefore have stronger enrollment growth compared to private schools, which tend to be more selective. Public schools are also more affordable, with all-in expenses less than half those at private schools.² Although enrollment at the privates is projected to rise marginally faster than at the public universities between 2007 and 2015 (10.6% vs. 9.8%), the much larger base at the publics means they will add 1.2 million students, compared to 0.3 million at the privates, during this period.

Moreover, private universities more strictly limit where students may live. They also are more likely to have endowments from which to draw for constructing and renovating student housing. Both of these factors limit the potential for serving the private markets. As a result,

² According to the National Center for Education Statistics, the average cost for tuition, room, and board in the 2004-05 school year at public four-year schools was \$11,441, compared to \$26,189 at private schools.

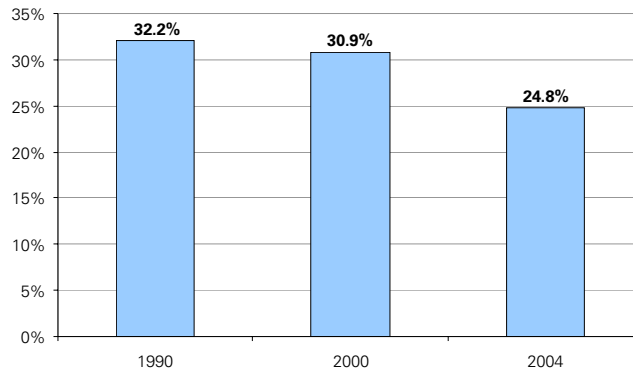
private colleges house 41% of their students, compared to less than 25% in the public schools. In conjunction with their more limited growth, enrollment trends will favor markets with public colleges and universities.

University Housing Supply

With surging enrollments, universities are able to house a only declining share of their students, a trend that is particularly prevalent among the public colleges. Among the reasons: declining funding capacity and subsidies from state governments, which increasingly favor primary over secondary education, as well as shifting investment priorities in private schools toward academic buildings over dorms. Also important is a rising recognition that the private sector can more efficiently address the student housing needs and has started to fill the void, working both with universities and independently.

As a result, dormitory capacity has failed to keep pace with the increases in college enrollment and public universities increasingly focus on housing their freshmen.³ RREEF Research estimates that dorm capacity at four-year public colleges has fallen from 32.2% of undergraduates in 1990 to 24.8% in 2004.⁴ While enrollment has surged over the past decade, the new supply has increased only marginally (Exhibit 4).

Exhibit 4
Dorm Capacity at Public 4-Year Institutions



Sources: National Center for Education Statistics, RREEF Research

The shortfall is particularly great among the large school states. California, Texas, and Florida enroll the greatest number of undergraduate students, yet none houses more than 20% of their undergraduates in dorms and affiliated housing, creating more opportunities for private student housing providers. Accordingly, the portfolios of student housing REITs are weighted heavily toward Florida and Texas. Among the top 15 states (ranked by number of students at public four-year colleges), almost 2.5 million students were not accommodated in university housing (Exhibit 5).

³ For example, even the University of California, which houses a relatively high 32% of its students at its 10 campuses, accommodates under 20% of its upperclassmen compared to 85% of first-year students.

⁴ As used by the National Center for Education Statistics, a division of the U.S. Department of Education, the term “dormitory” refers to all university housing, including traditional dorms, as well as on- and off-campus housing managed by third-party providers.

Exhibit 5
Dorm Capacity at Public Four-Year Schools
Top 15 States by Enrollment (000s), 2004

State	Undergraduate Enrollment	Dorm Capacity	Capacity as Share of UG Enrollment	Capacity Shortfall
California	480.5	92.7	19%	387.8
Texas	391.7	77.9	20%	313.8
Florida	310.7	36.8	12%	273.8
New York	287.0	77.9	27%	209.1
Michigan	221.5	70.2	32%	151.3
Ohio	217.2	54.2	25%	163.0
Pennsylvania	211.3	70.5	33%	140.8
Indiana	163.3	38.7	24%	124.6
Georgia	160.6	36.2	23%	124.5
North Carolina	150.0	50.5	34%	99.6
Illinois	149.4	45.3	30%	104.0
Virginia	140.4	54.2	39%	86.2
Louisiana	131.8	26.5	20%	105.4
Wisconsin	128.1	35.9	28%	92.3
Colorado	124.2	25.3	20%	98.9
Total	3,267.7	792.8	24%	2475.1

Sources: National Center for Education Statistics, RREEF Research

In addition to outright shortages, much of the existing student housing is old and obsolete, lacking central air conditioning, high-speed wireless Internet access, and other amenities considered essential by many students. Plus, the electrical infrastructure typically is insufficient to meet today's greater electricity needs, but can be enhanced only at great expense. A 2004 National Multi Housing Council (NMHC) survey of 1,500 off-campus properties in 64 college towns across the nation determined that most of the properties were at least 20 to 30 years old.

