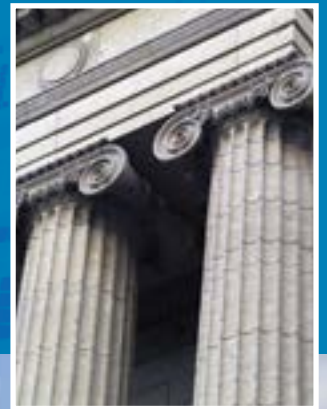


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Message from the Dean

Towson University College of Business and Economics



Dear Colleagues and Friends,

We are very happy to share with you the annual issue of the *Baltimore Business Review*. This marks our fourth year of partnership with the Baltimore CFA Society (BCFAS). Towson University's College of Business and Economics (CBE) is proud to work with the BCFAS and all of our industry and local business partners to facilitate the cross-pollination of ideas between our students and industry leaders and allow us to maintain the currency of our academic programs.

Last year, we announced with great pleasure the CBE's plans for the T. Rowe Price Finance Laboratory, a state-of-the-art facility made possible by support from the T. Rowe Price Foundation, many employees of T. Rowe Price and other generous donors. Construction occurred over the summer and the laboratory had its grand opening on Sept. 6, 2012. Along with university and state officials, many alumni, friends and supporters of the CBE helped us celebrate the unveiling of this invaluable new space in venerable Stephens Hall. This facility comes at a perfect time



for students as they prepare to engage a workplace rife with challenges and opportunities and the lab's amenities have been immediately incorporated into the curriculum. Our students have already started to benefit from the hands-on access to the new resources and technology available, and we believe as a result our students will be more competitive and prepared to answer their calling and reach their goals. We are hopeful that

the facilities will not only help our business majors but will reach students in other colleges and the community at large.

The articles in this issue highlight aspects of the economic road to recovery ahead for the state and the nation. You will read how innovation and entrepreneurship are integral to the future of Maryland given that appropriate resources are dedicated to cultivate the already vibrant business environment the state has enjoyed. Several articles take care to emphasize that a healthy banking industry will be critical for the state to capitalize on these opportunities. The issues of access to and paying for higher education which will challenge future students are also addressed, while two articles analyze the post-mortem impact of the housing bubble and bust on economic growth.

We believe the topics addressed in this issue are highly relevant to the way forward and will foster more dialog between educators, industry and government. As always, we welcome your feedback and impressions of this publication as well as ideas for contributions. Also, if you wish to help sponsor future issues, please contact me at any time.

Best regards,

Shohreh A. Kaynama, Ph.D.
Dean, College of Business and Economics

Dear Colleagues and Friends,

We at the Baltimore CFA Society are excited and proud to launch this fourth annual edition of *Baltimore Business Review* our collaborative publication with the Towson University College of Business and Economics.

The designation of Chartered Financial Analyst (CFA) is widely recognized in the investment industry, and by sophisticated investors, as a paragon of investment excellence. CFA charter holders pursue a rigorous course of three exams, covering ethics, economics, accounting, bonds, equities, derivatives, portfolio analysis, and other investment subjects. The study of ethics is particularly important in an era when some investment practitioners have engaged in unsavory practices. Even if a candidate passes every other section by a wide margin, he or she will fail the exam without passing the ethics portion.

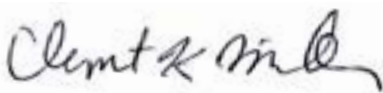
The Baltimore CFA Society was founded in 1948, as the Baltimore Society of Security Analysts. Membership of the Baltimore CFA Society exceeds 600, drawn from a diverse cross section of local investment firms, commercial banks, educational institutions, and government agencies. The Baltimore CFA Society provides a variety of services to its members. Foremost is an ongoing program of luncheons featuring renowned speakers on a wide variety of investment topics. We offer scholarships and study group opportunities for those who wish to pursue the CFA Charter. Additionally, we participate with CFA Society Washington in the Global Investment Research Challenge. Teams from local universities prepare competing equity analyses of a particular company and defend them to a panel of experienced equity analysts. This year, the company is Marriott International, Inc., of Bethesda, Maryland.

Most articles in this BBR edition address trends in the banking industry: mobile banking; banking consolidation and its effect on the trust business; the federal role in student lending; the impact of mortgage securitization on small business lending, and Maryland state initiatives to fill in gaps in private sector start-up funding. Other articles address housing market trends, the dominance of four NYSE designated market makers, and a Maryland stock index constructed by Towson students.

Credit for this publication accrues to Niall O'Malley of the Baltimore CFA Society, as well as Michael Dewally and Yingying Shao from the Towson University College of Business and Economics. Additionally, Rick Pallansch of the Towson Design Center provided generous support.

Please enjoy this great publication. We look forward to hearing any feedback you might have.

We wish you the best of luck in your investing.



Clement K. Miller, CFA
President
Baltimore CFA Society



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Clement K. Miller is an investment strategist serving with Wilmington Trust Investment Advisors (WTIA), the investment advisory subsidiary of M&T Bank. He is a member of the Investment Research Team, which fashions investment policy. He is co-Portfolio Manager for the Wilmington Trust Multi-Manager International Fund, and manages relationships with third-party international equity and fixed-income managers. He earned a Bachelors' Degree in International Finance from Georgetown University's School of Foreign Service, an MBA in Finance from George Washington University, and the designation of Chartered Financial Analyst (CFA).



Recession and Its Effect on Maryland's Innovation and Entrepreneurship

Clay E. Hickson

*Executive Director, TowsonGlobal Business Incubator, Towson University
President, Maryland Business Incubation Association*

During times of recession when many people lose their jobs, their entrepreneurial spirit often kicks into gear. Difficult economic times can force people to be creative in finding ways of supporting themselves and of pursuing long-held dreams. This most recent Great Recession has had mixed effects on innovation and entrepreneurship, both in Maryland and in the United States.

Growth but Stagnation

Nationwide, the overall number of people who became self-employed increased to its highest level since 1996; however, entrepreneurial activity took a big hit during these recessionary years. Although the amount of people who ventured into self-employment grew, the number of people who already owned businesses decreased by 400,000 (Shane, 2011). In fact, the number of self-employed people decreased by more than the number of regular employees. As a result, entrepreneurial growth has remained relatively stagnant between 2009 and 2012.

While recessions can spur entrepreneurship because of necessity, this time around there seems to have been counterbalancing forces at work, which may be one of the reasons why the economy's recovery process has been so slow and sluggish. The entrepreneurial spirit may be willing, but many of the resources needed remain weak. Poor revenue growth and increased difficulty in gaining access to capital have driven many established small businesses to failure and made it more challenging for willing entrepreneurs to launch their innovative ideas.

State Support and Strengths

Maryland fortunately was spared the worst effects of the Great Recession, but self-employment in the state also decreased by 4% between 2007 and 2009 (SBA, 2011). One of the reasons so many businesses went under was because of how difficult obtaining funding has been, either from banks or from venture capitalists and angel investors. These factors helped prompt the state of Maryland to begin developing initiatives that can stimulate entrepreneurial endeavors.

In 2008, Maryland was named one of the leading states in the transformation into an entrepreneurial and innovation-based economy, demonstrating above average levels of entrepreneurship, according to a Kauffman Foundation Study; and has remained a leader ever since (Praxis Strategy Group, 2012).

The US Chamber of Commerce also has named Maryland the top state for innovation and entrepreneurship, aided in part by the Invest Maryland initiative which raised \$84 million to finance the state's promising start-up and early stage companies (State of Maryland, 2012). The Maryland Minority Research & Development Initiative also seeks to increase women-owned businesses' access to federal grants for early stage research and development projects by providing them with business assistance and access to equipment and research facilities (Prince Georges County Business Development).

Maryland's prime Mid-Atlantic location has been an important factor contributing to the growth of entrepreneurial activity. Easy access to thriving innovation hubs in Philadelphia and New York facilitates collaborations and connections to resources from around the region, but the proximity to Washington, DC, is a major asset. Federal labs and research institutions, along with a wealth of world class educational institutions not only attracts innovators from all around the globe to study and work here, but these individuals often take their ideas outside the lab for further development and commercialization. Thus, creating a positive ripple effect throughout the economy.

Another factor that has helped in making Maryland a top state for innovation and entrepreneurship is the proliferation of business incubators across the state. The Maryland Business Incubation Association reports that there are more than 20 business incubators, innovation centers, and accelerators across the state, supporting approximately 500 businesses specialized in diverse sectors such as life sciences, information technology, professional services, trade, retail, cyber security, gaming, and green products, among others. These incubators provide a host of resources, mentoring, and access to funding that give startups a much better chance of succeeding than if they tried to go it alone.

Regarding the availability of these programs many entrepreneurs still are unaware that they exist or do not have much information on how incubators can help them develop their ideas and start their businesses. These organizations could benefit not only from more promotion but also from more formal support from the state to help fund existing initiatives that will help increase the number of successful entrepreneurial ventures—the ultimate engines of job creation and tax revenue generation.

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With contributions by:

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TowsonGlobal Business Incubator
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Keffa Coffee's Success Story

Keffa Coffee owner Samuel Demisse is just one example of how vital these programs are to spurring innovation for small businesses of all kinds. Samuel imports green coffee directly from the farmers in Ethiopia and sells to roasters all across the country. He is one of 350 certified coffee cuppers in the world, meaning he actually is qualified to grade coffee. His innovative approach has resulted in several years of stellar revenue growth—doubling from one year to the next. Despite his success, Samuel struggled to obtain a working capital loan of sufficient size to allow him to purchase the inventory needed to grow his business and meet demonstrated customer demand. He finally was able to obtain the loan he needed because TowsonGlobal—Towson University's business incubator—used its connections with M&T Bank and vouched for Keffa Coffee. Now, he is poised for even greater growth.

Other Resources and Opportunities

Another initiative created to help increase awareness of the many resources available statewide is Startup Maryland, which launched “Pitch across Maryland”. In this initiative, a group of investors, business experts, and entrepreneurs travelled Maryland by bus to different incubators, economic development agencies, universities and landmarks across the state. They met with entrepreneurs, allowing them to pitch their ideas, for a chance to gain exposure, win prizes, and receive valuable advice, information, and connections from experts.

A wide variety of industry sectors provide strong innovative ideas and solid entrepreneurial opportunities. For example, the IT industry has seen steady growth both in the US and in Maryland in the past decade. While IT jobs in the rest of the US shrank, they grew by approximately 7 percent in Maryland. More than 170,000 high-tech jobs contribute \$15.3 billion to our state's economy (Garfield, 2012).

At the same time, it is important to recognize the importance of stimulating innovation in other sectors besides those in high tech sectors. Manufacturing, which has lost huge numbers of jobs in both the US and Maryland is one where supporting innovation is crucial. This sector still has not recovered from the effects of the recession, but bringing the entrepreneurial spirit to the manufacturing industry could help facilitate a speedier economic recovery here in Maryland and across the country.

Facilities like the ObjectLab at Towson University and the FAB Lab at the Community College of Baltimore County bring high tech tools to entrepreneurs, product developers and others. They can get help making prototypes of their inventions and are provided with a wide variety of equipment, including milling machines, 3-D printers, a laser cutter and a variety of design software. Such facilities help to educate people on product development steps, including industrial design and manufacturing (Lorenzo, 2012).

Room for Improvement

Still, despite being ranked first in “innovation and entrepreneurship,” when entrepreneurial activity is separated out by itself, Maryland ranks only 21st overall in this category. Why this disparity? In simple terms, Maryland has lots of great new ideas bubbling around in the labs and universities but has not necessarily been as successful as many other states in exploiting those ideas.

Maryland is well suited to recover from the recession faster than some other parts of the US because of its strong entrepreneurial ecosystem, and the variety of initiatives that help stimulate the entrepreneurial spirit; however, to ensure that Maryland does not squander its strengths, policymakers and entrepreneurs alike must ensure that real efforts are made to strengthen that ecosystem. The state could help in a significant way by assisting in loosening up funds with loan guarantee funds or small business revolving loan programs. In addition, business assistance grants made available to qualified startups in all sectors (not just technology) will help ensure a more vibrant and diversified economy.

Startups and small businesses are the real job creators, and finding ways of better supporting them will facilitate their success...which translates into success for Maryland.

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Trends in Student Loans

Erica Niemann, CFA

*Analyst
Lane Five Capital Management*

Total government funding of higher education is roughly \$265 billion. This article will focus on what the changes in the post-secondary education landscape really mean.

The Federal Direct Lending Program became the primary source of postsecondary lending in the midst of the financial crisis. Of the over \$265 billion in funding, direct funding to institutions is roughly \$157 billion, and student funding through Title IV, which include Stafford Loans and Pell Grants, represents \$108 billion. The Department of Education, not known for its underwriting prowess, and with no mechanism for pricing risk, is now lending over \$100 billion a year at fixed low interest rates.

Meanwhile, post-secondary education itself is changing. Following more than 30 years of tuition increases, the value proposition is being called into question. The for-profit sector, whose students comprise 30% of all borrowers and 50% of all defaults, has come under particularly harsh fire during the last two years. Yet, that sector is not to blame for the decision to lend freely to any individual willing to fill out a FAFSA. Presented below are the common arguments against for-profit education and the lesser-known data

points that may indicate a much more vibrant education model that could offer a solution for efficiently educating our future workforce were it not for the unintended consequences of government regulations.

Lastly, Maryland ranks 18th in FAFSA applications year-to-date, but has experienced growth on par with the national average. Furthermore, one of the most innovative for-profit education companies, American Public Education (ticker: APEI) has close ties to Baltimore. This company has managed to outpace the growth of for-profit education while maintaining much lower default rates than the national average for proprietary institutions. Its unique business model is worth a closer look as we assess the burden that educating our workforce places on taxpayers.

Indirect Student Funding: The move to Direct Lending

On July 1, 2010, the Department of Education officially transitioned from the FFELP loan program, which guaranteed student loans made by private lenders, to the Federal Direct Loan Program. Now, all federal student loans are originated and administered by the Department of Education.

In the federal fiscal year ending October 2011, \$169 billion in federal aid was dispersed directly to institutions and indirectly to over 16 million students by the Department of Education to fund post-secondary education. Out of that, \$108 billion was indirect funding via federal student loans -- a sum that grew at a compound annual rate of 10% per year over the last five years. That growth comprises full-time enrollment growth, which has averaged 4% annually, and tuition increases. College tuition and fees have consistently risen for the past 35 years. Since the Labor Department began tracking in 1978, the cost of obtaining a college degree has increased by 1,120%. By 2020, the Department of Education will have dispersed over a trillion dollars in loans, funded by the Treasury and ultimately the taxpayers.

Federally guaranteed student loans are not underwritten for credit-worthiness, the interest rates are fixed regardless of risk, and students may borrow up to the program's maximum limit irrespective of the actual cost of tuition. The objectives of this arrangement are to make the program accessible to all students, to provide students with freedom to choose their institutions, and to cover students' living expenses, which can be a major obstacle between the poorest students and a college

education. However, these policies create an array of unintended consequences and conflict in many ways with other regulations and policies in place. In some cases, such as community college, tuition is lower than the maximum loan limits. Students are still entitled to the maximum limit, so they are able to take on debt well in excess of their tuition.

Federal Student Loans fall into three major categories: Perkins and Stafford Loans, Plus Loans, and consolidated loans. The terms of each are slightly different. However, Stafford and Perkins accounted for 84% of total loans generated in fiscal 2011, and are made directly to students. Perkins loans have an interest rate of 5%, with a 10-year repayment period and a limit of \$5,500 for undergraduate students. Stafford loans typically have a fixed interest rate of 6.8%, and are either subsidized or unsubsidized. Subsidized loans do not accrue interest while the student is in school. The amount a student would qualify for in subsidized Stafford Loans is needs-based, so lower-income students generally receive more subsidized loans. Since 2008, Congress has voted to steadily reduce the interest rate on these loans. The rate on a subsidized Stafford Loan is now 3.4%.

