

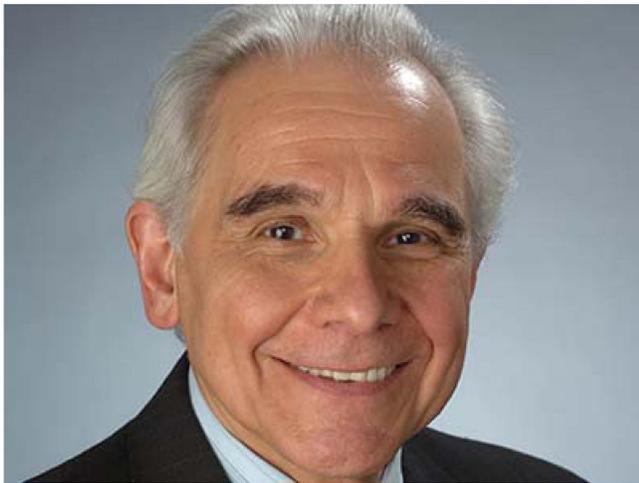
BUSINESS & ECONOMY

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Professor Robert Ashford's 'Inclusive Capitalism' Gains International Support

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According to Robert Ashford, Bond Schoeneck & King Distinguished Professor in the College of Law, “In the time needed to read this article, the wealthiest 1 percent of the American people will have acquired more capital wealth with the earnings of capital than most people will earn in their lifetimes, no matter how long and hard they work.”



Robert Ashford, (315)443-1111, rhashford@aol.com

Although most people earn from their labor, thanks to the institutions of corporate finance the top 1 percent achieve much greater growth in wealth not by working, according to Ashford, but rather by “acquiring capital with the earnings of capital.” Moreover, says Ashford, the same institutions of corporate finance that facilitate such vast sums of capitation acquisition for primarily the top 1 percent could facilitate much more capital acquisition more profitably, without redistribution or inflation, if everyone were included in the capital acquisition process.

These observations were advanced by Ashford in a series of well-received lectures on “Inclusive Capitalism” delivered earlier this year in the United Kingdom at Cambridge and Oxford universities, the London School of Economics and Syracuse University’s Faraday House in London. His pioneering work has now culminated in a contract with Cambridge University Press to publish a book tentatively titled “Milton Friedman’s Capitalism and Freedom: Missing Truths, False Promises, and Better Ways.” In his book—intended for undergraduate and graduate courses, as well as the general public—Ashford plans to identify missing truths and false promises in Friedman’s widely accepted analysis that prevent

contemporary capitalism from producing and distributing much greater and more widely shared prosperity and to offer better capitalistic ways of achieving it.

Ashford—who teaches a seminar on “Inclusive Capitalism, Property Rights and Binary Economics,” as well as courses in Business Associations and Professional Responsibility—says he agrees with the basic premise of Friedman’s enormously influential best-seller that some form of capitalism is necessary for personal freedom in a post-industrial society. But he finds serious fault with Friedman’s book because Friedman’s analysis rests on simplistic economic assumptions.

“Friedman ignores the institutional realities of mega-corporations, private wealth concentration and exclusionary property rights,” Ashford explains, “that needlessly deny most people more equal, practical opportunities to acquire wealth the way the top 1 percent routinely do, and therefore deny them the robust personal freedom that would spring from a more inclusive approach to capitalism.” Quoting the words of Justice Louis Brandeis from more than 75 years ago, Ashford observes, “We can have democracy in this country or we can have great wealth concentrated in the hands of a few, but we cannot have both.”

Although widely conceived as distinct disciplines, Ashford’s scholarship maintains that in post-industrial societies, economics and law are inseparable because virtually all economic opportunity requires property rights to be practically realized. “Law is the invisible infrastructure that channels and facilitates economic activity,” says Ashford. “In contemporary capitalism, property rights work to concentrate private wealth, when they could more profitably work to create and distribute much greater private wealth much more broadly without any redistribution or inflation.”

Acceptance of Ashford’s approach among professional economists is increasing as evidenced by his lectures at Oxford, Cambridge and the London School of Economics, all hosted by economists. Paul Davidson, founding editor of *The Journal of Post Keynesian Economics*, endorses Ashford’s work, calling it a “promising antidote to the eroding earning capacity of poor and middle-class people.” Richard Hattwick, founding editor of *The Journal of Socio-Economics*, agrees, noting that Ashford’s innovative approach to fuller employment and per capita growth based on capital productiveness and broadening property rights deserves a prominent place in mainstream economic analysis. Moreover, Demetri Kantarelis, founding editor of *Global Business & Economics Review*—who has co-authored several articles based on Ashford’s scholarship—calls Ashford’s scholarship “the most important contribution to economic theory in many decades.”