These housing gaps provide the private sector two major avenues to participate in student housing:

- through direct affiliation with universities to provide dormitories and student apartments, generally (though not exclusively) on campus; and,
- by-passing the schools and providing off-campus housing directly to the students.

Universities employ a wide variety of models to partner with private developers to provide university housing. In most cases either the university itself or a related foundation will issue tax-exempt bonds to finance the construction. Private developers are therefore limited to fee-based contracts to develop and/or manage the facility, and there is no opportunity for private investment. Another option, though less common, is for the university to ground-lease an on-campus site to a private developer, who finances and develops the project on its own. The university transfers the development and/or ownership risk to the private partner(s), who in turn can earn ownership profits, in addition to fees for service.

However, the vast majority of the institutionally-owned student housing is developed privately through a process akin to that for conventional apartments, with only a loose affiliation, if any, to the local university. In this approach, the land and improvements are privately owned, and the project privately managed. Most projects are constructed new, but some involve conversion of conventional apartments. Many privately-owned projects benefit from a master lease with the university, in which the school commits to leasing a specified number of beds or units, which can function as *de facto* dormitories, but most do not.

Industry Composition

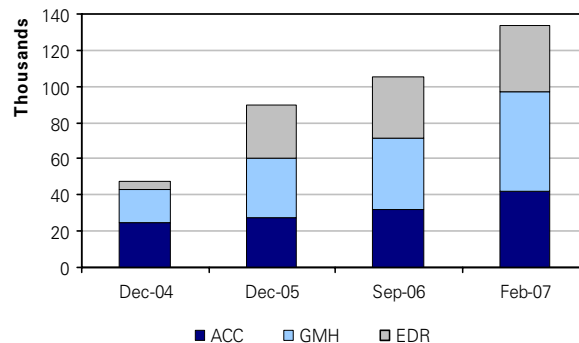
Off-campus student housing is still a highly fragmented industry, with most units owned by small investors and not professionally managed. A number of private companies are also large players in the market, including JPI, University Partners, Paradigm Properties, Student Housing Solutions, Campus Apartments, Place Properties, and Fairfield Residential; other niche owners dominate in some markets.

However, the biggest industry players are the three REITs, which entered the market in the last three years. Their participation in the market and public disclosure requirements has made the sector more transparent to investors.

- *American Campus Communities (ACC)*: ACC was the first public student housing REIT, going public in mid 2004. The company owns or manages 42 properties with 26,400 beds and provides leasing and management services at a total of 57 properties with approximately 35,700 beds (including properties it owns).
- *GMH Communities Trust (GCT)*: GCT, which went public in mid 2005, owns both student and military housing. Its portfolio includes 77 properties and 46,696 beds, and it manages more than 40,000 student housing beds under the College Park Communities name.
- *Education Realty Trust (EDR)*: Student housing industry firm Allen & O'Hara completed an IPO in early 2005 and changed its name to Education Realty Trust, at the same time purchasing 14 communities from JPI. The company presently owns or manages 66 properties with 40,742 beds in 21 states.

Since going public, the three student housing REITs have expanded rapidly, increasing their portfolios from a combined 47,200 units at year-end 2004, to 133,200 as of February 2007. The REITs have enlarged their portfolios through individual asset and portfolio acquisitions, as well as new development. They also have pursued management of university-owned and investor-owned properties (Exhibit 6).

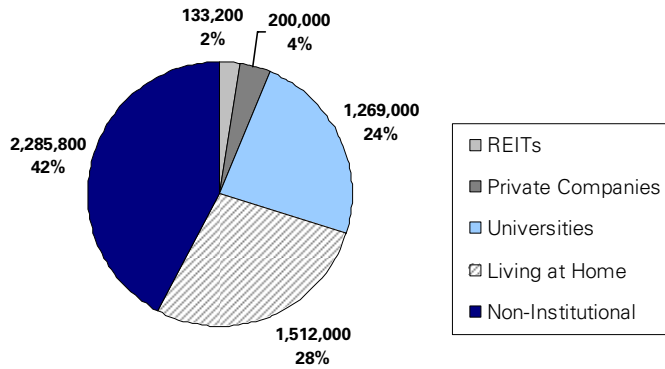
Exhibit 6
REIT Portfolio Growth
Beds Owned or Managed, 2004 to 2007



Sources: Company filings and websites, RREEF Research

Despite their recent growth, REIT and large private owners and managers still comprise only a relatively small share of the student housing market. RREEF Research estimates that the portfolio of institutionally-owned student housing (including projects owned by REITs and the large private owners) amounts to between 280,000 to 380,000 beds, which represents only 5% to 7% of undergraduate housing needs at public universities, and is only a quarter of total dorm capacity (Exhibit 7).