With the direct loan program, Department of Education officials have become the loan officers, lending over \$100 billion to students with no credit restriction. If one were to actually consider the four C's of credit -- character, capacity, collateral and capital -- these loans would never be issued. In fact, as the unemployment rate remains elevated, loan default rates have risen across all sectors of higher education. The ability to obtain a job after graduation is the only indication of an individual's capacity to repay and their human capital is often their only collateral.

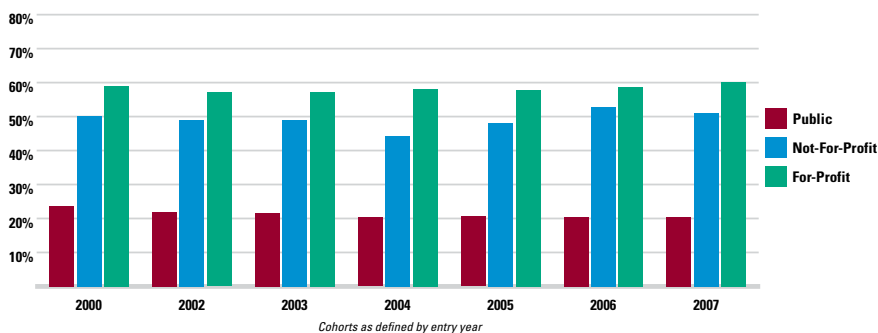
Trends in Higher Education: For-Profit Education Now a Meaningful Contributor

The landscape of post-secondary education has changed significantly in recent years. The for-profit, or proprietary institutions, have gone from relatively insignificant in size in the 1990's to a large and increasingly efficient delivery system for post-secondary education. It now serves over 1.6 million students or 10% of the full-time-equivalent fall enrollments tracked by the National Center for Education Statistics. Furthermore, the number of locations has expanded almost three-fold, from 343 schools in 1990 to over 1,300 last year.

Since the financial crisis, state appropriations to fund public state schools and community colleges have declined significantly, putting pressure on public schools to increase tuition prices. Historically, for-profit schools have grown at the expense of public institutions, particularly when comparing 2-year degrees, where the graduation rates at for-profit institutions are nearly double that of the public counterparts

Figure 1: Graduation Rates

Students completing certificates or associate's degrees within 150 % of normal time



Cohorts as defined by entry year
SOURCE: U.S. Department of Education, National Center for Education Statistics.

Arguments against the for-profit sector have been well documented over the past two years. First, the prices are higher than public institutions. According to the National Center for Education Statistics, the average cost of tuition, room, board and fees for public institutions nationwide was \$13,297 for the 2010 school year versus \$23,032 for the average for-profit institution. However, this is below the average not-for-profit institution's cost of \$35,539. Second, graduation rates are lower in for-profit institutions in aggregate, but, as noted above, graduation rates for two-year degrees are significantly better than the community college system. Lastly, the percentage of students in for-profit institutions who borrow, the amount borrowed, and the default rates are all higher than in not-for-profit institutions. While for-profit schools accounted for roughly 10% of enrollments in 2010, that student body accounted for over 25% of the dollars loaned through the Stafford Loan program. Recently reported two-year default rates for the 2010 cohort were 8.3% for the public sector, 5.2% for the private not-for-profit sector and 12.9% for propriety for-profit institutions.

Despite these facts, there are some important nuances to be understood, and in exploring them there are lessons that perhaps all of higher education can learn from the for-profit sector.

First, while prices are higher than public institutions, particularly at two-year colleges, public institutions receive significant direct funding from state and federal government. The public and not-for-profit sectors supplement tuition revenues with direct government funding in the form of grants, tax-exempt status, appropriations and government contracts. According to a study published by Robert Shapiro and Nam D. Pham in 2010 called "Taxpayers' Cost to Support Higher Education,"¹ "for every \$1 in direct government support for private for-profit institutions, per-student, at federal, state and local levels, private not-for-profit institutions receive \$8.69 per-student and public institutions receive \$19.38 per-student." For-profit schools rely almost entirely on student-funded tuition, which mostly comes through indirect funding or Title IV sources, with negligible direct government support. According to a study from Stifel Nicholas, published in October of 2010 and titled "Taxpayer Efficacy of Higher Education," the actual net cost to taxpayers for graduating a student through the for-profit system is \$16,713 versus \$50,746 in the public sector and \$18,084 in the not-for-profit sector (see Figure 2). Additionally, for-profit institutions are full federal and state tax-payers, whereas the tax-exempt status of not-for-profits and public institutions allows every activity, including athletics, research, and brand new recreational centers and dorms to be funded with tax-exempt dollars. The cost-benefit analysis of both for-profits and not-for-profits cannot just focus on the cost of loans, it must also include direct subsidies and lost taxes.

Second, the for-profit sector serves a larger percentage of women, minorities, and adult learners. Often these individuals have not been well-served in the public system. They may have jobs and families and other obligations that require flexible scheduling and alternative class availability. Additionally, they often require extra support in terms of childcare, public transportation availability and remedial training to fill in gaps left from the unsatisfactory K-12 experience often present in less-advantaged neighborhoods.

Studies have indicated that some of the demographic issues may also largely explain the higher borrowing, lower graduation and higher default rates. For example, one 2009 study found that not only do "four-year career colleges that are predominately minority-serving exhibit a higher graduation rate than public and private institutions that also serve minority students (47 percent

versus 33 percent and 40 percent, respectively),” but “career colleges graduate African-American and Hispanic students at higher rates than public institutions graduate Caucasian students.”² If we take national graduation rates at face value we do not get the full picture of the challenges of the demographics that the for-profit sector is facing.

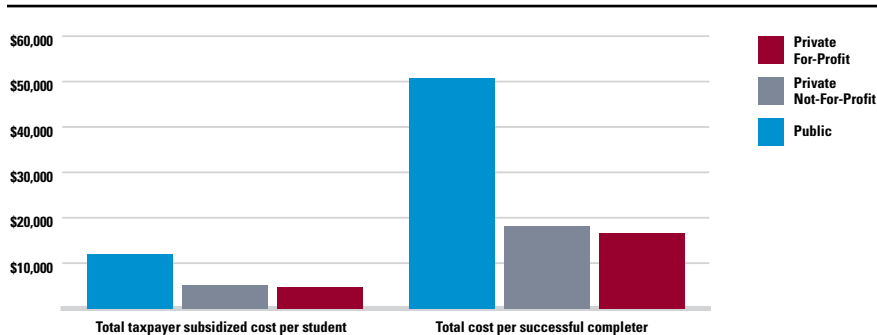
Furthermore, students attending for-profit institutions tend to qualify for higher Pell Grants, a leading indicator of low-income status because the program is based on the level of need. In a July 6, 2010, study titled “Adjusting Default Rates According to Borrower Demographics,” Mark Kantrowitz examined the default rates among those receiving greater amounts of Pell Grants versus those receiving lower amounts to normalize default rates across sectors finding that the gap in two-year default rates becomes almost negligible between the public, not-for-profit and for-profit sectors when adjusting for the percentage of Pell Grant recipients.³

Lastly, the cost of delivery at for-profit institutions is lower because these schools do not have the same institutional constraints as the public and not-for-profit sectors. For-profit institutions operate without tenured professors, prestigious research projects (that do not directly enhance the teaching of students), and continuous expansions of facilities that provide little educational value. According to the National Center for Education Statistics, total expenses per full-time-equivalent student at four-year institutions in the 2009-2010 academic year were \$36,393 at public schools, \$47,053 at not-for-profit schools and \$12,626 at for-profit schools.

Regulation: Creating Unintended Consequences

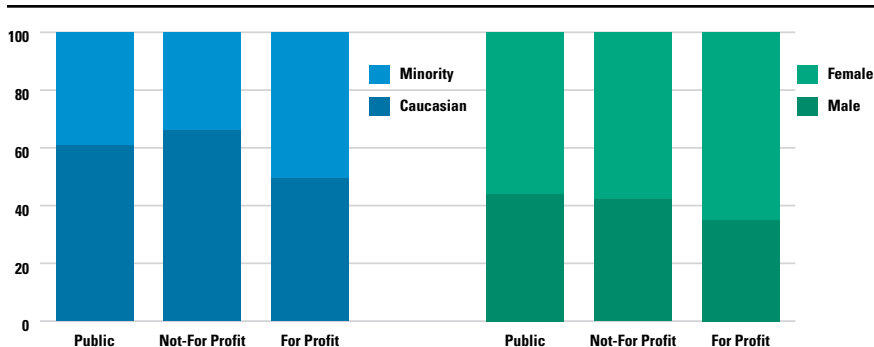
The Higher Education Act (HEA) governs all elements of higher education. The last HEA reauthorization took place in 2008, and it is scheduled for another reauthorization in 2013. However, the most recent reauthorization was delayed five years until Congress finally addressed it in 2008. Even before the last HEA authorization, the for-profit sector had been subject to the 90/10 rule, which requires no more than 90% of a school’s revenues to come from Department of Education funding -- so called “Title IV” funds. The regulation’s goal was to ensure that students had “skin in the game” by forcing them to stump up some of the

Figure 2: Total taxpayer cost per student



SOURCE: Stifel Nicolaus and U.S. Department of Education, National Center for Education Statistics

Figure 3: Enrollment by minority status / gender



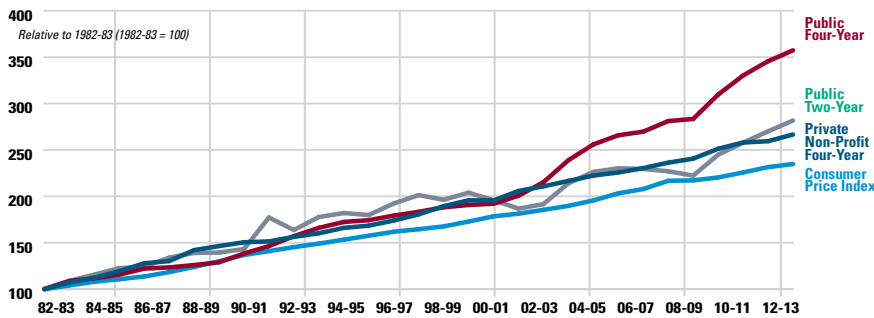
SOURCE: U.S. Department of Education, National Center for Education Statistics

cost themselves. Since the latest HEA reauthorization, Congress has increased the aid available to students via both Pell Grants and Stafford loans, in an effort to keep up with escalating tuition costs across post-secondary education. While they intended to improve college affordability for students, the increases had a perverse effect when combined with the 90/10 rule.

Students naturally use the maximum amount of Pell Grants they qualify for, and fund as much of the remaining costs as possible with fixed, low-rate Stafford loans. Schools, of course, cannot require students to borrow less than they are entitled to, even if it is far more than they need to cover tuition costs. Yet schools are required to ensure that their students’ borrowings do not make up more than 90% of their revenue. Thus, tuition prices rise to an amount approximately 90% of the available federal funding. Many schools, which once allowed students to fund the entire cost with federal funds, have had to raise tuition and fees just to ensure that they comply with the rule that they get at least 10% of their revenue from non-Title IV sources.

These regulations were designed to make education more affordable, while ensuring student borrowers

Figure 4: Inflation-Adjusted Published Tuition and Fees



SOURCES: The College Board, Annual Survey of Colleges; NCES, IPEDS, Bureau of Labor Statistics.

behaved responsibly. The perverse result has been to greatly increase the immediate cost of education and to burden students with higher debts and future loan repayments. If the 90/10 rule were abandoned, or if schools were allowed to limit federal fund access to 90% of tuition and fees, prices would likely fall, access would increase, defaults would be less onerous, and students would have far lower debt levels.

Under the Obama administration, the Department of Education, with help from Senator Harkin, the head of the Senate HELP committee, has been on a crusade to “police” the sector. The Department of Education, through its own rule-making process, has produced a piece of regulation, dubbed Gainful Employment (GE), to describe the role of for-profit institutions in the latest HEA. The Department of Education now defines this simple term, “gainfully employed,” with over 900 pages of regulation. The meat of the regulation includes two calculations that endeavor to gauge the worth of a school’s program offering by measuring: (i) a repayment rate for students up to four years post completion, and (ii) the ratio of debt to post-completion income three years after a student exits the program. Gainful Employment, which was overturned this past July in federal court, would have had the effect of capping tuition prices in the for-profit sector. The Department may still pursue the regulation after making revisions. Altogether, considering the growth in tuition prices across *all* of higher education, this seems like a good idea. Yet, with not-for-profit tuition increasing at a faster rate, shouldn’t these rules, at minimum, be applied to all post-secondary institutions, for the benefit of all students? Consider the chart below that shows inflation in college tuition prices over the last 30 years.

Gainful Employment combined with the 90/10 rule, increased funding of the Pell program and higher loan limits, puts for-profit institutions in a vice. Schools

must keep tuition at levels that are not so low as to create an issue with meeting 90/10, but not so high as to generate ratios above the maximum debt-to-income or repayment rate. Further exacerbating the issue is the student’s “right” to federal grants and loans, which, again, allows an individual access to the maximum loan amount regardless of the level of tuition and fees. While, for the time being, Gainful Employment has been sidelined, the 90/10 regulation, ironically, keeps prices high to the detriment of students and impacts overall debt levels, which is a consumer issue, an institutional issue and, increasingly, a taxpayer issue.

Maryland at a Glance

Maryland receives about \$1.3 billion in appropriations from the Department of Education annually. The State had 377,967 students enrolled in the fall of 2010, of that only 13,294 students, or 3.5% of the population, were at for-profit institutions. The average indirect state grant provided per full-time-equivalent student is \$450, which is about on par with the national average. The State’s overall two-year cohort default rate was 7.8%, well below the national average of 9.1%.

American Public Education: An Innovative Company with Maryland Roots

American Public Education (ticker: APEI), with offices in Columbia, Maryland, came public in 2007 and continues to be an innovator in the for-profit sector. Baltimore investors Camden Partners and ABS Partners were invested in APEI prior to the IPO. The company operates two entirely online, regionally accredited institutions: American Military University, serving members of the armed forces and their spouses since 1993, and American Public University, which instructs civilians. APEI currently serves about 110,000 students – roughly 58% of the student population is active-duty military and the remainder is civilian with careers in public service. The company has invested significant resources in its proprietary information systems called Partnership at a Distance (PAD), which allows new and current students to interact exclusively online at times that fit their schedules, and do so in a cost effective manner. The company’s history of providing graduate- and undergraduate-level curriculum for military officers through distance learning is advantageous for a couple of reasons: (i) the company is not laden with the large fixed costs of operating physical campuses; (ii) military

personnel and veterans have access to Department of Defense funds, such as the post 9/11 GI bill, which count as non-Title IV funds and keeps the company well below the 90% threshold and allows the school to offer significantly lower prices; and (iii) referral rates among the military are much higher than the civilian working adult population resulting in a lower cost to market. The benefit of this position is that cost savings have allowed American Public Education to offer some of the lowest prices in the industry. In fact, the company has not raised its undergraduate tuition rate from \$250 per credit hour since 2000. Meanwhile, college tuition and fees have increased 102% over that time period nationwide.

The lower tuition level, which is comparable to in-state public institutions, and lower cost structure have resulted in revenue and earnings growth at a compound annual rate of 45% and 86%, respectively, over the past five years (ending in fiscal year 2011). APEI's profitability versus a composite of all other for-profit institutions is shown below, highlighting the company's superior EBIT margins on higher year-over-year growth.

While the for-profit sector has struggled with growing enrollments over the past two years under the heavy burden of higher unemployment rates, increased regulation, and a heavy dose of negative publicity, APEI has managed to not only outpace its peer group, but maintain positive growth in new enrollments.

With obvious market share gains and superior levels of profitability at lower prices, APEI has proven that a for-profit model can not only work, but also offer a superior alternative for students and help to solve the education gap in our country. It also acts as very strong evidence of how efficient the for-profit sector can be when the 90/10 Rule is a non-issue.