The timely relevance of Ashford’s scholarship to contemporary global economic concerns is revealed in the titles to his recent UK lectures: “Inclusive Capitalism: The UK’s Ownership-Broadening Road to Prosperity in the Post-Brexit Era” (at Oxford University); “Enhancing Individual Earning Capacity in the Age of the Robots by Broadening Capital Acquisition with the Earnings of Capital” (at SU’s Faraday House in London); and, at Cambridge University and London School of Economics, “Beyond Austerity and Stimulus: Making Employment and Growth More Sustainable by Widening Capital Ownership with the

Earnings of Capital.”

“Austerity” and “stimulus” are shorthand terms for competing mainstream responses to the financial crisis of 2007-2008, the Great Recession, the crisis in the European monetary union and the Brexit issues in the UK. The terms also frame the ongoing macroeconomic debate between advocates of the conflicting “free market” and government solutions believed necessary to move capitalist economies to fuller employment in order to produce greater per capita growth and more broadly shared prosperity.

Ashford’s inclusive capitalism approach to fuller employment and greater per capita growth places it squarely in the middle of this great global debate. Drawing from private property principles too often ignored in mainstream economic analysis, Ashford’s book will advance a strategy for achieving fuller employment and stronger per-capita growth that is “beyond austerity and stimulus.” Observes Ashford, “In my travels to the UK, I didn’t meet anybody who wasn’t interested in economic policy alternatives to austerity and stimulus.”

The fuller-employment logic underlying Ashford’s inclusive capitalism approach (ignored by both austerity and stimulus advocates) is remarkably simple: because investment is always future looking, a broader distribution of capital acquisition with the earnings of capital promises a broader distribution of capital income (and therefore greater consumer demand) in future years, and therefore greater market incentives to invest in labor and capital in earlier years.

“One key institution is the professional trust fiduciary,” continues Ashford. “Currently, existing ones—such as Fidelity, TIAA-Cref, T. Rowe Price and Vanguard—assist mostly wealthier people to acquire capital with the earnings of capital roughly in proportion to their existing wealth.” With an understanding of inclusive capitalism, Ashford says such companies can also profitably assist poorer people with capital acquisition in proportions not limited to their existing wealth. Likewise, once corporate fiduciaries, financial advisors, lenders, investment banks and capital credit insurers come to understand that broadening capital acquisition with the earning of capital will enhance corporate and investment profitability, corporations will begin to voluntarily include their employees, customers and neighbors in large-scale capital acquisition programs. “The barriers to producing more goods and services that people need and desire are not technological,” notes Ashford. “The barriers are in understanding how to do so profitably and sustainably.”

With Ashford’s “inclusive, competitive capital acquisition rights” approach to fuller employment and per capita growth, poor and middle-class Americans will see their earnings and wealth increase in an age of stagnant wage growth (yet high productivity). “A broader distribution of capital earnings will promote fuller employment and growth by enabling poor and middle-class people to better afford more of the necessities and simple luxuries of life that richer people have long enjoyed from capital income,” says Ashford. Furthermore, with more broadly distributed capital income, there will be “reduced need for welfare dependence, government spending, borrowing and taxes.”

Ashford concludes that inclusive capitalism would enhance personal freedom and strengthen democracy, goals at the heart of Friedman's book: "Widespread, practical access to capital acquisition—represented by a broadly diversified portfolio of America's 3,000 or so largest credit-worthy corporations, precisely the sort of investment portfolio that routinely earns for the top 1 percent—is necessary for individual prosperity, personal freedom and the citizen participation required for robust democracy."

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Broadening Capital Acquisition with the Earnings of Capital as a Means of Sustainable Growth and Environmental Sustainability

By Robert Ashford, Ralph P. Hall, and Nicholas A. Ashford

*** R. Ashford, (315)443-1111, rhashford@aol.com ***



In a prior article in this edition – entitled *Addressing the Crisis in Employment and Consumer Demand* – it was argued that environmental sustainability with sustainable economic recovery requires sustainable earning capacity for working and middle-class people. In general, earning capacity can be enhanced by some combination of two contributions; (1) wages earned through employment and (2) money earned through the ownership of productive capital.¹ The latter includes ordinary investment from wage savings that people might make through the purchasing of stocks, bonds, and property; changing ownership structures of businesses (see Marjorie Kelly’s approach of *generative ownership*),² employee stock ownership plans (ESOPs),³ and extending effective market opportunities to poor and middle-class people so that they can acquire capital with the earnings of capital based on principles of binary economics.⁴ This article focuses on the binary economic approach and explains how this approach can enhance not only their capital earning capacity but also their demand for employment and the prospects for achieving environmental sustainability.

