Jacobs Levy Equity Management Center for Quantitative Financial Research

Fall 2017 Conference September 15, 2017

Welcoming Remarks Christopher Geczy, Ph.D., Academic Director

Good morning, and welcome to the Fall Conference of the Wharton School's Jacobs Levy Equity Management Center for Quantitative Financial Research. I'm Christopher Geczy, Academic Director for the Jacobs Levy Center, and it's my pleasure to host today's event.

Today's program highlights factor models, and will feature three paper presentations and a panel discussion around this topic. Importantly, we will also be awarding the Wharton-Jacobs Levy Prize for Quantitative Financial Innovation to honor Stephen Ross for Financial Innovation, recognizing Steve posthumously for his work in the area of multi-factor asset pricing introduced in his 1976 *Journal of Economic Theory* paper, "The Arbitrage Theory of Capital Asset Pricing" and followed by important empirical work and applications. Steve published this paper while he was a faculty member at Penn with appointments in the Economics Department (primary) and in the Finance Department at Wharton. We are gratified that Carol Ross, Steve's wife, joins us here to accept the award. Steve was one of the giants on whose shoulders so many of us stand in academic and practice alike. We are grateful for his contributions and for your presence here, today, Carol.

Our conference presenters today bring diverse perspectives from academia and the financial industry, and reflect the Jacobs Levy Center's mission to advance research in quantitative finance at the intersection of theory and practice. We are looking forward to hearing from them and learning from them, and I encourage all of you to offer your questions and comments during the audience Q&A portions. Please note that all of today's slide presentations can be accessed online. The webpage is provide on the back of your agenda, along with information about how to connect to Wi-Fi.

I would like to extend our profound thanks to Wharton alumni Bruce Jacobs and Ken Levy, whom you'll be hearing from today. In 1986, when Bruce and Ken founded Jacobs Levy Equity Management, quant investing was in its infancy and not well understood. Bruce and Ken helped to change all that. In a series of innovative and influential articles in the leading professional journals, in books they co-authored, in media appearances, and not least with their generous support of finance scholarship, they promoted the discipline of quantitative equity management. The investment approaches of numerous managers overseeing likely trillions of dollars today is directly or indirectly in part based on the work they've done themselves and the work of others whom they've supported.

As well as being thought leaders and philanthropists, Bruce and Ken are of course vigorously competing in the industry they've godfathered, successfully managing billions of dollars, utilizing their firm's proprietary research.

Also, they continue to break new ground in aspects of Modern Portfolio Theory that are central to its practical application. As just a single example, in 2013 they published an article in *The Journal of Portfolio Management* proposing a unique risk factor representing portfolio leverage, and introduced the concept of leverage-efficient mean variance frontiers.

Bruce and Ken have a philosophic devotion to expanding the frontiers of professional expertise in our industry, both through their own work and through supporting academic research. To that end, Bruce and Ken made a generous gift to Wharton in 2011 to commemorate the 25th anniversary of Jacobs Levy Equity Management, which established the Jacobs Levy Center and the Wharton-Jacobs Levy Prize. With this gift, Bruce and Ken have helped ensure Wharton will remain at the forefront of research and scholarship in the field of quantitative finance. The Jacobs Levy Center supports innovative research that will help investors meet their goals, and seeks to prepare the next generation of asset managers and academic scholars. The Wharton-Jacobs Levy Prize, which is awarded every two years, recognizes outstanding quantitative research that has contributed to a particular innovation in the practice of finance. We were pleased to award the first Prize to Harry Markowitz for his work on individual retirement planning, and the second Prize to Bill Sharpe for his work on style analysis. And this year, as I mentioned, we are honored to recognize Stephen Ross with the 2017 Prize for his work in the area of multi-factor asset pricing. I think we can all agree that the prevalence of factors in the world of investing today is a testament to the lasting impact of Steve's work. I know many in this room were friends and colleagues of Steve's. We are so glad to have you with us to celebrate his work and his life in this afternoon's prize ceremony.

I would also like to recognize those sponsors who helped make today's event possible. Many thanks to this year's conference sponsors, Institutional Investor Journals, Jacobs Levy Equity Management, State Street Global Exchange and Wharton Research Data Services. If you haven't already, please do visit their tables in the registration area outside the ballroom, which will be open throughout the day.

I would also like to thank the Jacobs Levy Center's corporate members who help make everyday progress and research support at the Center along with the conference possible: AQR Capital Management, Kepos Capital and McKinley Capital Management. Our corporate membership program directly aids the research of Wharton and Penn faculty and students in quantitative finance, and we are grateful for the ongoing involvement and support of our members. In addition, these members enjoy certain benefits including early access to research, involvement in Center activities and other advantages. If you are interested in learning more about the program, information is included in your conference materials.

Now, it's my great pleasure to introduce the Dean of the Wharton School, Geoffrey Garrett, as welcomer-in-chief. Dean Garrett's association with Wharton stretches back more than twenty

years to when he joined the faculty in the Management Department in 1995. He subsequently held professorships and leadership posts at Oxford, Stanford, Yale and UCLA, before returning to his native Australia and serving as dean of the business schools at the University of Sydney and the University of New South Wales. He became Wharton's dean in 2014.

At that time, he gave an interview to Wharton magazine in which he highlighted the key role of quantitative analysis in making Wharton one of the top business schools in the world, and keeping that reputation. He said,

What makes Wharton great in finance and what makes the school great in the rest of business education? I think the key is quantitative analytics. In the era of big data, analytics is not only for geeks. Better analytics leads to better decisions, and better decisions are the foundation of leadership. Wharton is the best-positioned business school in the world to integrate sophisticated, data-based analysis into leadership."

End quote. Under Dean Garrett's leadership, I think Wharton has amply fulfilled his vision, and I hope the Jacobs Levy Center is a key part of what Dean Garrett had in mind to compete for world leadership in the field of quantitative research and analytics...and not only for geeks! Please join me in welcoming Geoff Garrett.