How Do We Efficiently Educate our Workforce?

Ultimately, the for-profit sector will play a role in the education of our workforce, given the higher levels of efficiency already demonstrated. The most profitable student is one who graduates and secures employment. Furthermore, increased scrutiny and high unemployment rates have prompted the for-profit sector to improve its practices. The sector is already showing improved retention, better graduation rates, falling default rates, and a demonstrable positive trend in outcomes. Students and taxpayers alike need the for-profit sector because it

Figure 5: Enrollment Growth; American Public Education, Inc. (APEI) vs. composite

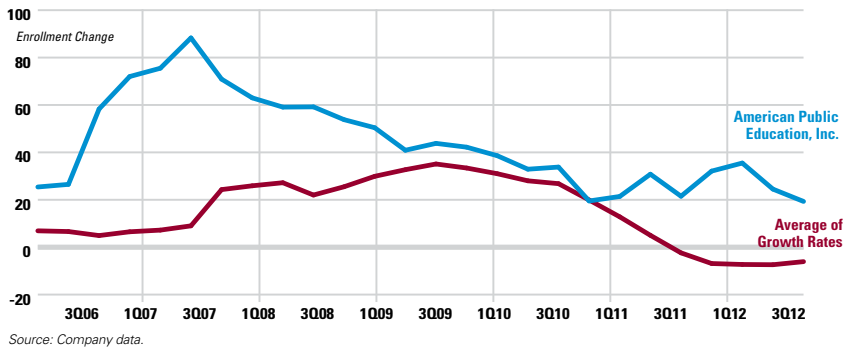
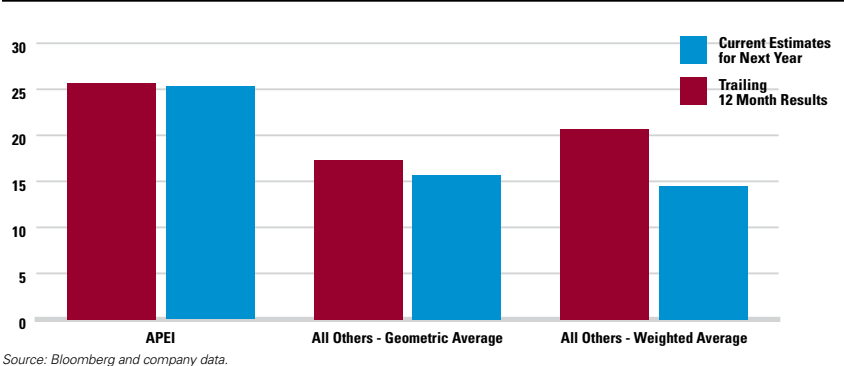


Figure 6: Average Historical Enrollment Growth



offers an alternative delivery model, provides a lower cost solution, and serves a population with more risk factors.

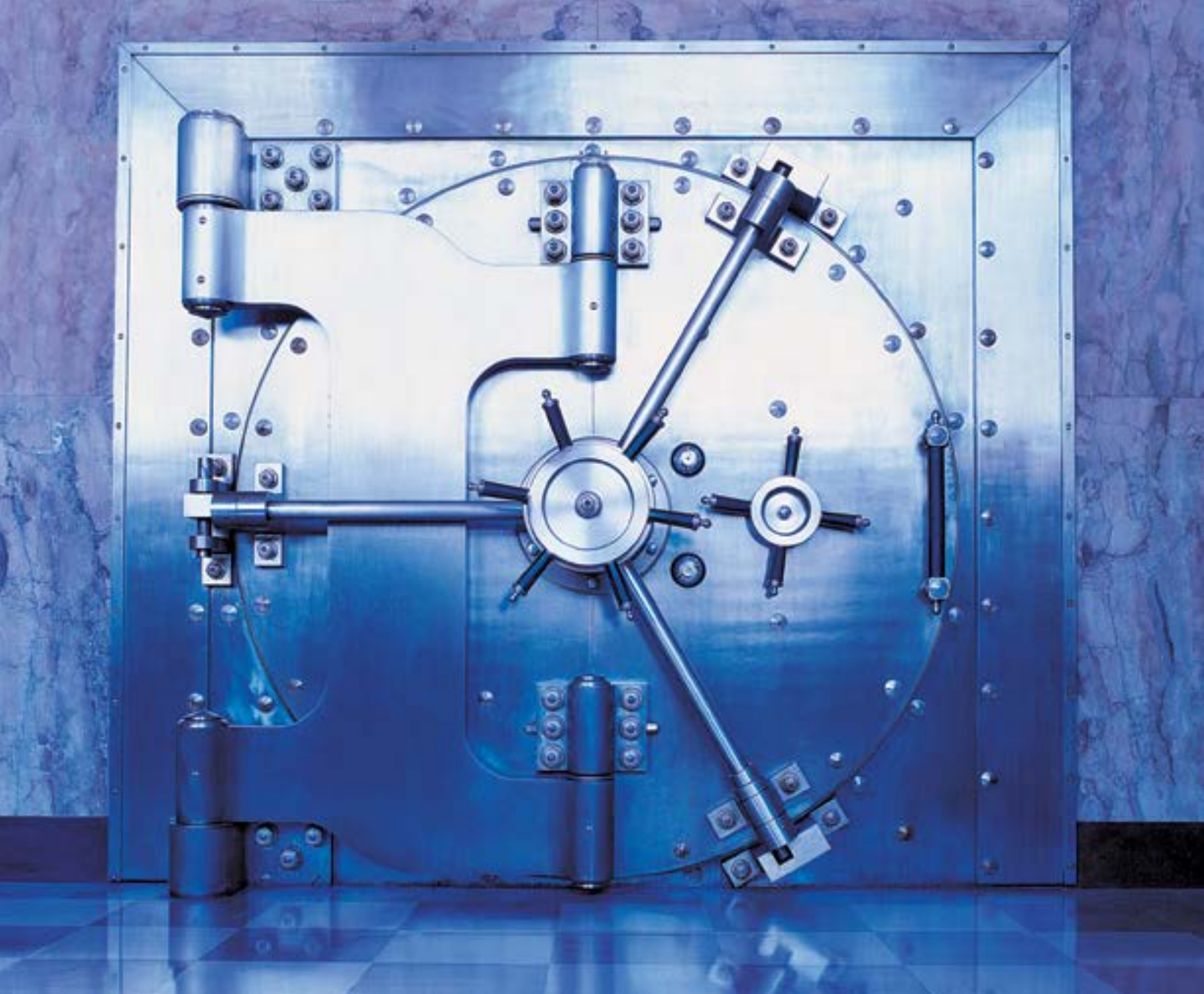
The regulation of higher education is absolutely necessary to protect against those inclined to take advantage of the system, to protect federal and state investments, and most importantly, to provide education and training to a changing workforce in a highly competitive global economy. However, the regulatory framework currently in place falsely inflates tuition at for-profit institutions, allows not-for-profit institutions to use tax-advantaged status to invest beyond the realm of student welfare and education, and holds some institutions accountable for outcomes beyond their control while giving others no accountability at all. It is time to look at the regulatory framework from a student perspective, and to apply scrutiny across the entire spectrum of institutions. The future of our workforce, in Maryland and beyond, is at stake.

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Disclosure

Erica Niemann and clients of Lane Five Capital Management own shares of APEI as of the date this article was written.



Securitization and Entrepreneurial Activity in Maryland

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Entrepreneurial activity is essential to the fabric of the United States' economy in creating jobs and driving the economy forward. According to the Small Business Administration's Office of Advocacy, there were 29.6 million businesses nationwide in 2008. Small businesses accounted for half of all U.S. private-sector employment and produced 64 percent of net job growth between 1993 and 2008. Recognizing the importance of financial capital to small businesses, President Obama signed in 2010 the Small Business Jobs Act that provides a series of provisions to allow small businesses to thrive in an environment where more credit is made available to finance their start-up, encourage their growth and fuel their expansion. This increased entrepreneurial activity will lead to the creation of new jobs which helps the economic recovery and expansion.

The economy of the state of Maryland has a unique feature in its vibrant small and minority business community, which now numbers more than 525,000 and helps the state come out of the economic downturn with strong growth. It is then important we develop a good understanding of the critical role of bank credit to entrepreneurs and how the recent financial crisis has impacted the ability of Maryland banks to respond to the local business community's need for capital.

Small business and access to credit

During the Fall 2011 roundtable sponsored by the BluePrint Maryland initiative, participants noted that “[s]mall businesses don't have access to affordable capital, as they can't get loans, and this is true of larger companies in some industries such as manufacturing as well as entrepreneurs who are qualified to open businesses but can't get off the ground. While the community banks are deemed easier to work with than the larger, national banks, often they face regulatory hurdles that prevent them from giving out more loans. In short, local companies need financial help and solutions. We could be creating thousands of jobs but there aren't funds for businesses to start or expand.”¹ In a recent Washington Post article, David Sussman agrees that despite “larger banks claim[ing] to be expanding their small business lending programs, the reality is that nine out of 10 loan applications are typically rejected, according to Biz2Credit, and the total number of bank loans to small businesses have fallen 17 percent since October 2011, according to Pepperdine University.”² Despite seemingly many funding alternatives available to businesses, such as credit unions and SBA loans, asset-based lending,

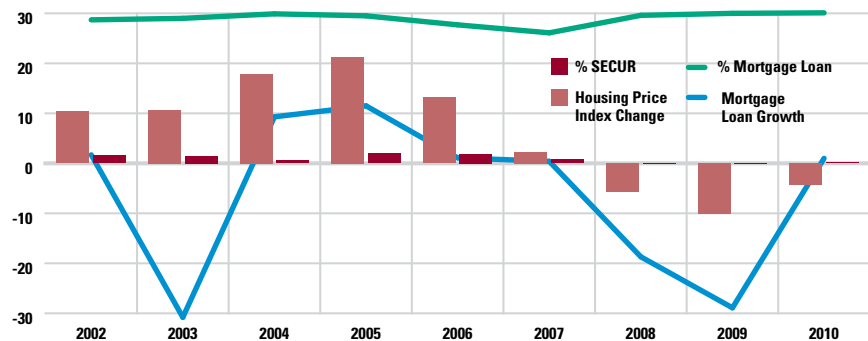
factoring, business line of credit, private equity, mezzanine financing, and hard money loans, few if any of these are available to an entrepreneur wishing to start a new business. In truth, bank credit is used by three fifths of all small businesses and remains a cornerstone of financial support. Yet, such loans are becoming a smaller share of banks' loan and asset portfolios at a time where the smallest lenders', who are so important to a local economy, share of small loans fell from 25 percent in 1996 to 7.1 percent in 2007.³ This leads us to investigate how one of the roots of the liquidity crisis impacted the ability of lenders to support their local economy.

Bank funding and securitization

Securitization, the financial innovation that allows banks to transfer non-tradable loan assets into tradable fixed-income instruments to actively manage their liquidity and credit risk, was part and parcel of the increased credit supply during the time leading to the liquidity crisis of 2008. Whereas large and international banks availed themselves to this process more than smaller and regional banks did, the popularity of this process was and remains widespread. Leading into the crisis, over 60% of all single-family home mortgages were financed through securitization, so were a quarter of all consumer credit and as much as 10% of commercial and industrial loans⁴. Securitization benefits lending institutions since it affords them greater resilience against the adverse impact of local economic shocks by diversifying their funding source. The downside that few participants in this market foresaw is that when the securitization market seized up, alternative funding sources were scarce and banks overly reliant on the securitization market found themselves in dire need of liquidity, impacting their ability to continue supplying credit to their local economies.

Maryland banks were willing participants into this market. The highest watermark achieved by the aggregated lending activities of Maryland-based banks in terms of securitization was 2.0% in 2005. However, the use of securitization by Maryland banks had generated the side effect of altering the distribution of their credit supply. Because standardized products such as residential or commercial real-estate loans are easier to transfer through securitization, banks shifted their emphasis in lending towards this part of the lending portfolio at the expense of other segments. This effect was especially pronounced during the first part of the

Figure 1: Mortgage Lending and Housing Value in Maryland



decade when banks were facing strong demand for mortgaged loans encouraged by the continued price appreciation in real-estate markets. In Figure 1, we see that the proportion of mortgage lending in total lending (green line) increased and reached 30%, with the highest growth rate in dollar volume at about 12% (blue line) around 2005, the year when Maryland banks relied the most on securitization. Once securitization dried up and home price dropped in 2007, the volume in mortgage loans plummeted.

Small business lending, business birth and job creation

As banks over-weighed their mortgage lending portfolio, small business lending suffered a decline. Indeed, far from being standard loans, small business loans are typically customized and the nature of the high credit risk involved renders them hard to transfer through securitization. Therefore, not only were small business loans not easily securitizable but a greater emphasis on mortgage initiation further reduced bank’s emphasis on small business lending. To add insult to injury, once securitization vanished and banks’ liquidity suffered, the total capital lent to small businesses dropped sharply as banks were diverting their available funds to support the over-extended portion of their lending. Figure 2 highlights that, in 2008 alone, lending to small business in Maryland retrenched an astounding 35%, a far more severe drop-off than the decline experienced (20%) during the slowdown of 2003.

Figure 2: Securitization and Small Business Loan Growth in Maryland

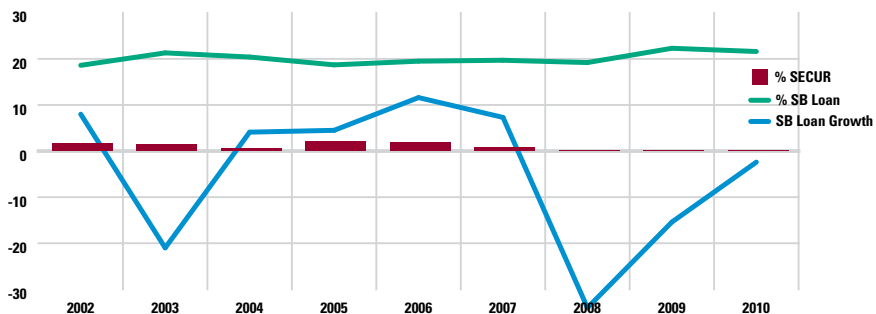
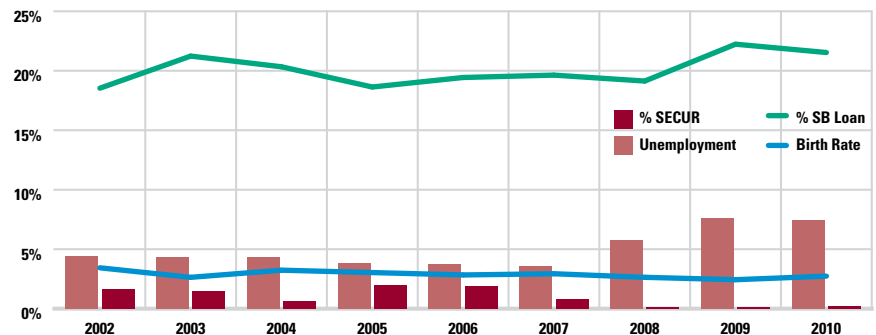


Figure 3: Loan Growth, Unemployment and Business Creation in Maryland



This observation is critical to the local economy because small businesses in Maryland play a very important role in the growth of the state’s economy. According to the most recent Quarterly Census of Employment Wages, Maryland businesses with 49 (99) or fewer employees account for 45% (60%) of all Maryland private jobs. Since most of the small firms are primarily financed by bank loans, the inability of Maryland banks to help finance small businesses and to support entrepreneurship has dire consequences for the health of the state’s economy. The Baltimore Sun reported in June 2011 that Maryland’s job creation pace was last in the country⁵. Faced with the hardship of a tight labor market, Marylanders were either trying to find jobs out of state or looking to start their own business. In Figure 3, we chart the state’s unemployment rate and the speed of business birth in the state before and after the demise of the securitization market. A business birth is defined by an establishment that had no

reported employees in the third month of four consecutive quarters preceding the reference quarter so as to avoid mis-classifying seasonal businesses. We find that the birth rate declined with securitization, implying that the rise and fall of securitization had a real effect on the state's economy.