The binary economic approach envisions an implementation of an ownership-broadening system of corporate finance that would require no taxes, redistribution, or government command. Corporations would be free to continue to meet

their capital requirements as before, but they would have an additional, potentially more profitable, market means to do so. This additional means could be voluntarily employed to:

1. enhance the earning capacity of the participating companies, their shareholders, their employees and their customers;
2. promote more sustainable, environmentally-friendly, and more broadly-shared growth and prosperity;
3. reduce poverty, welfare dependence and the need for government expenditures, taxes, and other transfer payments; and
4. enhance the value of equity investments and reduce the risk of borrowing,
5. enhance the credit worthiness of national governments, and their ability to raise revenue.

The ownership-broadening approach to corporate finance begins with several widely-shared propositions:

1. Corporations seek to employ labor and capital according to their relative contribution to production.
2. Profit-maximization aims to produce more with more productive capital and less labor so that production generally becomes increasingly more capital intensive.
3. Profitable business planning requires investing in capital that competitively “pays for itself” (i.e., earns a competitive return for the financial investment needed to acquire it).
4. A major purpose of corporate finance is to enable corporations to acquire capital *before* they have earned the money to pay for it.
5. By way of corporate finance, major corporations and their shareholders grow richer by acquiring capital roughly in proportion to their existing wealth.
6. The capital earning capacity benefits created by this process of capital acquisition with the earnings of capital are highly concentrated.⁵
7. Corporate finance planning is forward-looking; it contemplates three periods: (1) investment today; (2) production tomorrow; (3) sales to meet expected demand the day after tomorrow.
8. Demand for capital goods (and the labor to create and employ it) depends on expected consumer demand in a future period.

The ownership-broadening approach to corporate finance continues with several propositions that are not as widely-recognized, and that may prove controversial because they seemingly defy widely-shared preconceptions regarding production, distribution, and growth.

Although most people believe that the primary role of capital in contributing to per-capita economic growth is to

The broadening distribution of capital acquisition and income will increase steadily and thereby provide the basis for binary growth.

increase labor productivity, there is another (binary) way to understand the primary role of capital: to do an increasing portion of the total work done. According to the widely shared perception, per-capita growth might be understood by the example of a person sawing ten boards per hour with a handsaw and one hundred boards per hour with a machine saw. Thus, human productivity has increased tenfold. Most people do not usually think of saws, themselves, as doing work, but rather as merely enabling people to do a particular kind of work (such as sawing) or as enabling people to do such work more productively and to do more work per unit of time. But consider the example of a person who in one hour can haul (1) one sack one mile by carrying it, (2) ten sacks one mile with the help of a horse, and (3) one thousand sacks thirty miles with the help of a truck. From a binary perspective, the horse and truck are doing more than enabling the person to do more work; they are doing more of the total work; and the same can be said for saws and any capital employed in production. Thus, per-capita growth can be understood as capital increasing labor productivity, but it can also be understood as capital doing an ever-increasing portion of the total work done.

Based on the less widely understood, binary economic conception of per-capita growth, three important propositions can be advanced:

1. Both labor and capital do work.⁶
2. Although advancing technology may be understood as making labor more productive, it may also be understood as making capital more productive than labor in task after task (which helps to explain why profitable corporations continually employ capital to replace and vastly supplement the work of labor).
3. The prospect of a broader distribution of capital acquisition with the earnings of capital carries with it the prospect of more broadly distributed earning capacity in future years, which in turn will provide the market incentives to profitably employ more labor and capital in earlier years. In other words, the more broadly capital is acquired with the earnings of capital, the more an economy will grow.