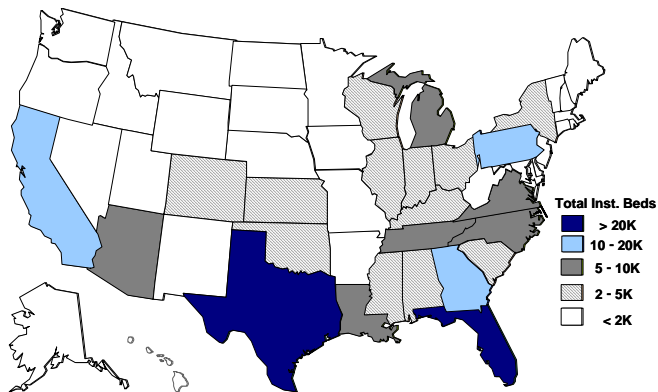
Exhibit 7
Student Housing Market Industry Composition
Total Beds Ownend/Managed in Markets
near Public Four-Year Colleges



Source: RREEF Research

The geographic footprint of REITs and other institutional owner/managers is heavily weighted to the Southeast, with Florida, Texas, and Georgia comprising the largest shares of their portfolios. Most institutional players seek properties in markets that are underserved by university-owned dormitories. California represents a smaller share of institutional portfolios than the sheer size of its college population would warrant, in part due to the difficulty in securing entitlements, though REITs and others have been increasing their involvement recently (Exhibit 8).

Exhibit 8
Institutional Presence
Total Beds Owned or Managed by State



Source: RREEF Research

Operating Characteristics

Because student housing is still a niche real estate product, little reliable operating data is available compared to the data published for more traditional product such as conventional apartments. Few brokerages and real estate data vendors track this product,⁵ and most projects are still controlled by private parties that do not share operating data. Nonetheless, the growth of student housing REITs is providing greater transparency into industry operations; additional insights are afforded by analysis of university housing operations.

Based on the experience of the three major industry REITs, student housing has been outperforming conventional apartments. This conclusion likely overstates the performance of the student housing controlled by the many smaller owners in this segment, but their experience may be less relevant for gauging the performance and potential of institutional-quality student housing.

Occupancy Rate. Occupancy of student housing in 2006 was quite strong at 94.8%, compared to 94.1% for conventional apartments. The industry average last year would have been higher but for some well-publicized missteps by EDR.⁶ As with any product, these rates vary widely among and within local markets, but most markets have limited vacancy problems, and many are experiencing acute shortages, particularly for better product. Vacancies in well-located, high-quality projects often approach zero.

Rents. Last year monthly rents averaged nearly \$1,200 per unit, almost 30% above that for conventional apartments. This premium can be attributed largely to the larger unit sizes of student housing projects, averaging 3.2 bedrooms per unit, compared to less than two for conventional apartments. Nonetheless, the ability of institutionally-owned student housing to lease units on a per-bedroom basis undoubtedly bolsters overall rent levels, while the record of keeping them occupied speaks to their relative quality.

Rents per bed exceed fees for university-owned dormitories, but by less than might be supposed. The industry average of \$371 per month was only 16% greater than the dorm average, and on par with the average dorm fee in private universities. This correspondence is more than coincidental as schools increasingly set dorm fees based on rents charged in the private sector. This pricing behavior has important implications for rental growth (Exhibit 9).

Rental Growth. The best available indications are that rents for student housing have been rising well ahead of inflation, though quantifying those rates is elusive. With the limited track record of the student housing REITs, there is no reliable time-series for tracking rental growth over time. The three REITs all added to their portfolios so substantially over the past three years that meaningful "same-store" revenue growth cannot be calculated.⁷

⁵ Real Capital Analytics has initiated limited coverage of student housing transactions, and both CB Richard Ellis and Marcus & Millichap, among other national brokers, now have specialized student housing groups, but as yet do not publish data regularly as they do for the traditional real estate sectors.