Yet, these are the entities that tend to be under-served by banks during the recovery after the recent crisis.

A recent study⁶ also reveals that tightened credit supply during a recession disproportionately affects small firms, and that workers are more likely to lose their jobs if they worked in a sector characterized by a high level of external finance. The same holds true for Maryland businesses as, historically, micro businesses (with less than 10 employees) in Maryland have been major job creating entrepreneurs⁷. Yet, these are the entities that tend to be under-served by banks during the recovery after the recent crisis. Still, there are bright spots in Maryland as showcased in Figure 4 by the activity of some local banks⁸ and by the state of Maryland's series of initiatives to fund hundreds of promising companies with the potential to create thousands of jobs. For example, Governor O'Malley created Invest-Maryland, a \$70 million investment in Maryland's young companies; and the Department of Business and Economic Development launched the Small Business Credit Recovery Program, which provides loan

Figure 4: Maryland's Top Small-Business Friendly Banks

Name	Location	No. of Loans	\$Value of Loans (1,000)
Columbia Bank	Columbia, MD	937	\$443,849
New Windsor State Bank	New Windsor, MD	872	\$60,535
Provident State Bank	Preston, MD	735	\$78,273
Bank of the Eastern Shore	Cambridge, MD	734	\$106,295
Community Bank of Tri-County	Waldorf, MD	725	\$166,392
American Bank	Rockville, MD	709	\$97,129
CommerceFirst Bank	Annapolis, MD	643	\$109,089
Peoples Bank	Chestertown, MD	524	\$101,238
Frederick County Bank	Frederick, MD	471	\$85,586
County First Bank	La Plata, MD	386	\$68,019
National Bank of Cambridge, Maryland	Cambridge, MD	343	\$70,413

guarantees to small businesses. Yet, if the state powers want to improve economic conditions and job creations in the state, they should recognize the critical role of access to credit to the success of small business and institute more policies that favor the extension of small business loans to entrepreneurs.

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How Does Fair Participation Affect Investor Confidence?

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The mandate of the Securities and Exchange Commission (SEC), as established by the Securities Exchange Act of 1934 is:

“to remove impediments to and perfect the mechanism of a national market system for securities...and to insure the maintenance of fair and honest markets”

The national and global market system for securities has changed in recent years, neither by intent nor by design. New technology and the recent for-profit orientation of securities exchanges has led to the rise of a new class of securities market participants who dominate trading volume while profiting from an informational advantage. High-frequency traders are known for their short holding periods which are typically measured in microseconds (one millionth of a second) or up to 30 minutes (long-term). This blinding speed dominates order flows, easily accounting for a billion shares of trading volume per day on the New York Stock Exchange (NYSE).

Since its inception the SEC has had a legislative mandate to create “fair and honest markets”. Largely, the SEC has achieved this through adaptive rule making that is open to public commentary while implementing Congress’s legislated changes. One of the largest legislative changes from Congress is the Dodd-Frank Wall Street Reform and Consumer Protection Act which has overwhelmed the SEC. Two years after the passage of the Dodd-Frank Act only 36% of its roughly 400 rules required by the Dodd-Frank Act have been written. The SEC has been charged with implementing 90 rules associated with the Dodd-Frank Act but Congress has not approved requested funding for the rule making and oversight. Two years after passage the SEC has struggled in the implementation of the 2,319-page Dodd-Frank Act, missing 71% of its deadlines.¹ The enormity of the Dodd-Frank Act has absorbed the lion’s share of the SEC’s resources and has left another pressing issue affecting investor confidence unattended.

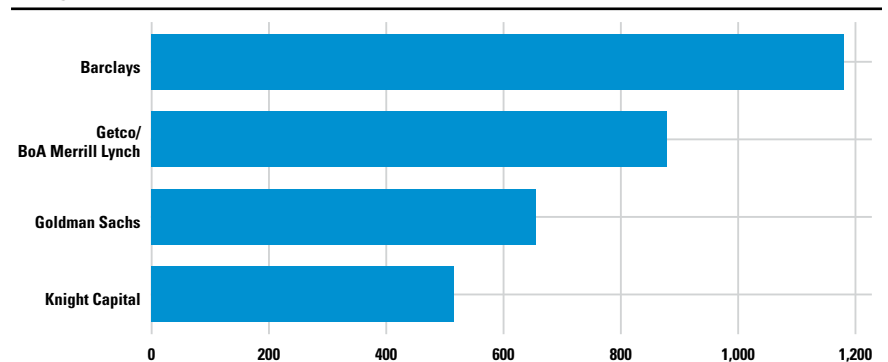
Since its founding the SEC has implemented reforms that have strengthened the national market system for securities. To understand how far we have come one only needs to look at trading commissions. In 1975, the SEC mandated that fixed stock trading commissions be negotiated. Before deregulation, buying a stock cost investors a trading commission of \$100 or more, depending on the number of shares. Today, stock

commission quotes are moving towards the subpenny (less than a penny a share). The SEC has overseen a dramatic reduction in trading costs. In 1994, the SEC recommended stock quotes move to sixteenths. For the 200 years prior to that the spread between bid and ask of stock quotes had been eighths, which stemmed historically from Spanish pieces of eight. The SEC further mandated the decimalization of stock spreads in 2001. While decimalization has reduced the cost of trading, it has also driven out market specialists and market makers who created market liquidity by reducing stock price volatility and hence increasing investor confidence in the value of their investment.

High-frequency traders have evolved from the computerization of trading and thrive in an environment where trading is frictionless, i.e. non-material incremental cost. What are high-frequency traders? High-frequency-traders use extraordinarily high-speed networks and use sophisticated computer algorithms to execute trades at blinding speeds. To ensure the fastest response time possible they pay to collocate their servers next to the NYSE switches in the NYSE’s 400,000 square-foot server farm in Mahwah, New Jersey.

To understand the evolution of high-frequency trading it helps to look back at an important anniversary-- Black Monday. On October 19, 1987, the value of the Dow Jones Industrial Average plunged a breathtaking 22% in a single day. At the time computer trading was blamed as a contributing factor; however, an offsetting factor at the NYSE was the market-making function performed by the specialist. During the Black Monday in 1987 there were 55 NYSE specialist firms helping buyers and sellers come together in a more orderly fashion than was observed on other exchanges. Today, the 55 specialist firms have been replaced by four Designated

Figure 1: Number of NYSE-listed securities handled by each designated market-maker



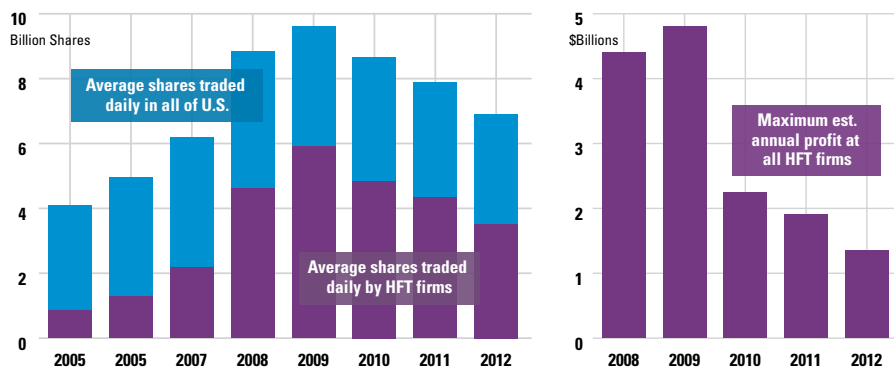
Market Makers on the NYSE which is often referred to as the Big Board.

In a world where machines trade against machines, what is a NYSE Designated Market Maker? It is a proprietary high-frequency trading firm using algorithms to make markets in designated stocks on the NYSE. Today, more than 90% of NYSE trading is supported by algorithms². In a world where the term “too big to fail” occurs with greater frequency there is considerable concentration among NYSE’s Designated Market Makers. One Designated Market Maker, GETCO, LLC, detailed in the table below, is playing an ever expanding role.

NYSE MKT, formerly the NYSE Amex. On August 13 Knight Capital resumed its Designated Market Maker role on the NYSE after emergency capital infusions.

Who is GETCO? GETCO, LLC, is a private company based in Chicago. The number of GETCO employees is quite modest at over 400. What is not modest is the company’s expanding political clout. It has hired as an advisor, Elizabeth King, the former Associate Director of the SEC’s Trading and Markets Division. GETCO’s advisors also include former Federal Reserve Governor Randall Kroszner and former SEC Chairman Arthur Levitt, who championed the SEC Fair Disclosure regulations.⁴

Figure 2: High-Frequency Trading Volume and Profits



GETCO oversees the trading of 896 companies listed on the NYSE and 156 companies on what was formerly the American Stock Exchange.³ Per GETCO’s own statistics from June to August 2012 it participated in 24.4% of all NYSE trading, provided 19.8% of NYSE liquidity, and oversaw trading for 10 of the 30 stocks in the Dow Jones Industrial Average. GETCO’s accomplishments are even more impressive if you consider that Knight Capital (then the 4th largest NYSE Designated Market Maker) almost went out of business after a software update last summer of their high-frequency trading algorithm created a crippling uncontrolled \$440 million trading loss in a matter of hours. During Knight Capital’s near-death experience, GETCO assumed Knight’s Designated Market Maker responsibilities for an additional 524 NYSE stocks and 156 stocks on the

While trading volumes associated with high-frequency trading may be falling, the significance of this market force cannot be underestimated. Whether it be the “Flash Crash” of May 6, 2010, the flawed Facebook IPO in May, or numerous other mini-crashes, investor confidence in the markets has been damaged. In a zero-sum game, it is critical for investors to believe that markets are fair and honest. The profits from high-frequency trading are in the billions. This not to say high-frequency trading does not perform important market functions. High-frequency trading has lowered the bid/ask spread for investors. It has led to greater market efficiency by removing securities arbitrage across markets. In addition, high-frequency trading advocates claim market liquidity has been increased but a core issue is the lack of liquidity during flash crashes. High-frequency trading algorithms constantly seek shifts in market direction and seek to profit from the shift with enormous sell or buy orders that front run investors. Numerous high-frequency trading algorithms feeding off one another create a crowded trade with blinding speed that removes liquidity while increasing volatility.

From a participation perspective, all investors equally deserve fair and honest market access. An ongoing problem is that high-frequency trading at a millionth of a second creates informational disadvantages for buy-and-hold investors. The SEC needs to apply ‘speed limits’ and require a return to wider bid/ask spreads which will help attract market makers while reducing aggressive high-frequency trading strategies. Permitting front running of trades by market participants with advantaged information is akin to having a microphone in the boardroom. One of the most sought-after prey by high-frequency trading algorithms are the buy and

sell orders of large institutional money managers, such as T. Rowe Price⁵. Large institutional investors, which include mutual funds and pension funds, are derisively referred to as “whales” which can be exploited by front running orders. High-frequency traders use order stuffing (“spoofing”) which changes the calculated opening price shown to buy-and-hold investors before the market opens. During market hours high-frequency traders engage in pinging with immediate-or-cancel orders which look for changes in market liquidity associated with order flow from large institutional investors.

The Canadian equivalent of the SEC, the Investment Regulatory Organization of Canada, has already started implementing rules that discourage excessive high-frequency trading. Canadian authorities are also considering applying Canada’s Criminal Code to high-frequency traders engaging in intentional order stuffing. If passed, an indictable offense could result in a prison term of up to five years.⁶ The Canadians are not alone. In September 2012, the German government started crafting legislation that will require high-frequency traders to register with the government while placing limits on order stuffing. Also, in September a European Union committee agreed to similar rules that would apply to the entire continent, if approved. At the same time the Australian Investments and Security Commission announced an initiative to bring high-frequency traders under stricter supervision to protect the country’s markets “against the type of disruption we have seen in other markets.”⁷

The seriousness of this issue can be seen in the SEC’s Concept Release on Equity Market Structure dated January 21, 2010, which cited order cancellation rates among high-frequency traders exceeded 90%.⁸ Another indicator of the value of millisecond trading advantages is seen in the fact that a Tradeworx subscription to high-frequency data feeds costs \$250,000 a year. A number of market participants have observed that high-frequency trading is nothing more than Small Order Execution System (SOES) Bandits except with better technology. High-frequency trading profits by ‘cutting in line’.

It is incumbent upon the SEC to do more to assure a fair and honest national market system which in turn will restore investor confidence. The loss of nearly a trillion dollars of market value in the “Flash Crash”

points to a need for ‘speed limits’ on high-frequency trading and a return to wider bid/ask spreads which allows traditional market makers to provide liquidity. In September, the SEC fined the NYSE \$5 million for sending private market data feeds faster than it provided public market data feeds. As this article goes to press at the end of October, more needs to be done to restore investor confidence and ensure fair participation.

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“Proposed Guidance on Certain Manipulative and Deceptive Trading Practices 7/17/2012 http://www.iiroc.ca/Documents/2012/cfcf121a-06e1-4d0c-856d-a7523b9508d3_en.pdf

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A Brief Housing Update and A Historical Perspective of Housing Booms

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In the last three months we have witnessed some signs of change in the pattern of home prices. The S&P Case-Shiller seasonally adjusted 20-City Home Price Index has reported price increases in May (1.04%), June (0.91%), and July (0.44%). Over the same time horizon, the Federal Housing Finance Agency's (FHFA) seasonally-adjusted purchase-only house price index (HPI), showed similar price appreciation with changes in May (0.6%), June (0.6%), and July (0.2%). Given this new pattern of rising home prices and mixed signals in the economy, many people are hoping that we are finally seeing the beginning of a recovery in the housing market.

Residential Housing Prices Comparison

National Comparison

Given the MSA level indexes available through the FHFA, we can study how home prices in the Baltimore market have done relative to others during the financial crisis. From the peak of the housing bubble in the 1st quarter of 2007 to the 2nd quarter of 2012, average housing prices in Baltimore have dropped 20.9% and risen 0.8% over the last year. This is worse than the national reading that shows a 17.6% drop from the peak with a 3.0% rise over the last 12 months. Baltimore has also fared worse than Washington DC where house prices are basically mirroring the national numbers. When compared with 1992 levels, Baltimore housing prices have risen 107% which is lower than Washington DC which has seen prices rise over 200%. Both cities are substantially higher than the US average of 81.3%.

Figure 1 compares housing price changes in the Baltimore-Towson MSA, Maryland, and the US.

The figure shows two distinct trends for Baltimore and Maryland versus the US. Between 1992 and 1997 house prices were mildly appreciating nationally, but were pretty much flat in Baltimore and Maryland as a whole. This indicates that Maryland was a late entry into the housing bubble. After 2001, the Baltimore area entered a period of price inflation that exceeded national levels. In early 2005, the annualized percentage change in home prices peaked out at over 20%, more than double the national rate. As of the 2nd quarter of 2012 home prices were increasing at the city, state, and national level.

Figure 1: Housing price changes in the Baltimore-Towson MSA, Maryland, and the US.