This principle of “binary growth” identifies a distinct cause of economic growth uniquely premised on the distribution of capital acquisition with the earnings of capital. The closest mainstream correlative is the Keynesian analysis that holds that a broader distribution *and/or redistribution of income* may promote growth. However, binary analysis differs from Keynesian analysis in a number of respects, two of which are identified in this article: (1) the enhanced growth predicted by Keynesian analysis materializes in the short and (at most) intermediate run. In contrast, binary growth materializes in the short, intermediate,

and long run; and (2) the binary growth principle (based on the broader distribution of capital acquisition with the earnings of capital) requires no government redistribution, taxation, borrowing, command, or other market intervention. It materializes as a direct result of corporations voluntarily deciding to operate in a potentially more profitable manner by ethically including their employees, customers, and neighbors in the process by which they acquire capital with the earnings of capital.

The mainstream strategy for promoting economic recovery is a composite mainstream left- and right-wing mix of government policies to promote (1) capital acquisition with the earnings of capital primarily for corporations and well-capitalized persons (generally in proportion to their existing wealth), and (2) primarily jobs (but by no means the best or highest paying jobs) and various forms of welfare redistribution for poor and middle-class people. If the binary analysis has validity, then in a market economy in which production is becoming ever more capital intensive, sufficient earning capacity to purchase all that can be produced cannot be distributed by jobs and welfare alone. The missing element in these strategies is to broaden distribution of capital acquisition with the earnings of capital.

Because present demand for the employment of capital and labor is dependent on expected demand for consumer goods in a future period, a voluntary pattern of steadily broadening capital acquisition promises more production-based consumer demand in future years and therefore more demand for a fuller employment of labor and capital in earlier years. Thus, if the techniques of corporate finance were opened competitively to all people, then the present demand for capital investment and employment would increase in anticipation of the broadening distribution of capital income to poor and middle class people with unsatisfied consumer needs and wants. Accordingly, a broader distribution of capital acquisition and income strengthens the promise of capital to pay for itself with its future earnings, makes profitable the employment of more capital and labor, and enhances the prospects of sustainable economic recovery and enhanced growth. It will also therefore increase the market value of well-run corporations and the wealth of their shareholders within the growing economy.

To understand how ownership-broadening corporate finance might voluntarily function,⁷ consider the largest three thousand or so credit-worthy corporations in the US, which own more than 90% of the nation’s investable capital.⁸ At diminishing unit costs, most of these corporations could profitably produce much more of the goods that people would purchase if they had the earnings to do so. Presently, almost all capital acquired by these corporations is acquired with the earnings of capital, and much of it is acquired with borrowed money.⁹ At the same time, the ownership of this corporate wealth is highly concentrated: Approximately 10% of the people own 90% of the wealth, leaving 90% owning little or none.¹⁰ Thus, capital returns its value at a rate reflective of its long-term (suppressed) earning capacity as it pays for its acquisition cost primarily for a small minority of the population.

The primary duty of corporate fiduciaries is not to maximize share price at every moment in time (sometimes referred to as “short-termism”), but to develop relatively long-term business plans to maximize corporate wealth and thereby to enhance shareholder wealth. In good economic times, and even in periods of sluggish growth or recessions, many, if not most, major corporations have capital acquisition plans which they might finance with retained earnings, borrowed money, or sale of shares. Given synergistic potential between a corporation and would-be shareholders, it might be in the corporation’s interest to forego the use of retained earnings and borrowed funds, and instead raise the necessary funds for capital acquisition by selling shares to the wealthy, for example, to Warren Buffet or Bill Gates. To purchase such shares, if Warren and Bill prefer not to liquidate existing holdings, they might borrow the money to purchase the shares. The share-selling corporation would not care if the source of cash is borrowed money rather than the purchaser’s own assets. The lender would normally insist that the shares be pledged as security until the loan is repaid and would normally insist on additional security from the borrower, usually in the form of the borrower’s assets. But the additional security need not be assets of the wealthy borrower, but rather could be supplied in the form of capital credit insurance¹¹ with insurance premiums paid either by the borrower or by the lender with the cost passed to the borrower via a higher interest rate. The binary approach provides a way in which working and middle class people can also obtain such insurance.

Thus, to acquire capital with the earnings of capital, well-capitalized corporations and people use:

1. the earnings of capital;
2. collateral;
3. non-recourse corporate credit; and
4. market and insurance mechanisms to diversify and reduce risk.

Just as investment trustees might act for Warren and/or Bill, so can they also act for poor and middle class people, enabling them to bring to the bargaining table corporate wealth-enhancing opportunities that well-capitalized people generally cannot offer (namely, a pent-up appetite to purchase the necessities and simple luxuries of life that richer people have long enjoyed from capital income). After the acquisition debt obligations are repaid with the dividends on the binary stock, the distributed earnings of capital acquired by the poor and middle class people will create more production-based consumer demand than if that capital had been acquired by richer people. More of the capital earnings, if acquired by richer people, would be invested in opportunities, but the investment opportunities would be smaller.