⁶ Most notably, in August 2006 EDR cut its dividend by 31% and lowered earnings guidance for 2006 only two weeks after its second-quarter earnings conference call, leading many analysts and investors to question management's credibility.

⁷ Based on company records, per-unit rent growth for ACC and EDT averaged 2.5% in 2004, (1.7%) in 2005, and 1.9% in 2006. However, since the composition of holdings kept changing through acquisitions during this period, it is not possible to draw significant conclusions on a "same-store" basis.

Exhibit 9
Operating Data - 2006
Private Student Housing vs. Doms and Conventional Apartments

	Rent per Bed	Rent per Unit	Occupancy Rate
Student Housing REITs			
American Campus Communities	\$459	\$1,528	97.2%
Education Realty Trust	\$367	\$1,156	93.3%
GMH Communities Trust	\$337	\$1,079	94.4%
Weighted Average, All REITs	\$371	\$1,194	94.8%
University Dormitories			
Public	\$303		
Private	\$365		
All	\$319		
Conventional Apartments		\$930	94.1%

Sources: REIT filings, REIS, and RREEF Research

The 2006 update to the NMHC 2004 student housing survey of 64 college markets found that rents rose an average of 7.0% from 2004-06, or about 3.4% annually, somewhat ahead of inflation. However, this survey suffers from data deficiencies that undercut its integrity.

A less direct but nonetheless informative indication of rent growth is afforded by examining fee growth charged for dormitories – which is well documented – in as much as university housing administrators increasingly set their dorm fees based on rents charged by private landlords. While tuition inflation has been widely publicized, perhaps less well known is the substantial long-term growth in dorm fees. Over the past 10 years, dorm fees have jumped 66%, with an average of 4.8% annually in this decade at public universities (Exhibit 10).

Exhibit 10
College Expense Inflation Annual Growth

	1980-1990	1990-2000	2000-2005
Public 4-Year Institutions			
Tuition and Fees	9.2%	6.5%	8.5%
Room Charges	7.9%	4.9%	6.3%
Private 4-Year Institutions			
Tuition and Fees	10.0%	5.7%	5.2%
Room Charges	8.8%	5.3%	5.2%
All 4-Year Institutions			
Tuition and Fees	9.6%	6.4%	6.5%
Room Charges	8.2%	5.1%	5.9%

Sources: National Center for Education Statistics, RREEF Research

These trends have extended across the country. Dorm fees in the top 15 growth states cited earlier have escalated an average of 7.1% annually – more than double the growth rate for conventional apartments in these states and nationwide (Exhibit 11).

Exhibit 11
Annual College Expense Growth, 2000-2005
Public Four-Year Institutions, Selected States

State	Dorm Fees	Apartment Rents	Difference
Alabama	3.6%	2.9%	0.7%
Arizona	8.7%	4.1%	4.6%
California	5.9%	4.7%	1.2%
Florida	4.9%	3.8%	1.1%
Georgia	7.6%	1.9%	5.7%
Indiana	5.4%	3.7%	1.7%
Louisiana	7.2%	3.0%	4.2%
Michigan	7.2%	2.8%	4.4%
North Carolina	6.3%	3.0%	3.3%
Oklahoma	15.7%	3.2%	12.5%
Pennsylvania	6.7%	2.5%	4.2%
South Carolina	11.1%	2.4%	8.7%
Tennessee	5.4%	3.6%	1.8%
Texas	5.7%	2.8%	2.9%
Virginia	<u>4.8%</u>	<u>3.5%</u>	<u>1.3%</u>
15-State Average	7.1%	3.2%	3.9%
U.S. Average	6.3%	3.0%	3.3%

Sources: National Center for Education Statistics, U.S. Bureau of Labor Statistics, U.S. Department of Housing and Urban Development, RREEF Research

These rental growth rates undoubtedly exceed those for privately-owned student housing, as the dorm fees started from a lower base – even now dorm fees average some 15% below private student housing rents. Nonetheless, these trends provide a vivid indication of student housing rental growth, which has been rising well in excess of both inflation and conventional apartment rental growth.

Future rental growth will be limited by the rents charged by conventional apartments, which will always remain an alternative, particularly for budget-conscious students. Overall college affordability will also be a factor: attendance rates drop when costs rise above the ability of students and their families to support them. Nonetheless, available indications suggest that increases in college costs, including dorm fees, will continue to exceed inflation. These rising dorm fees should enable private owners of student housing to continue boosting rents aggressively, particularly in more supply-constrained markets where university housing has failed to keep pace with surging student enrollments.