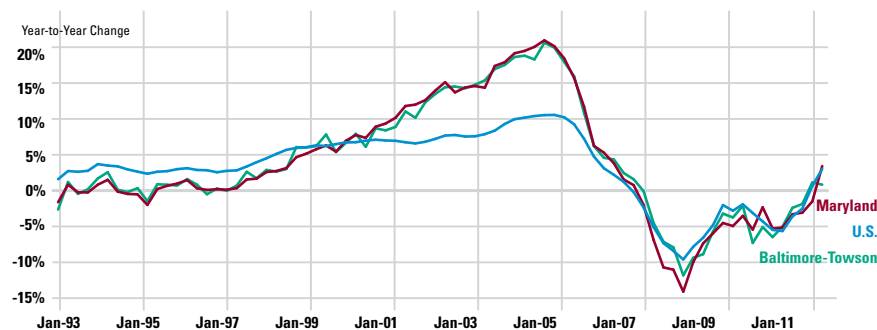


Figure 1: FHFA

State Comparison

We can look across Maryland by using MSA level house price indexes from the FHFA. There are four MSA level home price indexes calculated in Maryland since 1992: the Baltimore-Towson index, the Bethesda-Frederick-Rockville index, the Hagerstown-Martinsburg index, and the Salisbury index. The Bethesda index captures more of the DC effect in Maryland home prices. Meanwhile the Hagerstown and Salisbury indexes are the more rural of the MSAs and may help shed some light on potential differences between urban and rural home price movements. The empirical evidence suggests that the three cities have experienced very similar price movements during most of the housing bubble. However, over the last year or so we have seen a marked difference between the Hagerstown and Salisbury areas and the more urban areas. Prices appear to be inflating much faster in the more rural western and eastern sections of Maryland. The FHFA tracks 12 month price changes for 304 MSAs in the US. Only 130 of these areas, led by Phoenix, AZ at +5.98%, displayed positive price changes between Q2 2011 and Q2 2012. The following table shows the ranking of Maryland MSAs.

Area	Rank	12 Month Percent Price Change
Phoenix, AZ	1	+ 5.98
Hagerstown, MD	19	+2.78
Washington-Arlington,VA-MD	106	+0.31
Bethesda-Rockville-Frederick,MD	159	-0.61
Baltimore-Towson,MD	178	-1.11
Port St. Lucie, FL	304	-7.46

The above table has changed substantially in the last 12 months. Last year Hagerstown was in the bottom 10 of all MSAs. Now it is in the top 20 with significant price appreciation. Every MSAs in Maryland has seen an improvement in their 12 Month Percent Price Change

when compared with last year. This swing in the data marks a potential turn in the housing market.

Historical Perspective on Homeownership

The most recent US housing boom was marked by both a record homeownership rate and by record high housing prices. This boom was followed by a housing bust that goes without comparison in US history. From a historical perspective, the most recent expansion in homeownership is small compared to the one that started in the 1940s. That housing boom was also marked with record homeownership and house prices. The big difference was the lack of a housing bust following 1960.

To get a visual on the two most recent housing bubbles, Figure 2 displays the US homeownership rate from 1930 till 2012.

Between 1940 and 1960, the homeownership rate increased from 44 percent to 62 percent. By comparison, the homeownership rate increased from 64 percent to 69 percent from 1995 up to the peak of the most recent housing bubble in 2007. The homeownership rate also behaved differently after each expansion. Between 1960 and 1995, the homeownership rate was fairly stable between 62 and 64 percent. After 2007 we have seen a steady drop in homeownership from 69 to 65 percent. With regards to homeownership, the first housing boom generated a permanent shift in homeownership. The most recent episode generated a much more temporary effect on homeownership.

Figure 2: U.S. Home Ownership Rate 1930-2012

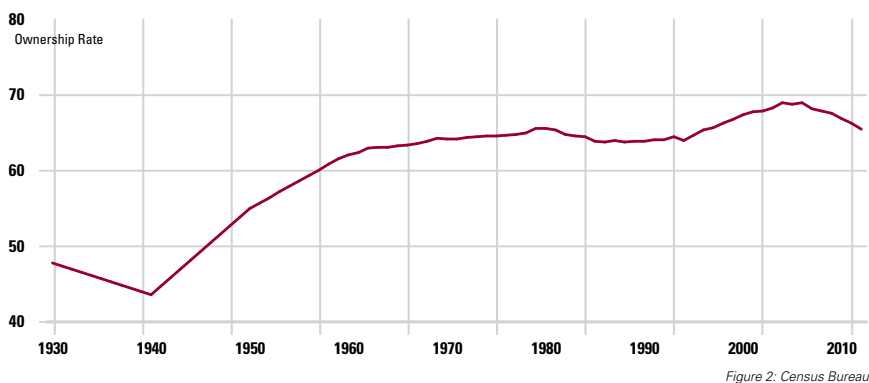
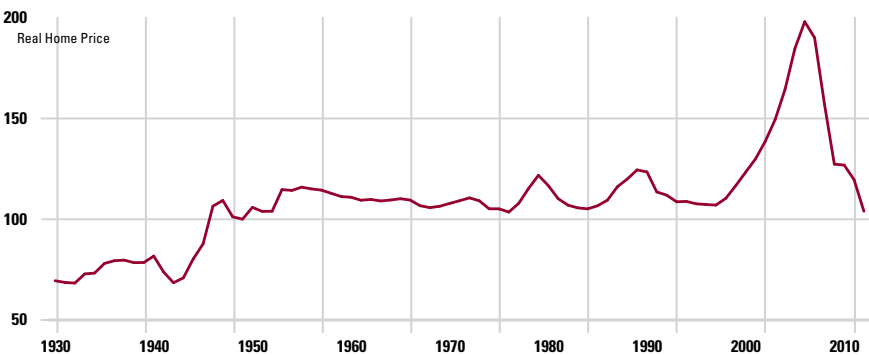


Figure 3: Real U.S. Home Price 1930-2012



These two booms also generated interesting patterns with regards to home prices. Figure 3 displays the real US home price between 1930 and 2012. The price index is measuring housing prices relative to the rest of the economy.

Once again the two bubbles look similar during their inflation. The 1940 to 1960 episode brought about a nearly 30 percent increase in home prices. The most recent episode brought about a much larger, 80 percent increase in home prices. Although different in scale, both booms show a large positive correlation between the homeownership rate and home prices. However just like with the homeownership rate, the first housing bubble never popped. Real home prices stayed in a fairly stable range until the beginning of the most recent housing bubble. As noted earlier, current prices have fallen roughly 20 percent from the peak in 2007.

The obvious question is why did only one housing bubble pop? The best way to address that question is by looking at the sources of the 1940 to 1960 housing bubble and see which sources do and do not apply to the most recent episode.

Causes of The Post Great Depression Housing Boom

The historical literature mentions many things which contributed to the 1940 to 1960 housing boom. The most common include financial innovation, tax provisions, demographics, and income.

Financial Innovation

Before the Great Depression, many mortgages were short term (5-7 years), balloon-type (non-amortizing) with large down payment requirements (50-60 percent). As a result of New Deal policies, government agencies began to offer standard fixed-rate mortgage (FRM) contracts with longer maturities (20-30 years) and a



Fetters (2010) has estimated that the VA policy of making zero down payment mortgage loans available to World War II and the Korean War veterans after 1946 account for a 10 percent increase in homeownership.

higher loan-to-value ratio (80 percent and above). A government agency was established to create a secondary market to provide liquidity and expand credit by buying primarily FHA-insured loans. Yearn (1976) argues that the increase in homeownership can be explained by the increased availability of mortgage funds from Federal Housing Administration (FHA) and the Veterans Administration (VA), and the easy monetary policy of the Federal Reserve System. Some historians have credited passage of the Serviceman's Readjustment Act of 1944 (the GI bill) with playing a vital role in opening the doors of higher education to millions and helping set the stage for the decades of widely shared prosperity that followed WWII. Almost 70 percent of men who turned 21 between 1940 and 1955 were guaranteed an essentially free college education under one of the two GI Bills. Fetters (2010) has estimated that the VA policy of making zero down payment mortgage loans available to World War II and the Korean War veterans after 1946 account for a 10 percent increase in homeownership. Chambers, Garriga, and Schlagenhauf (2012), CGS, suggests that the length of the mortgage contract sponsored by the FHA can account for roughly 25 percent of the total increase in homeownership.

Tax Provisions

At the beginning of this period the government changed the treatment of owner-occupied housing in the federal income tax system. This policy changed the effective price of owner-occupied housing services because of the deductibility of local property taxes, mortgage interest payments, and by the omission of imputed rents from adjusted gross income. Rosen and Rosen (1980) estimate that between 1949 and 1974 about one-fourth of the increase in homeownership was a result of implicit subsidies toward housing embedded in the personal income tax code. CGS(2012) finds that the tax provisions account for 13 percent of the homeownership rate increase.

Demographics

Demographers, such as Chevan (1989), argue that demographic factors are the key to understanding the large increase the participation in housing. The main channels of increased homeownership are through higher survival rates and the overall aging of the population. The higher survival rates would imply that the population would place more value on the long run decisions where owning would be more valued than renting. The aging of the population would push the typical household further into their higher earnings years where homeownership becomes more affordable. CGS(2012) finds that demographic factors account for roughly 25 percent of the homeownership increase between 1940 and 1960.

Income

Between 1935 and 1960 wage income changed significantly increasing by a factor of 2.25 on average. This increase in income improved the affordability of housing. This made the higher mortgage payments under the new amortized loans look less expensive. In addition, the steepness of wage growth between age 20 and 35 is much more pronounced in 1960 than in 1940. This means more young households are likely to find home ownership a viable alternative to renting as they are able to accumulated wealth at a faster pace.

The Main Difference: Income Growth

When looking at the previous list of potential shocks that generate housing bubbles, some of these apply to both housing booms. First, mortgage innovation was occurring in both situations. The first bubble coincided with the introduction of the 30 year fixed payment loan and other longer duration loans. The current bubble was marked by the increased use of ARMs and zero downpayment loan products. So the role of mortgage innovation in housing bubbles may explain why both bubbles started, but is not likely to explain the differences at the end of the two episodes. Housing tax provisions and demographic effects are also present in both bubbles, but the mortgage interest deduction was not altered and demographics changes are slow and are unlikely to explain any differences in the way a housing bubble would collapse.

According to the Census Bureau in 1995, median household income in 2012 dollars was \$49,935. By the peak of the bubble in 2007 that number had only increased to \$54,589. Thus during the inflation of the recent housing bubble, median income was growing by less than 1 percent per year. Although more difficult to obtain, estimates are that median income grew at about 3 percent per year between 1940 and 1960. Thus, median income was growing over three times faster during the first housing boom. So in contrast to the home ownership increase observed between 1996 and 2005, income growth was a crucial variable in accounting for the permanent increase in home ownership between 1940 and 1960. Essentially, the level and shape of income over the age profile is a precondition for mortgage innovation to play an important role in generating an increase in the aggregate home ownership rate. A conjecture is that a collapse in the housing market did not occur after the 1960 housing boom despite a large increase in housing prices was because the income growth allowed the increased home ownership rate to be supported. The recent housing bubble received no support because of the lack of income growth. This made the new mortgage products less affordable and the housing bubble popped in 2007.

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Trends in Local Money Management

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Over the last 30 years, there have been monumental changes to the investment advisory industry in our region. Many great, locally owned firms, like Alex Brown and Mercantile Safe Deposit & Trust, are gone. Others, such as T. Rowe Price and Legg Mason, survived and thrived. Dozens of small money management firms have been created as professionals left larger organizations over the years to start their own. As a result of these movements, the local investment advisory landscape is currently dominated by brokers, Registered Investment Advisors, and banks. RIAs seem to be growing the fastest at the moment, primarily because that business model appeals the most to both clients and practitioners.

The brokerage industry has witnessed mass defections to the RIA model as brokers have struggled with the shrinking compensation levels they have been forced to endure. Most of the compensation to brokers in the past was centered on transaction-based fees and 12b-1 fees from mutual funds. As brokerage firms reduced payouts and attempted to shift clients toward an asset-based fee, many in the industry decided to start their own practice as RIAs. Entire companies were formed to provide platforms for these disenfranchised brokers to start their businesses. The best example of such a company is LPL Financial. Legg Mason saw the trend several years ago and completely exited the brokerage business by selling that division to Smith Barney. The brokerage industry's changes have been subtle but significant, creating many new options for investors.

The banking industry has also witnessed dramatic changes over this time period. In the early 1980s, a consolidation of smaller community and medium-sized state banks spread across the nation. This consolidation occurred as regulatory statutes prohibiting cross-border banking were relaxed. Today, four huge banks (JP Morgan, Wells Fargo, Citicorp, and Bank of America) control 35% of all domestic banking assets and 37% of all US deposits. Based on the theory that banking services are largely a homogenous commodity, consolidation made sense as a way to save costs and lower fees to customers.

In the merger era of banking, many important factors were overlooked, including banks being “too big to fail,” banks cutting jobs to become leaner, and banks finding new ways to fee their customers. But one factor that is not often discussed is the effect these mergers had on the investment advisory industry. Consolidation of the trust and wealth management services of local



These mergers often eliminated or drastically modified personal relationships that spanned several generations. Personal contact, the essential ingredient of a successful relationship, was severely altered by many banks and many dependent beneficiaries were simply cut adrift.

banks was difficult. One needs look no further than Maryland to see the effect. Maryland's five largest banks in 1980 (Maryland National Bank, First National Bank of Maryland, Equitable Trust Company, The Union Trust Company, and Mercantile Safe Deposit & Trust Company) each had established investment services that developed over time as successful banking customers sought to protect their families' wealth as they retired and died.

Over many decades, these fortunate families turned to their local banks to oversee the orderly generational transfer of their wealth to their children and grandchildren, as well as to pursue an effort to influence and maintain control of their accumulated assets after they were gone. In Maryland, many trust departments served successfully for several generations in protecting and enhancing family fortunes. Often, close personal bonds developed between the trust companies and the many beneficiaries they served. Wealth managers and trust officers became integral members in the functioning of many wealthy families. Indeed, these families were

dependent on and influenced by the fiduciary relationship with their trust company.

But the banking consolidation changed the financial landscape and had a profound effect on these long-standing personal relationships. In the pursuit of financial efficiencies, all five of Maryland's trust and wealth management departments were effectively scaled down and account relationships were routinely removed to distant regional central offices of the surviving mega-banks. These mergers often eliminated or drastically modified personal relationships that spanned several generations. Personal contact, the essential ingredient of a successful relationship, was severely altered by many banks and many dependent beneficiaries were simply cut adrift.


The most pervasive example of this is when a client of an old trust company is transferred from their local office to the regional office that assumed their trust's management upon the acquisition. This typically occurs when the relationship is considered "too small" or "not significant enough" to keep locally. In a form letter, a relationship of many years is reassigned to new professionals located hundreds of miles away, reachable by an 800 number. Think of a deceased testator who thought he endowed his family for several generations, only for his heirs' accounts later to be routinely shifted between cities and shuffled among personnel who have no understanding of the specific needs of the individual beneficiary or the desires of the grantor's generosity. As a final insult, fees for these "enhanced" services were materially increased.

Even worse were the potential or actual threats to investment performance. Many of these trusts that were managed for decades with a particular philosophy were forced into inferior investments that drove down returns. The buying entity typically begins to move the client into their proprietary mutual funds, often selling stocks that have been in the family for years. The claim is made that the benefits of greater diversification will outweigh the taxes incurred by selling the stocks. While this might be true in some cases, most of the time the recommendation is made for no other reason than to

make it easier to manage the trusts. It is far easier to manage a trust invested in funds than one invested in individual securities. So, a portfolio manager can manage far more relationships than would normally be the case. Moreover, a lower-level employee can manage portfolios made up of funds, making it much more cost-effective.

The mega-bank consolidation has had a massive affect on the local landscape. Gone are all the local bank trust departments, and huge institutions reign in their place. Gone are most of the personal relationships clients had with their trust personnel. With great size comes efficiency, which generally means central decision-making on investments in far-off places, fewer local investment professionals, and the probability of poorer service.

Maryland investors are faced with an evolving landscape. There is an excellent solution here for everyone, to be sure. Regardless of your preferences, the Maryland area is full of world-class investment advisory firms from small to large. As many studies show, most investors do like to deal locally. Maryland investors should look locally first.



