

# GREAT EXPECTATIONS: HOW CREDIT MARKETS TWIST THE ALLOCATION AND DISTRIBUTION OF LAND

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*"The basis of allocating loans is not marginal productivity but collateral security"- Rainer Schikele*

Henry George likened the aggregate effects of land speculation to those of a cartel of landowners. What do cartels do? They control enough of a resource to affect price, and withhold part of the resource from use, or from its full and best use. Formal cartels do this consciously. Herbert Hoover called it "Associationism", and fostered his "Associations" which he evidently thought were good for the economy and the country. FDR spent his first term sponsoring his National Recovery Administration (NRA), with its Blue Eagle logo posted in every store window. Each logo bore the motto "We do our part", meaning our part in upholding prices and avoiding competition while goods stuck glued to the shelves. For farm landowners (but not tenants or workers) there was the Agricultural Adjustment Administration (AAA) dedicated to retiring much of our best farmland from production and employment. A locomotive pulling just 3 cars and a caboose were a common sight then, while railroad freight rates and passenger fares were maintained at high levels. Cities and counties that foreclosed on millions of tax-delinquent lands around the nation held them in cold storage for years, to help support the market. Texas enforced a "prorate" on oil wells, limiting each well to pumping just 15 days or less a month. ALCOA monopolized aluminum by owning all the bauxite and holding it underground until wartime's urgent need for aircraft forced the U.S. Government to build up a competitor, Reynolds.

Rootless youths rode the boxcars or the rods, such as were moving, seeking jobs or a handout, then even as today. Cartels are not good at making jobs. But Henry George saw and wrote about hordes of tramps in the depression after 1873, and traced their problems to the same root: land held out of use – only then it was hard to blame organized cartels. How can there be too little land, he asked, in a nation with more and better land per capita than any nation in history? How can the free market fail to allocate land to more intensive and better uses when people seek work, and demand more food, clothes, and shelter?

What about that wonderful free market Chicago-Schoolers crow about? There must be, he reasoned, some basic flaw in the land market that makes it produce results like a cartel, without the visible presence of cartels. He called this immanent presence "land speculation". This term "land speculation" today can mean several different things. Land lasts forever, so even to forecast a constant future stream of rents and discount rates is

speculative. It is just as conjectural as to posit continual rises, or falls, or any repeated pattern of cycles. Economic theorists sometimes write casually of "perfect knowledge", but perfect forecasting to infinity smacks more of Divine Omniscience beyond human foresight. From George's contexts, however, he clearly uses "speculation" to mean buying and holding land for the rise, whether for future resale or re-use or collateral or estate-building, so that is the meaning I use here.

George never learned the basic algebra of finance. He had the mind for it, demonstrated for example in his demolition of M.I.T. President Francis A. Walker in their celebrated debate over how to measure the concentration of farmland. He anticipated what are now named the Lorenz Curve and the Gini Ratio, after scholars who formalized his insights. But he did not move beyond words and similes into algebraic formulae. It is true that today's academics clothe themselves in pretentious formulae to hide their naked brains; yet it is also true that a few good formulae outlast the exciting oratory that evoked them. Few understand Einstein, for example, but many can recite  $E=MC^2$ . Let us, therefore, translate George's "land speculation" into some of the basic algebra of finance, not to hide but to clarify.

Our mentors weaned us on  $V=a/i$ , where  $V$  is land value, " $a$ " is annual rent, and " $i$ " is the interest rate. It's a good start, but deceptively simple. Here are its hidden assumptions:

- " $a$ " and " $i$ " will stay the same forever. (Forever is a long, long time.)
- Everyone in the market has access to long-term funds at the same interest rate, " $i$ "
- Everyone forecasts the same value of " $a$ "
- Irregular pulses of costs and revenues can be levelized and summed to translate them into the assumed level " $a$ "
- We can think in infinite time, although our lives are finite, and so are the lives of goods other than land

To handle infinite time, and relate it to the present, I will divide it into two parts:

- a. The current use, with levelized annual rent of " $a$ ", and a life of " $n$ " years. For an arithmetical example, let  $n=30$  years.
- b. The rest of infinite time after the first 30 years, with levelized annual rent of " $b$ ". " $b$ " > " $a$ ", and may well be  $\gg$ " $a$ "

Land Value ( $V$ ) comes from both parts of the infinite future, " $a$ " and " $b$ ".

The present value of part (a) is the Discounted Cash Flow (DCF) of " $a$ " over 30 years. There is a compact formula for DCF:

$$DCF/a = [1-(1+i)^{-n}]/i \quad (1)$$

The right side of (1) is the Discounted Cash Flow Factor (DCFF). It converts a (continued on page 8)