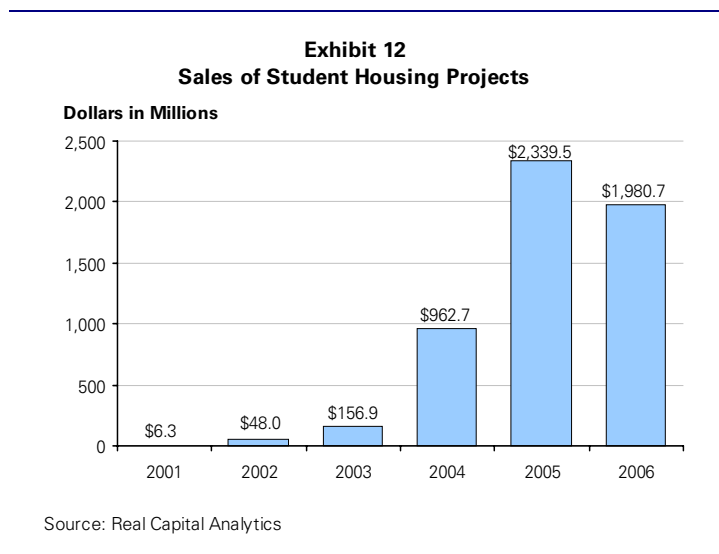
Expenses and Costs. Reliable expense data for the industry is also limited, as the REIT data is distorted by many one-time costs associated with acquiring, renovating, and integrating the new assets. Even so, available data suggest that operating expenses for student housing usually exceed those for conventional apartments, often by a wide margin.⁸ The top reasons: the greater service levels and on-site personnel at these projects; marketing costs are also higher due to the short leasing period. Also, student housing affords fewer opportunities for economies of scale, as operators rarely manage more than one or two projects in a market area. However, this data must be parsed carefully, as some of the additional expenses are ultimately reimbursed, such as utilities that are included in the base rent.

⁸ A 2006 report by Green Street Advisors concluded that student housing expenses were almost twice those of conventional apartments, but was based on the experience of only one student housing REIT (ACC) and two multi-family REITs, limiting its reliability.

Maintenance costs can be higher for student housing due to more intensive use by students, and the short time to turn-around units, though the perceived extent of student abuse is sometimes exaggerated relative to the reality. Also, operators tend to be more aggressive about billing parents immediately for any unit damage. The net impact of all these factors on operating margins varies widely by operator, but in many cases projects achieve net revenues quite favorable relative to conventional apartments.

Investment Trends

The student housing investment market has grown substantially during the last few years. **Investment volume** has grown from virtually nil in 2001, to \$2+ billion in each of 2005 and 2006⁹ (Exhibit 12).



While showing impressive gains, this sales volume pales in comparison to the market for conventional apartments: The college population (about 15.1 million undergraduates) accounts for about 5% of the U.S. population (300 million), but for about 10% of renters overall. This estimate reflects that 39% of all college students live at home with family (implying about 9.2 million student renters), while two-thirds of American households own their home.¹⁰ By contrast, the dollar volume of student housing transactions last year amounted to only 2.3% of the total apartment market. Thus, student housing accounts for less than a quarter of its relative proportion of the renter population, which hints at the potential for much greater institutional investment levels.

⁹ Real Capital Analytics, "Student Housing Special Report, 4Q'06 Special Report." During the first two months of 2007, 14 properties sold for \$371 million, for an annualized volume of \$2.2 billion.

¹⁰ The U.S. Census Bureau reports in 2005 that 36.8 million homes in the U.S. were renter occupied (33.1%), with an average household size of 2.4, which yields a universe of about 88.3 million residents of renter-occupied units. This compares to the college population of about 15.1 million, of which 39% live at home, or 9.2 million that live outside the home, virtually all of whom rent, either in dorms or some other form of student housing. Thus, student renters account for 10.4% of total renters in the U.S. Note that the 2.5 million students in graduate school account for a minimal share of the residents at institution-owned student housing, and thus are excluded from these calculations.

Among the regions, the Southeast is particularly active, with more than 35% of the dollar volume sold during 2006, despite having only 23% of the enrollment at public colleges. The greater activity here reflects buyers' focus on large-school markets with university housing shortages. By contrast, the West accounted for less than 9% of the sales volume, despite having 17% of students. No doubt some of this differential can be attributed to California, which traditionally has lagged other states in constructing private student housing (Exhibit 13).