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Banking Consolidation and Mobile Banking in Maryland

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Abstract

Mobile banking is rapidly becoming an important retail distribution channel for banking products and services in Maryland. This change is driven by consumers who perceive mobile banking as both easy to use and useful. Banks themselves see mobile banking as a means to lower transactions costs and engage customers in order to build their brand image as well as to promote customer retention and attraction. Mobile banking will become an integral part of life for those individuals who choose to integrate their financial activities with their social media.

The move to mobile banking is seen to accelerate the ongoing concentration of the banking industry in Maryland. Mobile banking will become a weapon of consequence in the battle for bank market share. Larger, more sophisticated banks with greater resources will have an advantage over smaller banks in this battle. The outcome of this battle will be fewer banks in Maryland and increasing market share for those banks who have already constructed online banking platforms.

Introduction

The past two decades have seen significant changes in the banking industry. The first change has been one of increasing consolidation in the banking sector which has been expressed in the decline of the number of banks and the growth of larger banks at the expense of smaller banks. The pace of these national changes has been mirrored in Maryland.

The second change has been a shift toward the use of digital distribution channels. The shift resulted earlier from the extraordinary growth of the Internet and later from the near ubiquity of mobile phones. Whereas the penetration of the banking sector by online banking facilities has begun to mature, the use of mobile banking facilities is at the earliest stages of development.

Currently 87% of the US population has a mobile phone and 44% of these are smart phones. Twenty one percent of mobile phone users currently use their phone for banking functions. An additional 11% of mobile phone owners expect to begin using their phones for banking services within the next year. It has been estimated that 46% of bank account holders will use mobile banking by 2017. Ninety percent of mobile banking users regularly check their balances. The second most popular use of mobile banking is to transfer money between accounts. Twelve percent of mobile banking customers use their phones to pay bills. Five percent of mobile phone owners use mobile banking daily, 12% use it weekly. Concerns over security and difficulties in using the technology appear to be the largest deterrent to use among those with mobile phones who do not do banking with them.

A key to attaining general banking goals of reducing customer attrition, attracting new customers, expending the products and services sold to current customers, reducing costs of operation and strengthening customer relationships is engaging the customers through dialogues concerning a mutually beneficial relationship, user-content campaigns and sweepstakes. A particular advantage for the banking public of using the mobile phone rather than a bank web site can be assessed by the use of specialized "apps." These applications come in a variety of forms that effectively let the user create the interface that is most useful to him or her.

Businesses and consumers recognize the importance in internet and mobile business/consumer solutions. Companies such as Paypal, Google Checkout, and Stripe are providing payment and money transfer processes to streamline and expedite consumer experiences. Maryland entrepreneurs have also responded to the need for alternate payment solutions. BillMeLater, headquartered in Timonium, Maryland was acquired by eBay, Inc. and is now part of their Paypal payment services.

Consumers appear to be expressing a preference for the use of smart phones to conduct a variety of banking functions. This creates great opportunities and challenges for Maryland banks. The opportunities have to do with capturing both market share and wallet share and increasing their brand strength. The challenges have to do with the expense of creating and maintaining mobile phone platforms that remain up-to-date with the latest technology in a ferociously competitive environment. As consumer preferences continue to drive the demand for mobile phone services, the pres-

Figure 1: National FDIC Totals

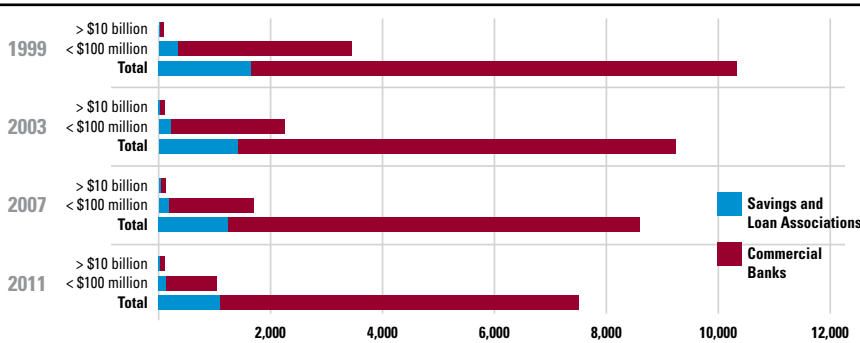


Figure 2: Number of Maryland FDIC Institutions

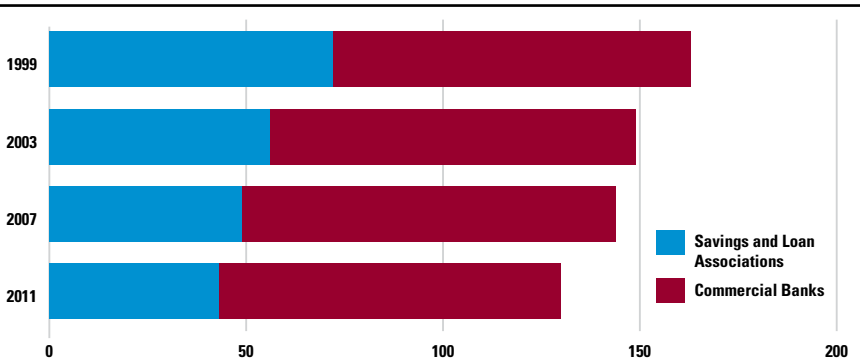


Figure 3a: Number of Banks

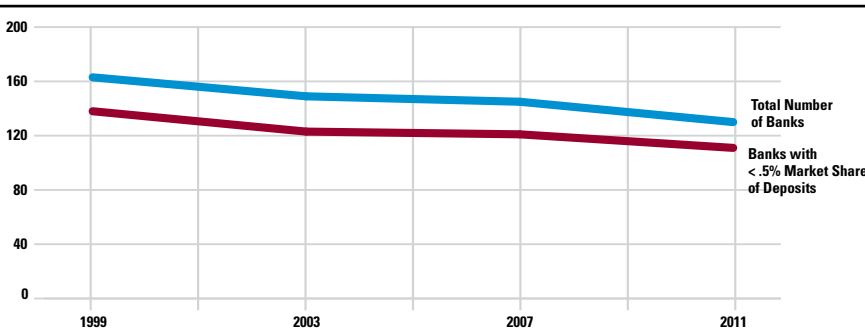
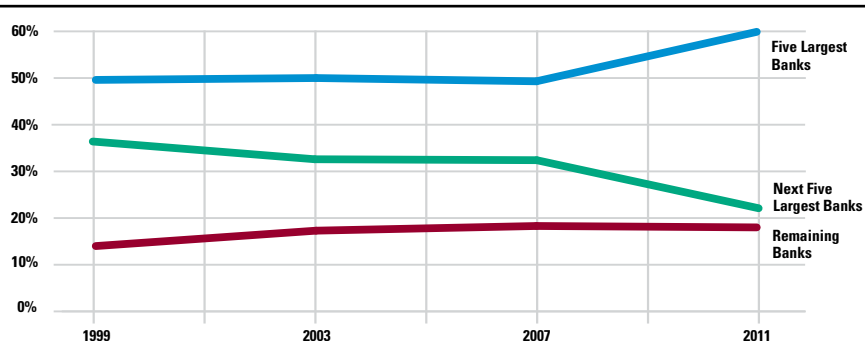


Figure 3b: Market Share of Deposits



sure on banks to develop these increasingly expensive mobile phone platforms will create additional pressure for consolidation in the industry.

As the younger generation of consumers, business people, and investors who have become accustomed to a rapidly changing digital world mature, they will increasingly view a wide array of banking services over their phones as necessary to their lifestyle. Large sophisticated banks that have already developed a strong digital presence both online and with mobile phones will have “first mover” advantages over smaller banks whose online banking facilities are primitive and have yet to offer any mobile phone platforms. The smaller banks will be hard pressed to offer comparable services. The expense of acquiring the necessary technology and overcoming the image of technological superiority of larger banks generated by the dazzling array of mobile phone services currently offered by the larger banks may prove too difficult for smaller banks. Although smaller banks may have a current set of loyal customers who are quite happy with the traditional manner in which they receive banking services, as time goes on, a new generation of consumers may demand a more modern approach to banking. The difficulty a smaller bank may have in making this transition might force them to merge with a larger bank that is able to offer such services to their customers.

National and Maryland Banking Trends

In the 12 years between 1999 and 2011, the total number of FDIC institutions declined by 27%, with a slightly smaller drop in the number of commercial banks and a larger drop in savings and loan associations. While the number of the largest banks increased over this time, this was accompanied by dramatic drop in the number of the smallest banks. This significant consolidation represented both the effect of adverse macroeconomic forces and the increasingly competitive nature of the banking market

As can be seen from Figure 2, the number of all institutions in Maryland dropped 20% during this period, with the largest fall occurring among savings and loan associations. The reason for the consolidation in Maryland also represented both the effect of adverse economic forces and the increasingly competitive nature of the market for financial services.

The consolidation trend in assets in Figures 1 and 2 is reflected in the increasing concentration of deposits in Figures 3a and 3b. The five largest banks in Maryland increased their deposits 17% during this period, while the smallest banks lost almost 40% of market share. This increased consolidation also reflects the effect of macroeconomic factors and the harsh competitive market within the state as each bank struggles to increase its market share.

Mobile Banking in Maryland

Figures 4a and 4b show a clear difference between larger banks and smaller banks when it comes to their digital capabilities. All the five largest banks in Maryland (Bank of America, M&T Trust Co., PNC Bank, Capital One, and Wells Fargo) have fully functional web sites offering a complete array of financial services and products, as well as an array of complimentary information and/or web linkages. This is important for providing mobile phone services because of the linkage between the online web site and the mobile banking interface. Almost none of the smaller banks offer anything comparable. Further, all of the large banks, half of the mid-sized banks, and almost none of the smaller banks presently offer mobile phone service.

The number of visits to social media sites is currently growing over 30% a year compared to roughly 8% for all Internet usage. Many banks recognize the importance of social channels as a vehicle for marketing their products and service and are making a strong attempt to do so. As the modern telephony generation seems to desire a seamless connection between their financial and social functions, it is significant that all but one of the large banks and almost none of the small banks have their sites fully linked to the various social media. Current trends suggest this integration increases both the attractiveness and utility of mobile banking.

The behavior of individuals in adopting new technology may be described by the Technology Acceptance Model. These behaviors were analyzed in Maryland through a survey of 231 residents taken as follows. In line with national trends, 90% of those surveyed were found to have Internet access. Of these, 80% were found to have internet phones and 20% of those used their phones for mobile banking.

Figure 4a: Survey of Maryland Bank Online Facilities

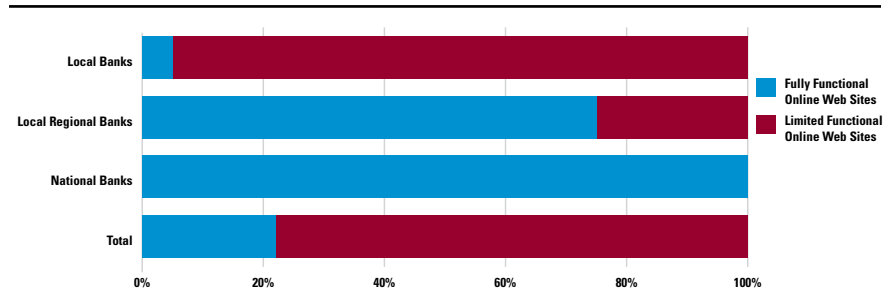


Figure 4b: Survey of Maryland Banks Mobile Facilities

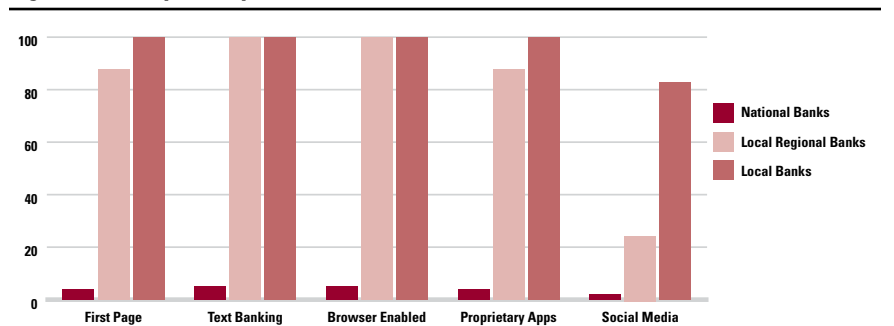
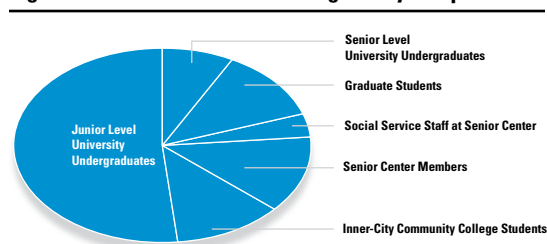


Figure 5: Online and Mobile Banking Survey Composition



The results of this survey confirmed the expectations of the Technology Acceptance Model. Individual use of mobile banking was found to be a function of both how useful mobile banking would be expected to be and the perceived difficulties of using mobile banking. Both the intensity and frequency of mobile phone use was found to be positively associated with the perceptions of ease of use and usefulness. In general, younger individuals were more likely to perceive mobile banking to be both useful and easy to use. Gender was found not to make a difference in mobile phone perceptions. Elderly individuals were found to be more likely to believe that mobile banking was useful, but less likely to believe it would be easy to use.

Conclusion

Mobile banking is poised to become an increasingly popular way for consumers to address their banking needs. A constantly evolving technology will make mobile banking ever more convenient and efficient from the point of view of the consumer. Successful banks will make great effort to develop a successful mobile banking platform. Mobile banking functions will be increasingly integrated into customer's use of social media. From the point of view of the banks, mobile banking will not only be seen as an efficient way to perform traditional banking functions, but will also be seen as a very effective device for engaging with customers. The form of this engagement will be interactive and mutually beneficial, creating value for the customer and financial institution alike. This process may increase brand strength for the bank.

Not all banks will be able to participate successfully in this change. As a result of getting a late start in this area, the expense of developing a mobile banking platform and integrating it into other aspects of the bank's business, or a cultural aversion to technological change, some banks will ignore this development until it is too late and they are consequently forced into merger with a larger bank that has successfully developed this technology. The market for financial services in Maryland will be increasingly marked by aggressive competition for market share and wallet share. Mobile banking is likely to be the battlefield where this war takes place.

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Regional Differences in Housing Prices amid the Recent Boom and Bust

David J. Merkel, CFA

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and writes The Aleph Blog*

There used to be a truism that residential real estate prices could not go down across the US nation as a whole. That misbegotten idea has been punctured by the fall in residential real estate prices from the beginning of 2007 to mid-2012. There are four main factors that affect regional and state-level housing prices in the US: 1) the biggest factor is the US housing market as a whole. A rising tide lifts all boats; a falling tide beaches boats. 2) The degree to which a state or region is space-constrained, 3) the degree to which buyers were willing to finance using speculative mortgage instruments, and 4) the industry concentrations of a given state or region.

This paper digs into the dynamics of housing prices in the US, from 1975 to mid-2012, by state and Census division. It uses data from the Federal Housing Finance Agency, which has calculated price indexes for housing by state, Census division, and the US as a whole. The data goes back to 1975 by quarter, and all the indexes are normalized to 100 at the beginning of 1980. The price indexes were created using a mix of sales data and appraisal data.

Ordinary least squares regression was used to calculate how sensitive housing prices were in each census division. The equation looks like this:

$$P_{division,t} = \alpha_{division} + \beta_{division} P_{us,t} + \epsilon_{division,t}$$

The intuition behind this equation is that the price index of a given census division can be explained by the amount that it varies in proportion to the price index for the US as a whole (the beta term), a fixed difference (the alpha term), and the error term. Here were the results by Census Division: (Top of next column).

