



Speech for the Investiture Ceremony as Doctor Honoris Causa of Dr. Robert F. Engle and Dr. Eduardo Schwartz

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RECTOR MAGNIFICUS,
DISTINGUISHED AUTHORITIES,
PROFESSORS,
STUDENTS,
LADIES AND GENTLEMEN.

First, I would like to share with you the deep emotion I feel right now. It is a very great and unexpected honor for me to receive this honorary title from your illustrious University.

On the one hand, receiving this honor from the University of Comillas, and the Faculty of Economics and Business Sciences in particular, makes me feel very close to your university and your beautiful city. It adds another piece of the world to my life that I feel a part of.

On the other hand, I am excited that it was my colleagues from the financial economics department, and especially Dean Teresa Corso, who nominated me for this distinction. My friendship with Teresa dates back more than 25 years, when, having just graduated from her doctorate in Finance, she visited the University of California in Los Angeles (UCLA), where I was teaching, and we jointly carried out research work on the convergence of interest rates in the European Monetary Union.

My academic efforts have always been guided by intellectual curiosity and I have never dreamed of receiving an honor of this nature. Getting to share this great honor with people as distinguished as those who have received this recognition until now, and especially today the distinguished Professor Robert Engle, is enough to make me feel the most sincere and humble of gratitude.

It never occurred to me in the sixties, when I received my degree in Industrial Engineering at the University of Chile, that one day I would find myself in front of you sharing this event. My career as an academic is certainly unconventional, as I spent eight years working for various companies as an engineer and as an executive in my native country, Chile. In fact, when I moved to Canada to pursue my graduate studies in business administration at the University of British Columbia, devoting myself even remotely to academic life was not on my mind. There, however, I began working with a young professor, Michael Brennan. This collaboration awakened in me an intellectual curiosity that had been latent during the previous years, and I soon realized that I could and should dedicate the rest of my life to academic work. However, I would not be here before you if it had not been for the advice and encouragement of great and respected colleagues such as Michael Brennan and Francis Longstaff, with whom I have collaborated for many years.

What we have come to call financial economics deals in part with any problem that is related to the fair valuation of any asset, whether it is an asset that we could classify as purely financial (a bond, a stock, an option) or a real asset (for example, general investment goods, or natural resource investments). The task of finding the fair valuation of assets is a very important and essential part of obtaining the optimal allocation of resources in the economy. Only by understanding this concept can we appreciate the fundamental role that finance plays in economic development.

There is a second role that financial economists have played and that is, in essence, complementary to the previous one: the organization and continuous improvement of the functioning of financial markets, whether fixed income, variable income, exchange rates or derivatives. These are key markets and instruments necessary to achieve the efficient allocation of resources, which allows a stable growth of our economies.

After this simple introduction to the general area of finance, I will give you a brief outline of my research in the context of this discipline. Although my work could be described as quite “technical,” I will try to summarize my contributions to financial theory in a few words.

I began my research career dedicated to the search for methodologies to obtain the correct valuation of financial assets. That is, basically fixed income assets, and financial derivatives such as options and futures. Little by little my research broadened its horizons, and in addition to venturing into the field of real estate assets, I began to study real assets. If we can understand a financial asset as a security for which a price is paid and whose possession gives the right to receive certain future flows of money (for example, the coupon of a bond or the dividends of a share), in the same way a real asset can be considered in the same framework. A copper mine, for example, is an asset for which a price is paid, and whose possession will give the right, in the future, to receive the income from the sale of copper. This means that we can apply similar valuation formulas, which are used for purely financial assets, to real assets. It is to this task that I have dedicated a substantial part of my work.

An extension of the same options theory that applies to the valuation of financial options can also be used to value these “real” assets. Although I will not go into detail on this topic, since a summary that would do it justice would require more time than I have available, I count myself among the group of researchers who gave the initial push to what is now called “real options theory”, which is now attracting great attention from researchers belonging even to fields not directly in finance.

As in the case of a financial option, where the exercise price of the option is paid and the underlying asset is obtained (be it a stock, a bond or a commodity), in the case of a natural resource such as a

gold or copper mine, or an oil field, the cost of extraction is paid to obtain the underlying asset (gold, copper, or oil). In this way, financial option valuation methods can be used to obtain the value of real options, such as natural resources.

In the same way that the value of an option depends fundamentally on the random process of the underlying asset (for example, a stock), the value of a natural resource depends fundamentally on the random process of the underlying commodity. As a result of this, I spent a lot of effort studying the random process followed by commodity prices.

Later my work focused on topics such as the application of real options to the analysis of research and development projects, especially applied to pharmaceutical companies and the development of new drugs. It is fascinating to think how these companies continue to function as great engines of the economy despite the fact that they need to spend a lot of money on research and development, that their projects are subject to numerous uncertainties—for example, whether they will be completed successfully, whether the product will be approved, whether there will be a market for the product obtained—and that it will take years to begin enjoying the income generated by such projects. The study of these companies, and research and development projects in general, is exciting not only from the point of view of theoretical finance, but also from the perspective of real economics.

In recent years, in addition to the topics already mentioned, I have dedicated part of my effort to studying some financial aspects of climate change, sustainability and environmental and resource economics issues. I am pleased to mention that in some of these studies I am collaborating with professors from this illustrious university.

Having described the importance of finances in the new economic environment, I would like to take the opportunity now to talk to you not only about the Professor and his research work, but about the man who today feels immensely happy to be with you in this ceremony.

In addition to my close friendship with Dean Teresa Corso and my connection with the University of Comillas and its faculty, my relationship with Spain, Spanish academics and Spanish academic institutions is long and deep. I have presented multiple seminars at Spanish universities and at academic conferences in Spain. I can mention: the University of Alicante where I received a DHC in 2001, the Carlos III University where I held a Chair of Excellence in 2009, and the University of Valladolid, where I have visited several times and have many friends.

I want to tell you that I feel very lucky to be accompanied on this occasion by my dear wife Gloria, who has been my partner throughout a life full of enormous satisfaction. Gloria has been for me the person who has always been there when I needed her. Together we have formed a family of three daughters and 8 grandchildren who have filled us with joy.

Finally, I ask you to allow me one more minute to conclude my acceptance speech by reiterating the great honor that it represents for me to become part, in such a special way, of the university community of the University of Comillas. Even more so in the company of the very distinguished academic and Nobel Prize winner, Robert Engle. I want to tell you that I will always remember this day with great affection.

Thank you!

Eduardo S. Schwartz

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