Exhibit 13
Transaction Volume vs. Enrollment Share

Region	Share of Enrollment*	Share of Transaction Volume	Difference
Mid Atlantic	17.5%	14.8%	(2.7%)
Midwest	24.4%	19.5%	(4.8%)
Northeast	4.0%	2.0%	(2.0%)
Southeast	23.3%	35.7%	12.0%
Southwest	13.7%	19.2%	5.0%
West	17.2%	8.8%	(8.3%)

*Undergraduate enrollment at Public 4-Year Institutions

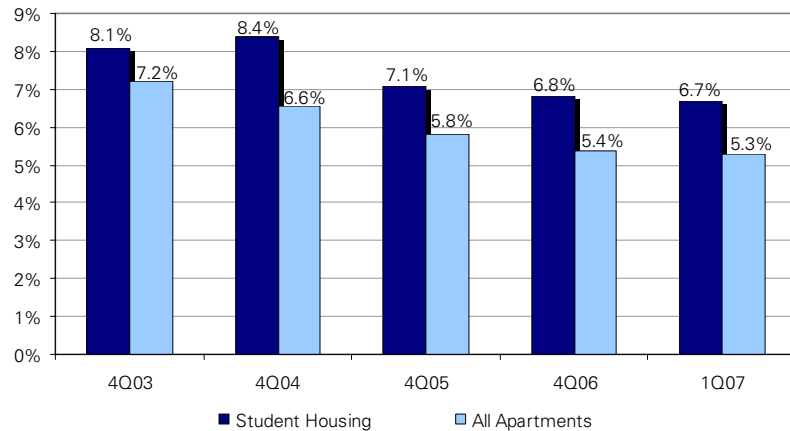
Sources: Real Capital Analytics, National Center for Education Statistics, RREEF Research

Capitalization rates for student housing projects typically have been higher than for conventional rental product – historically a premium of 100 to 150 basis points. The higher yields reflect greater investor caution about student housing risks, the thinner investor market for student housing, as well as the more management-intensive nature of the product. However, cap rates for student housing have been declining, both absolutely and relative to those for conventional apartments. Transaction data tracked by Real Capital Analytics show that during the past 12 months, the median cap rate for student housing projects was 6.85%, about 75 basis points above the median rate of 6.11% for all apartments – in line with industry thinking, which puts the premium range now at 50 to 100 basis points, with more desirable markets at the low end of the range. The drop in cap rates for student housing reflects both greater investor awareness and comfort with the product, as well as the compression trends that have characterized most real estate product types in recent years (Exhibit 14).

On the other hand, **per-unit prices** for student housing are roughly on par with prices for conventional apartments, although projects rented by the bed can command a premium. The larger number of bedrooms in student housing (on average slightly more than three beds per unit) compensate for the higher cap rates, resulting in average per unit prices of \$102,800 in 2006, versus an almost equal \$102,400 for conventional apartments, according to Real Capital Analytics.¹¹

¹¹ Real Capital Analytics, "Student Housing Special Report, 4Q'06 Special Report."

Exhibit 14
Capitalization Rates - Student Housing vs. All Apartments



Source: Real Capital Analytics

As the industry consolidates, the **owner composition** is changing: private investors are the most active sellers, and REITs are the most active buyers. During 2006, REITs comprised 50% of buyers, far ahead of the other types of buyers.

Lastly, investors will want to better understand the **return performance** for this asset class relative to traditional real estate such as apartments and offices. Unfortunately, the record is not yet clear. As noted previously, there are only two pure student housing REITs (plus another that has both student and military housing). Of the two pure student housing REITs, one went public only in 2005 and has endured some well-publicized missteps, while the other went public in late 2004, so the data set is quite limited. Moreover, both REITs have been making significant acquisitions over the past two years, making meaningful portfolio analysis problematic. Drawing conclusions based on just these two owners could be misleading. Similarly, data on privately-owned student housing is limited. Currently NCREIF¹², the standard reference for return data on privately-held real estate, does not calculate an index yet for student housing, though the topic reportedly is being considered.

Investment Considerations

The selection criteria for developing or acquiring student housing has many elements identical to those for conventional apartments, as well as other issues particular to this product type. Student housing projects also face many success factors and risks unique to this sector.

Market Selection

As with almost any real estate product, investors will pay a premium for student housing properties located in large, supply-constrained markets with strong demand growth prospects. These criteria would tend to favor the states with large college enrollments shown previously (Exhibit 5) and the states with the greatest expected student growth as indicated by high school graduation rates (Exhibit 15). These two lists are highly correlated – 12 of the top 15 high-growth states also rank in the top 15 states ranked by undergraduate enrollment at public

¹² The National Council of Real Estate Investment Fiduciaries, an association of institutional real estate professionals, compiles real estate performance indices for five basic product types (office, retail, industrial, apartments, and hotels) based on pooled data provided by member firms and organizations.

universities. More significantly, the top four student growth states are also rank as the four states with the greatest existing dorm shortfall: California, Texas, Florida, and New York.