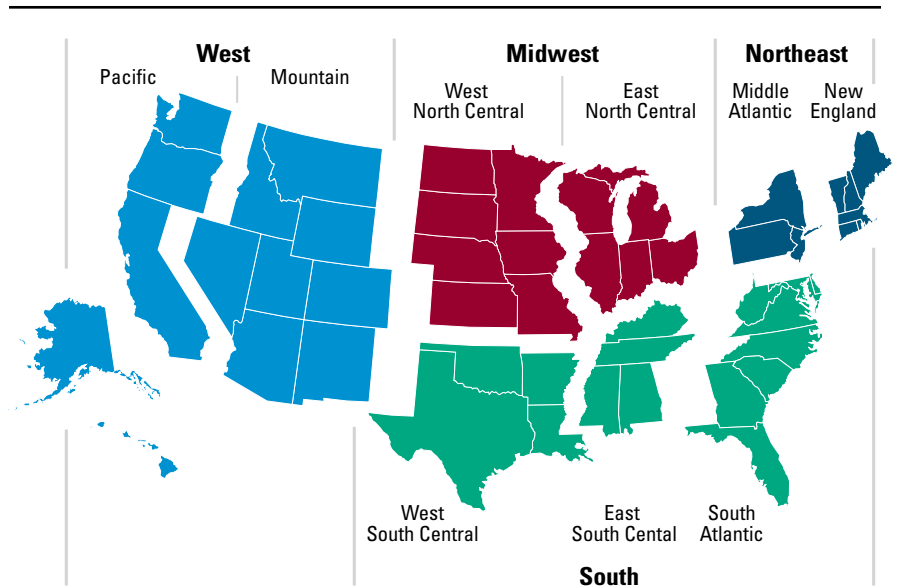
Broadly, the Census Divisions fall into three groups: the hot markets of New England, Pacific and Mid-Atlantic, the moderate markets of the South Atlantic and Mountain States, and the cold markets in the middle of the US. The difference in sensitivity to US housing prices is considerable. If housing prices rose 10% in the US, New England's housing prices would tend to rise 17.3%, while the West South Central division's housing prices would only tend to rise 5.1%.

Figure 1: Census Districts Sensitivity to National Real Estate Trends

Census Division	Alpha	Beta	Alpha SD	Beta SD	R-squared	Alpha T-Stat	Beta T-Stat
New England	(48.12)	1.73	4.80	0.0218	97.70%	(10.02)	33.64
Pacific	(69.35)	1.57	4.71	0.0214	97.32%	(14.73)	26.87
Mid-Atlantic	(34.32)	1.50	3.49	0.0158	98.37%	(9.84)	31.71
South Atlantic	(1.90)	1.01	1.33	0.0061	99.46%	(1.43)*	1.15*
Mountain	(5.14)	0.96	2.42	0.0110	98.09%	(2.13)	(3.69)
East North Central	20.17	0.81	2.73	0.0124	96.64%	7.38	(15.08)
West North Central	18.44	0.77	1.46	0.0066	98.92%	12.66	(34.38)
East South Central	28.13	0.75	1.82	0.0083	98.20%	15.43	(30.54)
West South Central	43.41	0.51	2.37	0.0107	93.70%	18.36	(46.03)

* Indicates not statistically significant from zero for alpha, and one for beta at a 5% level.

Figure 2: Census Districts



The beta coefficients give a good idea of the variability of housing prices in Census divisions over the whole time period. But another way to analyze the results and that is to look at the correlations on the error terms across the divisions to see if there are hidden common factors that don't get reflected in the original regression. Given the sharpness of the boom and bust in housing prices 2000-2012, an analysis of the residuals correlation will reveal more of the commonalities in price movements during that period. Here were the results:

Figure 3: Residual Correlation by Census Districts

	CENC	CESC	CWNC	CWSC	CMA	CNE	CPAC	CMTN	CSA
East North Central	CENC								
East South Central	CESC	39%							
West North Central	CWNC	54%	72%						
West South Central	CWSC	-25%	52%	51%					
Mid-Atlantic	CMA	-55%	-7%	-46%	-14%				
New England	CNE	-31%	-30%	-36%	-25%	74%			
Pacific	CPAC	-45%	-93%	-73%	-50%	4%	8%		
Mountain	CMTN	-9%	-17%	1%	15%	-67%	-67%	27%	
South Atlantic	CSA	-71%	-68%	-73%	-22%	14%	0%	75%	54%

As in the first analysis, there are three groups, and for the most part they are similar, except the “hot” group gives the Pacific division to the moderate group, and the cold group remains the same.

Figure 4: Average Residual Correlation by Census District Group

Avg Correlation	Group 1	Group 2	Group 3
Group 1	74%		
Group 2	-18%	52%	
Group 3	-31%	-42%	41%

The average correlations within each group are high, and those between groups are negative, indicating three separate effects in deviating from the aggregate behavior of US housing prices. Group one reflects the space-constrained nature of New England and the Mid-Atlantic. Group three reflects the relative lack of the boom-bust of housing prices in the center of the country. Group two, which is Pacific, Mountain, and South Atlantic, reflect some of the aggressive lending that went on in places like California, Nevada, Arizona, and Florida, to mention the most severe situations, exacerbating the boom and bust in housing prices.

The same methods were then applied to analyze the states. The results are even more striking given the greater variations across states versus Census Divisions. (See Figure 5).

The difference in sensitivity to US housing prices is considerable by state. If housing prices rose 10% in the US, Massachusetts’ housing prices would tend to rise 21.8%, while the Oklahoma’s housing prices would only tend to rise 4.3%.

The states were then divided into five beta groups, where there seemed to be natural breaks in the data. On a map, it looks like this: (See Figure 6).

The high sensitivity states to US housing prices are largely found in New England, the Mid-Atlantic, and the Pacific. Average sensitivity states, that is, Florida, Pennsylvania, Colorado, Montana, Minnesota, Illinois, Utah, Arizona and Wisconsin tend to be in states with some large cities as well as some amount of rural area. That sort of mix reflects the composition of the US overall. The low sensitivity states tend to be in the states with a large amount of rural areas and developable land near their larger cities. These states are scattered across the Mountain States, the center of the US, and the South.

Betas reflect the overall sensitivity to moves in US housing prices 1975-2012, but the correlation of the residuals of the states could highlight hidden factors that were influential in price movements during the boom and the bust.

Calculating the groups across 50 states and DC was more complex than for nine Census divisions. Starting with a large number of groups, the groups were iteratively adjusted, combining groups that were highly correlated with each other until there were no more improvements possible, ending with eight groups. Here is the average correlation matrix:

Figure 5: State Sensitivity to National Real Estate Trends

State	Alpha	Beta	Alpha SD	Beta SD	R-squared	Alpha T-stat	Beta T-Stat	Group
Massachusetts	(84.39)	2.18	6.45	0.0293	97.38%	(13.08)	40.32	4
New York	(59.69)	1.88	4.82	0.0219	98.03%	(12.40)	40.46	4
District of Columbia	(121.45)	1.88	8.62	0.0392	93.90%	(14.08)	22.37	5
Rhode Island	(60.50)	1.69	5.58	0.0253	96.77%	(10.84)	27.29	4
California	(75.35)	1.64	7.01	0.0318	94.67%	(10.75)	20.04	8
New Jersey	(56.51)	1.63	4.26	0.0193	97.96%	(13.27)	32.81	4
Hawaii	(55.30)	1.49	7.05	0.0320	93.57%	(7.84)	15.34	5
Maine	(29.07)	1.46	3.53	0.0160	98.23%	(8.24)	28.52	4
Maryland	(45.67)	1.41	4.17	0.0190	97.39%	(10.94)	21.87	5
Washington	(53.08)	1.40	3.38	0.0154	98.23%	(15.70)	25.86	1
Delaware	(23.56)	1.36	3.26	0.0148	98.27%	(7.22)	24.42	5
New Hampshire	(23.56)	1.34	4.60	0.0209	96.52%	(5.12)	16.44	4
Vermont	(24.45)	1.30	4.19	0.0190	96.90%	(5.83)	15.69	5
Connecticut	(5.36)	1.28	5.00	0.0227	95.51%	(1.07)*	12.21	4
Oregon	(47.91)	1.27	4.21	0.0191	96.72%	(11.37)	13.98	1
Virginia	(30.64)	1.27	3.23	0.0146	98.05%	(9.50)	18.21	5
Florida	(19.27)	1.09	5.37	0.0244	93.11%	(3.59)	3.89	8
Pennsylvania	(0.56)	1.08	2.77	0.0126	98.02%	(0.20)*	6.51	5
Colorado	(12.07)	1.07	3.73	0.0169	96.40%	(3.23)	4.18	7
Montana	(18.39)	1.03	4.00	0.0182	95.55%	(4.59)	1.56*	2
Minnesota	(12.09)	1.02	2.19	0.0100	98.60%	(5.51)	2.15	6
Illinois	3.56	1.00	1.76	0.0080	99.06%	2.03	(0.18)*	7
Utah	(5.56)	0.97	4.04	0.0183	94.95%	(1.38)*	(1.61)*	1
Arizona	(9.18)	0.96	4.75	0.0216	92.97%	(1.93)*	(1.96)	8
Wisconsin	3.10	0.91	2.12	0.0096	98.34%	1.46*	(9.72)	7
South Carolina	18.85	0.88	1.68	0.0076	98.89%	11.23	(15.75)	3
North Carolina	18.58	0.88	2.12	0.0096	98.23%	8.75	(12.88)	3
Nevada	5.67	0.86	6.16	0.0280	86.28%	0.92*	(5.10)	8
Michigan	16.91	0.83	4.96	0.0225	90.13%	3.41	(7.51)	6
Idaho	6.93	0.83	2.71	0.0123	96.84%	2.56	(13.82)	1
Georgia	25.25	0.83	1.84	0.0083	98.51%	13.76	(20.77)	6
New Mexico	16.25	0.81	2.55	0.0116	97.07%	6.36	(15.99)	2
Kentucky	23.57	0.78	2.20	0.0100	97.59%	10.70	(22.19)	7
Tennessee	24.91	0.77	1.94	0.0088	98.11%	12.87	(25.84)	3
South Dakota	14.55	0.77	2.66	0.0121	96.47%	5.47	(18.98)	3
Missouri	24.99	0.76	1.19	0.0054	99.26%	21.00	(43.56)	3
Alabama	31.60	0.75	1.83	0.0083	98.22%	17.28	(29.86)	3
Wyoming	3.30	0.71	4.28	0.0194	90.06%	0.77*	(14.67)	2
Alaska	30.00	0.68	3.83	0.0174	91.19%	7.83	(18.20)	2
Ohio	34.75	0.68	2.83	0.0128	94.99%	12.28	(24.68)	7
Nebraska	33.31	0.65	2.22	0.0101	96.57%	14.98	(34.27)	7
Indiana	36.65	0.65	2.46	0.0112	95.75%	14.91	(31.65)	7
Iowa	27.33	0.63	2.19	0.0100	96.47%	12.47	(36.68)	7
Arkansas	38.48	0.60	1.52	0.0069	98.09%	25.35	(57.48)	3
North Dakota	30.37	0.60	3.13	0.0142	92.30%	9.71	(28.15)	2
Mississippi	38.64	0.59	1.62	0.0073	97.76%	23.91	(55.59)	3
Louisiana	27.02	0.59	2.77	0.0126	93.57%	9.77	(33.03)	2
Kansas	35.13	0.58	1.84	0.0074	97.61%	21.46	(56.48)	3
West Virginia	33.98	0.52	2.27	0.0103	94.45%	15.00	(46.82)	3
Texas	47.77	0.49	2.47	0.0112	92.72%	19.32	(45.50)	2
Oklahoma	45.82	0.43	2.57	0.0117	90.14%	17.84	(48.82)	2

Figure 6: Sensitivity of State Housing Prices as a Function of US Average Housing Prices

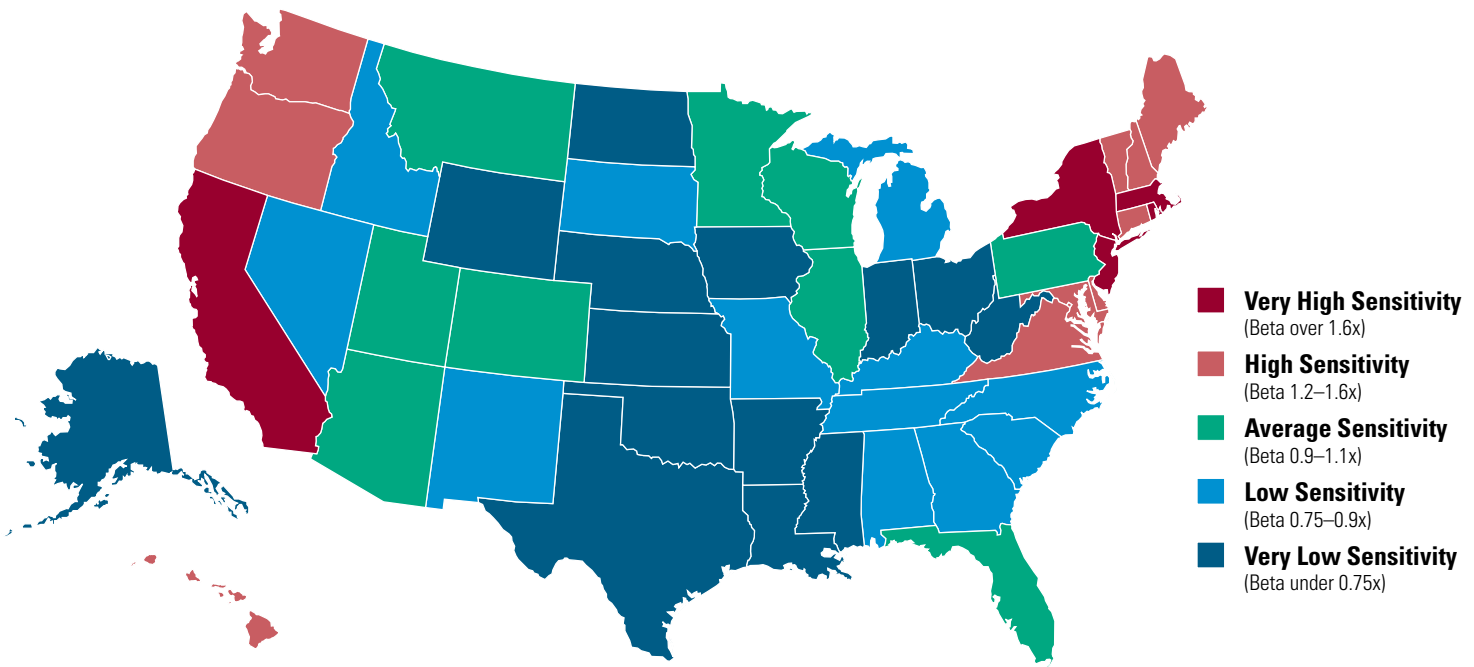


Figure 7: Residual Correlation Matrix for State Groups

Avg Corr	1	2	3	4	5	6	7	8
Group 1	82%							
Group 2	43%	76%						
Group 3	32%	49%	71%					
Group 4	-59%	-27%	-31%	76%				
Group 5	7%	14%	-10%	37%	69%			
Group 6	-12%	-27%	3%	-23%	-61%	44%		
Group 7	21%	10%	52%	-48%	-41%	38%	70%	
Group 8	-3%	-29%	-68%	7%	2%	-5%	-54%	82%

And here is the map identifying the groups:
(See Figure 8).

Groups 1-3 correlate strongly internally, and moderately among each other. Same for 4 and 5. Same for 6 and 7. Group eight stands alone. Outside of a correlation between groups 3 & 7, the rest of the group correlations are weak if not negative.

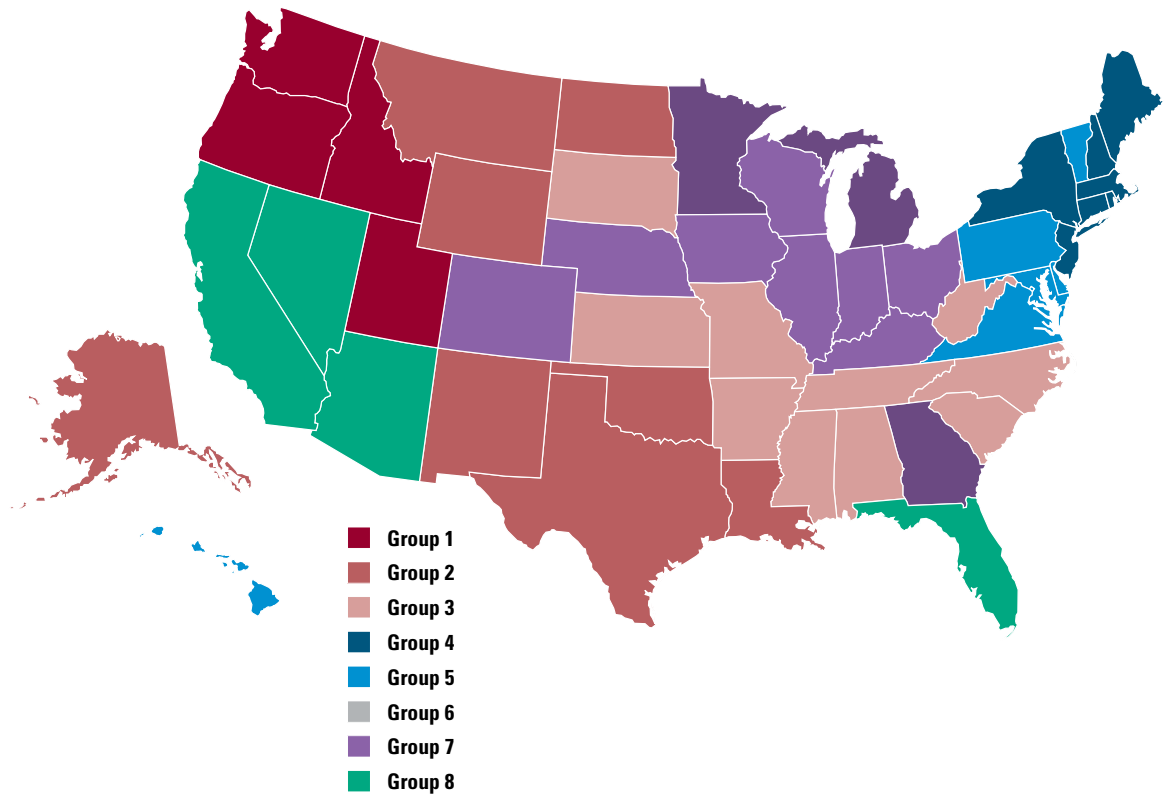
Compared with the residual correlations in the Census divisions, this gives a sharper picture of the boom & the bust. Group 8 is the states that had the worst of the boom and the bust, using a higher proportion of

short-term finance to drive the speculation. Groups 1-3 missed out on the boom & bust for the most part, with slight regional differences in price movement – Group 1 in the Northwest, Group 2 in resource extraction states, and Group 3 across the lower Midwest & South.

Groups 4 is mostly New England and 5 is mostly the Mid-Atlantic and plus Hawaii. Because of the space-constrained nature of these markets, the boom was significant, and the bust not as significant. Groups 6 and 7 cover the upper-Midwest, with Georgia and Colorado. With group 7, there was some boom and bust but it evened out, but group 6 had little boom, and more bust than normal.

Maryland’s housing prices have held up well as a Mid-Atlantic state. Being next to Washington, DC, certainly has helped, given the growth in the US Government during the last 10 years. The space-constrained nature of Maryland’s DC suburbs has helped keep Maryland housing prices high on average.

Figure 8: Housing Price Residual Correlation Groups in the United States



Conclusion

Different regions of the US had different experiences as housing prices rose and fell during the recent housing boom and bust. Results varied by region, availability of developable land, financing options, and other factors. Though the situation was nationwide, the effects were more severe in California, Nevada, Arizona, and Florida, where short-term finance made the boom and the bust more severe. Maryland fared better than most states in both the boom and the bust because of its proximity to Washington, DC.

The public policy implications of this paper are significant and varied. In order of ease of implementation:

Let the Federal Reserve and the lending regulators restrict the ability of lenders to lend short-term on long-term assets like houses, particularly to non-prime borrowers.

The Federal Reserve should constrain its monetary policy to limit large increases in debt. The stimulus from lowering the Fed funds rate is temporary, but the problems arising from deflating large amounts of bad debt can last for a decade or more.

To the degree that states attempt to attract industries to their states, they should aim to diversify rather than concentrate industries. In that sense, the risk to a state like Maryland is when the Federal Government shrinks significantly, it will have a disproportionate impact on the Maryland state housing prices, and its economy more generally.

The boom/bust cycle can't be repealed, but it can be ameliorated through diversification and constraints on lending. Whether there is the political will to do so is the real question.

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Towson University Index— Towson University Investment Group

Travis Crouse
Portfolio Manager, Towson University Investment Group

Molly Burton
Vice President, Towson University Investment Group

The Towson University Index (TUI) was first created as a way to measure performance of publicly traded companies that have a history of hiring Towson University students, are thought to be possible hirers of Towson students, or have some other connection to the University or the state of Maryland. The index is comprised of only a sample of companies that might fit the description and is not meant to be all-encompassing. The original index was comprised of 30 Maryland based companies and 10 companies based elsewhere.

This year, the modified list is composed of 50 publicly traded companies with 33 Maryland and 17 non-Maryland companies. We used a weighted approach to create the index; hence the larger the company's market capitalization the greater the company's representation in the index. In addition, Maryland based companies were given a proportionately larger weighting in the index than their non-Maryland counterparts.

Figure 1 illustrates the performance of the Towson University Index relative to the S&P 500, a parallel comparison of two weighted indices. The graph tracks and compares the total performances of the two indices over a 5-year period between July 2007 and August 2012. Since 2007, TUI outperformed the S&P 500 by 29.9%. The recent acceleration of outperformance is attributable to changes to a small number of the TUI constituents, the expansion of the TUI, as well as the change in time period tracked.

In addition, the TUI outperforms the S&P 500 by 13.01% over the most recent measured twelve months. Since the toughest quarter of the most recent recession

(the 4th quarter of 2008) in which the TUI underperformed the S&P 500 by 3.04%, the TUI has proven its resiliency by achieving robust returns.

The four most represented sectors in the TUI are Financials at 50.9%, Consumer Staples at 22.6%, Industrials at 16.6%, and Consumer Discretionary at 5.8%. The TUI's superior returns as of late are largely due to its heavy exposure to well performing sectors (Financials and Consumer Staples) and indicate individual companies in the TUI outperform their respective sectors as a whole.

One of the TUI's best performers has been Jos. A Bank with returns exceeding 100% over the last 5 years. Amidst uncertain economic conditions, Jos. A Bank has been able to expand its operation to over 500 stores in 42 states. Another success story of the TUI is McCormick and Company whose unique portfolio of products has made it a dominant, global leader in the spice industry. McCormick has been the epitome of consistent growth as it has slowly expanded into international markets and achieved returns of over 65% since August of 2007.

When looking at the TUI, it is important to remember there are a large number of private companies (especially healthcare firms) and government organizations in Maryland that contribute to growth and job opportunities. The TUI highlights the job opportunities available to Towson students and emphasizes the relative performance of publicly traded companies connected to the University.

Figure 1: Towson University Index relative to the S&P 500



Disclosure:

This year's TUI was based on last year's TUI and was updated with assistance from the Internship and Career Services program at Towson University. Historical prices obtained from Google Finance, employee figures obtained from MSN Money, sectors of the companies and their respective quarterly revenues were obtained from NetAdvantage, a Standard and Poor's service. To obtain the market caps as of August 22, 2012, the most recent price as of the writing of this article was divided by the most recent market cap and then multiplied by the closing price on August 22, 2012; the effects of changes due to share issuances are expected to be minimal.

T. Rowe Price Finance Laboratory

In the Fall 2012, the College of Business & Economics was happy to inaugurate the T. Rowe Price Finance Laboratory. This new facility, sponsored by the T. Rowe Price Foundation and other generous donors, replicates the functionality of Wall Street's top trading firms and provides a rich research environment for the TUIG. Student members have the ability to value securities and analyze investment opportunities aided by real-time data, using the latest numerical algorithms powered by Bloomberg, a global leader in business and financial information.

TUIG's club meetings take place in the facility which offers a professional setting for visitors to interact with group members. Data needed or the preparation of this article were retrieved from the available resources in the laboratory. In all, the facility is a great addition for the Finance curriculum in the College of Business & Economics and promise to enhance the learning opportunities to all current and future Finance and Business majors.



Travis Crouse, from Aberdeen, Md., is a student at Towson University with an expected graduation of May 2014. He is currently pursuing a major in finance. Since the summer of 2012, Travis has served as the Portfolio Manager for the Towson University Investment Group prior to which he served as the Junior Portfolio Manager. Travis currently interns as a Financial Planning Assistant at Heritage Financial Consultants.



Molly Burton, from Parkton, Md., is a senior at Towson University pursuing a major in Business Administration with a minor in Finance. Molly Burton is the Vice President of the Towson University Investment Group. She is also a member of the Baltimore CFA Society.



Speaker Panel Q & A Session at TUIG Fourth Annual Market Summit, April 2012. TUIG will host the Fifth Annual Market Summit on April 16, 2013 in Stephens Hall, Room 310 from 6 to 8 p.m. on the Towson University Campus

Table 1. Companies Based in Maryland

Ticker	Company	Market Cap	Sector	Quarterly Revenue	Employees
ADX	Adams Express Co	998M	Financials	11.0	30
ARB	Arbitron Inc	930M	Consumer Discretionary	104.00	1,205
AGX	Argan Inc	228M	Industrials	63.00	239
CSE	CapitalSource Inc	1,540M	Financials	106.0	564
CHH	Choice Hotels International Inc	1,830M	Consumer Discretionary	173.0	1,431
CIEN	Ciena Corp	1,600M	Information Technology	477.0	4,387
OFC	Corporate Office Properties Trust	1,600M	Financials	133.0	428
CVH	Coventry Health Care Inc	5,610M	Healthcare	3,517	14,400
DISCA	Discovery Holding Co	20,450M	Consumer Discretionary	1,142	4,600
FMAR.OB	First Mariner Bancorp	11M	Financials	20.00	522
GPX	GP Strategies Corp	380M	Industrials	102.00	2,523
GVP	GSE Systems Inc	36M	Information Technology	13.00	262
JOSB	Jos A Bank Clothiers Inc	1,120M	Consumer Discretionary	201.0	4,236
LM	Legg Mason Inc	3,380M	Financials	630.0	2,979
LMT	Lockheed Martin Corp	29,730M	Industrials	11,921	123,000
MAR	Marriott International Inc	12,060M	Consumer Discretionary	2,776	120,000
MKC	McCormick & Co Inc	8,140M	Consumer Staples	984.0	9,000
MED	Medifast Inc	393M	Consumer Discretionary	93.00	860
MCRS	Micros Systems Inc	4,150M	Information Technology	302.0	4,953
OHI	Omega Healthcare Investors Inc	2,590M	Financials	83.00	24
OSIR	Osiris Therapeutics Inc	278M	Healthcare	1.0	54
SBGI	Sinclair Broadcast Group Inc	960M	Consumer Discretionary	253.0	3,130
FIRE	Sourcefire Inc	1,530M	Information Technology	50.00	519
TROW	T Rowe Price Group Inc	15,700M	Financials	736.0	5,265
TSYS	TeleCommunication Systems Inc	93M	Information Technology	114.00	1,324
TESS	Tessco Technologies Inc	149M	Information Technology	192.0	843
UA	Under Armour Inc	5,800M	Consumer Discretionary	369.0	5,400
UTHR	United Therapeutics Corp	2,860M	Healthcare	225.0	543
UUU	Universal Security Instruments Inc	10M	Industrials	3.00	16
USU	USEC Inc	79M	Energy	364.0	1,885
GRA	W.R. Grace & Co	4,340M	Materials	826.0	6,300
OPNT	Opnet	750M	Information Technology	44.0	654
SASR	Sandy Spring	469M	Financials	41.0	713
		129,792M			

*numbers expressed in millions

Table 2. Companies Based Elsewhere

Ticker	Company	Market Cap	Sector	Quarterly Revenue*	Employees
BBT	BB&T Corp	22,110M	Financials	2,694.0	32,998
BBY	Best BUY Co Inc	5,990M	Consumer Discretionary	11,610.0	167,000
C	Citigroup Inc	88,880M	Financials	15,691.0	261,000
COF	Capital One Financial Corp	32,170M	Financials	5,670.0	37,400
LUV	Southwest Airlines Co	6,930M	Industrials	15,658.0	46,128
MTB	M&T Bank Corp	10,940M	Financials	1,129.0	4,629
PG	Procter & Gamble Co	183,650M	Consumer Staples	20,212.0	126,000
PNC	PNC Financial Services Group Inc	32,810M	Financials	3,893.0	50,448
SHW	Sherwin-Williams Co	14,070M	Materials	2,573.0	32,998
WFC	Wells Fargo & Co	180,230M	Financials	87,597.0	264,400
MS	Morgan Stanley	29,120M	Financials	6,953.0	58,627
KIM	Kimco Realty Corp	8,180M	Financials	233.0	685
NOC	Northrop Grumman Corp	16,920M	Industrials	6,274.0	72,500
SWK	Stanley Black & Decker Inc	11,350M	Industrials	2,814.0	44,700
UPS	United Parcel Service Inc	72,970M	Industrials	13,349.0	398,000
CSGP	CoStar Group Inc	2,290M	Industrials	85.0	1,514
SUSQ	Susquehanna Bancshares	1,980M	Financials	192.0	2,926
		720,590M			

*numbers expressed in millions



Towson University Investment Group

The Towson University Investment Group (TUIG), which was formerly known as the Wall Street Investors' Investment Club, was founded to bring together highly motivated students that are seeking a hands-on experience with equity investments and research. The group routinely prepares stock research reports to analyze equities for inclusion in the actively managed portfolio that is the core of the group. The organization is completely student-run and depends on the efforts of members while offering valuable professional development opportunities.

TUIG offers a unique form of student involvement that fills the gap between the classroom and real-world investment management. As part of the learning experience, the group travels to various locations, both domestically and internationally, to meet with financial and economic professionals or attend investment forums. In March 2011, the group travelled to Hamden, Connecticut to attend the inaugural Quinnipiac Global Asset Management Education (G.A.M.E) Forum, presented by keynote speakers at Quinnipiac University. Keynote panelists discussed the economy, stock markets, alternative investments and corporate governance. Past events include golf outings to support local charities.

TUIG is affiliated with the Towson University College of Business and Economics and the Department of Finance. Members work closely with faculty and other students to advance the college's mission and to promote the academic success and education of students.

Contributors

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Baradwaj is an Associate Professor and Chair of the Department of Finance, Towson University. Previously he was at the University of Wisconsin Eau Claire from 1990-2001. He secured an undergraduate degree in Physics from the University of Madras, India in 1979, a M.S. in Business from Iowa State University in 1986 and his Ph. D in Finance from Texas A&M University in 1991. His teaching and research interest lies in the area of Banking and Finance. He has taught a wide variety of courses including Financial Policy, Bank Management, Financial Institutions & Markets, and International Finance. He has published his research in academic banking and finance journals including the Journal of Banking & Finance and Journal of Financial Services Research.



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Contributors

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The Baltimore CFA Society's mission is to provide the financial community with information and knowledge, while advocating ethical conduct with regard to investments and financial management. The Baltimore CFA Society also seeks to encourage and aid the education of persons engaged in the investment profession, and to provide members of the society with opportunities to exchange ideas and information amongst their peers.

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