Exhibit 15
Actual and Projected High School Graduates, by State
Ranked by Total Growth 2007-2012

	<u>Average Annual Absolute Growth</u>		<u>Average Annual Percent Growth</u>	
	<u>1998-2007e</u>	<u>2007e-2012f</u>	<u>1998-2007e</u>	<u>2007e-2012f</u>
United States	2,979,209	2,976,912	2.2%	0.8%
1 California	368,596	393,504	3.1%	0.7%
2 Texas	252,907	258,472	3.4%	1.2%
3 New York	162,050	155,648	1.1%	0.2%
4 Florida	134,393	146,946	5.2%	1.5%
5 Illinois	131,138	129,780	1.0%	0.9%
6 Pennsylvania	132,663	128,142	1.7%	0.0%
7 Ohio	128,767	122,626	1.1%	0.1%
8 Michigan	110,655	109,488	1.5%	0.6%
9 New Jersey	88,954	99,540	5.6%	1.3%
10 Virginia	77,511	81,282	2.5%	1.7%
11 North Carolina	75,329	80,146	3.6%	0.9%
12 Georgia	73,813	77,780	3.2%	1.4%
13 Arizona	55,185	73,780	10.2%	3.2%
14 Washington	65,623	63,372	1.8%	0.4%
15 Indiana	65,017	62,802	0.2%	1.1%

Sources: National Center for Education Statistics, RREEF Research

Conditions in the conventional apartment market are also important. Markets with a large supply of affordable apartments are less attractive as these less costly units will compete with dedicated student housing projects. For the same reason, markets with low barriers to entry also generally should be avoided due to potential overbuilding. Investors also should look for markets with greater institutional-investor presence to ensure liquidity when the asset is to be sold. This factor reduces the attractiveness of many higher-growth college markets that are located in smaller metros lacking significant institutional investments.

Finally, investors should examine the universities themselves. Projects near universities with strong growth prospects obviously will represent potentially lower risks. This assessment will depend not only on local demographics, but also the school's financial ability and desire to grow. Schools with more selective admissions (high ratio of applicants to admitted students) and high retention rates also should be preferred as their enrollment will be less vulnerable to declines over the course of the economic cycle – a risk factor discussed below.

Success Factors

Location and amenities are keys to the success of off-campus student housing. The most successful projects – those that have the lowest vacancies and command the highest rents – are located within walking distance of the universities they serve. If not within walking distance, a shuttle service to/from campus is often essential.

Many amenities are now virtually mandatory, including a kitchen, laundry, and Internet access, particularly for newer and higher-quality projects. Almost 90% of projects surveyed in American School & University's 17th Annual Residence Hall Report had these amenities. Air conditioning was also found in 84% of projects. Because many of today's students have been raised in a child-centered environment, their requirements often go beyond these basics. Fitness centers, swimming pools (especially in warm climates), TV/game rooms, computer

rooms, and sports courts are becoming more common, although the popularity of these amenities depends somewhat on what is available on campus. More upscale properties might even offer concierge service, coffee bars, and tanning salons. For this reason, a unit count of at least 150 is usually preferred in order to reach economies of scale in providing these amenities (and managing the project).

Unit mix and design are also important. Private bedrooms and bathrooms are increasingly the norm for new student housing projects, as is parking for every student (i.e., one bathroom and parking space per bed). Virtually all successful projects are designed with a high proportion of three- and four-bedroom units but relatively small living areas (kitchen and living room) and bedroom sizes (Exhibit 16).

Exhibit 16
Amenities Comparison
Student Housing vs. Class A Apartments and Dorms

Amenity	Student Housing	Class A Apartments	Dorms
Kitchen	Small	Larger	N.A.
Washer / Dryer in Unit	✓	✓	N.A.
Individual Bedroom / Bathroom	✓	✓	N.A.
Bedroom Size	Small	Larger	Small
Living Room	✓	✓	N.A.
Private Patio / Terrace	✓	✓	N.A.
Finish Level	Moderate	High	Low
Clubroom / Lounge / Pool Tables	✓	✓	Limited
Gym / Basketball / Volleyball	✓	✓	✓
Swimming Pool / Hot Tub / Spa	✓	✓	N.A.
BBO Grills	✓	Some	N.A.
Free Cable / Premium Cable	✓	✓	N.A.
Free Internet Access / Wireless	✓	✓	Some
Computer Lab	✓	✓	✓
Concierge Service	Some	✓	N.A.
Shuttle to Campus / Bus Service	✓		✓

✓ = Typical

Source: RREEF Research

Thus, relative to typical conventional apartments, newer student housing projects will have:

- A much higher proportion of three- and four-bedroom units (usually more than 50% of bedrooms, and often more than 75% are in these large units)
- A much greater ratio of bathrooms and parking spaces to bedrooms (1:1:1)
- Relatively small bedrooms and shared living areas in each unit
- One full kitchen for each unit
- More extensive common areas and amenities for the building

These unit and building features, increasingly required for marketing to students, also make these projects more difficult to convert to conventional apartments if the student housing orientation is ultimately not successful.

Risk Factors

Student housing presents a number of challenges and risks unique to this sector, which if not managed properly, can affect the performance of the investment.

Short leasing cycle: Most student housing is leased during a narrow window of time during the spring semester, and few students move during the academic year, so prospects for filling vacancies once this window has passed are limited. If management has misjudged rents or amenities, it could have long-term implications for the project.

High reliance on a single source of demand: Demand for student housing primarily comes from one nearby university (though student housing projects in urban markets sometimes can draw from more than school). Developers and investors must know the local student population and admission trends and gear their product toward their student base.

High turnover: Unit turnover during the academic year is small, but only about one-third of students typically renew, creating high annual turnover that all occurs in a concentrated time.

Management intensive: Student housing presents significant challenges for the operator, starting with the need to manage student tenants throughout the year. The unit turnover process is especially difficult, as all units must be prepared for the new tenants in a single two-week period. These issues require specialized experience serving this market.

Per-bed leasing: Most projects lease by the bed, which requires running a roommate matching service. Filling units with compatible roommates can be difficult, even when overall project demand is high.

Reputation: Word of mouth is key to marketing efforts for off-campus housing. If a property is not well managed, students will quickly pass the word, which could affect future demand.

Wear and tear: Maintenance costs can be higher for student housing due to more intensive use by students, and the short time to turn-around units (though the perceived extent of student abuse is sometimes exaggerated relative to the reality).

Limited re-use potential: Most student housing is structured as apartments with up to four bedrooms. In general, little non-student demand exists for apartments with so many bedrooms. As a result, it is difficult and expensive to convert student housing into conventional market apartments.

All of these risks can be managed to a greater or lesser extent, however, providing potentially outsized returns for the effective operator. Thus, quality, specialized management is probably even more essential in this market than for conventional apartments.

But student housing is vulnerable in varying degrees to most of the same market risks that assets in all real estate sectors face, namely the threat of new competition and economic cycles.

New competition: With few major players involved in student housing, this sector is somewhat less susceptible to the bouts of massive overbuilding that periodically afflict most real estate markets. Nonetheless, existing product still faces risks from new projects that can quickly become the new "hot" community for students with limited loyalties and clear preferences for having the newest and best products. Poorly-located, less-accessible projects

can be particularly vulnerable, whereas the best located properties situated closest to campus can retain high occupancies for many years.

Moreover, the conventional apartment market can serve as a curb on rent growth for student housing. While many students, particularly those from more affluent households, will pay a premium to live in a preferred community, the demand is not completely inelastic. Projects that push rents too aggressively risk losing residents to more affordable conventional projects, even if with lower amenity levels.

Finally, private student housing owners face supply threats from the universities themselves. Though many public schools have sharply reduced direct dorm construction, most schools now arrange for on- or off-campus apartments through third-party providers. These projects can operate at a cost advantage relative to private owners because they typically are financed with tax-exempt bonds (lowering capital costs) and are exempt from local property taxes (lowering operating expenses).

Economic cycles: The demand for student housing overall is less cyclical than that for other real estate categories. Student enrollments do not vacillate as dramatically as do, say, employment and consumer spending. Even so, student housing projects may see occupancy fluctuate over the course of the business cycle, as more students opt for less expensive units during recessions. Here again the conventional apartment market plays a role. Weak market conditions for regular apartments can attract students seeking bargain rents.

On balance the risks from operational issues unique to student housing probably outweigh the more typical real estate risks. However, investors should not ignore either set of risks when pricing potential acquisitions. Each has the potential to overwhelm the yield premiums student housing still enjoys.

ANALYST CERTIFICATION

The views expressed in this report accurately reflect the personal views of the undersigned lead analyst. In addition, the undersigned lead analyst has not and will not receive any compensation for providing a specific recommendation or view in this report.

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