Figure 1 illustrates aggregate the growth-sustaining feature of an ownership-broadening economy.

Based on the assumptions specified below, Figure 1 shows the number of years of annual ownership-broadening acquisitions that will have paid for themselves over time. Figure 1 assumes:

1. a seven-year cost recovery period for capital investment;
2. in every year after the implementation of the binary economy, some number, N , of an economy’s credit-worthy

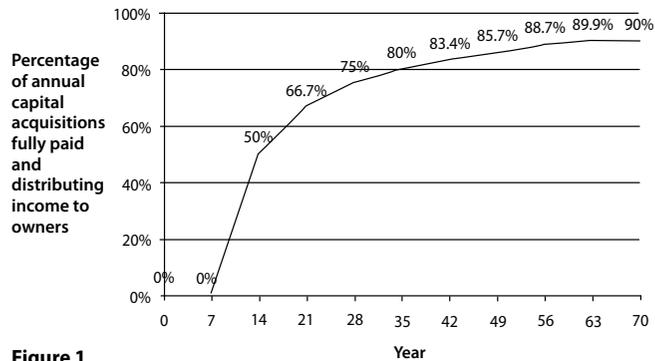


Figure 1

companies have profitably utilized binary financing to acquire some percentage, X , of their capital investments;

3. the capital credit insurance is profitably priced to repay the lending banks for those financings that fail to repay their acquisition loans so that X is net of those failures; and
4. N , X , and the rate of return on capital remain constant throughout the period.

The broadening distribution of capital acquisition and income will increase steadily and thereby provide the basis for binary growth. Each year after the initial cost recovery period, an additional year of binary capital will have paid for itself and will be distributing capital income to poor and middle class people. Consistent with the conservative assumption of a seven-year capital cost recovery period, Figure 1 shows the steady growth in annual capital acquisitions. In the long run, the linkage between supply (in the form of the incremental productiveness of capital) and demand (resulting from the widespread market distribution of capital income to consumers) approaches 100%. The more binary financing that is undertaken, the greater are the distributional growth effects. If the rate of return on capital investment increases then the curve shown in Figure 1 would rise more steeply and approach the specified percentages sooner in time.

Maintaining Market Share in a Growing Economy

To maintain market share in the projected growing economy, based on their capital investment planning horizon, producers will have to increase production and productive capacity *before* binary income begins to be distributed to its new owners. Because present demand for capital goods is positively affected by anticipated future demand for consumer goods, the broader distribution of capital acquisition and capital income should be reflected in increased employment of labor and capital within producers’ capital investment planning horizon. With a capital cost recovery period of seven years, and a capital investment planning horizon of five years, market incentives for increased capital investment by producers of consumer goods might materialize for some producers in the third year. Furthermore, the producers of capital goods needed by the producers of consumer goods to increase their productive capacity may

experience market incentives for increased capital spending and labor employment as early as the first year.

Some additional effects of broader capital acquisition, which may be immediately reflected in the prospects a binary economy, are:

1. Reduction in welfare dependence and welfare expense.
2. Reduction in tax rates.
3. Tax benefits for participating corporations.
4. Enhanced corporate profitability, wealth, and share-value, with enhanced private and government sponsored retirement security.
5. Enhanced sovereign credit ratings.
6. Greener growth.

Thus, with a widely shared understanding of the binary growth that would result from a broader distribution of capital acquisition with the earnings of capital, the trends of all of the factors set forth above used to evaluate the economic projections, growth potential, and the credit-worthiness of individuals, corporations, and nations would be positively affected. With the binary understanding, people and their governments would have a blueprint for the binary market reforms that would improve projections made by proponents of austerity and stimulus. Market participants would have an enhanced confidence and optimism regarding the credit worthiness of sovereign debt and the future of the global economy; the sustained effect of ownership-broadening financing set forth above will make both austerity and stimulus measures more affordable and more easily harmonized politically to the extent deemed desirable; and the market effect of that would result from that understanding would be immediate.

However, even under such conditions, there would remain a first-actor-collective-action problem that would inhibit ownership-broadening binary financing because there is no guarantee that such projected aggregate benefits from ownership-broadening capital acquisition would be enjoyed proportionally by participating corporations whose more broadly distributed shares gave rise to more broadly distributed income. For example, if General Motors were to encapitalize its employees, customers, and neighbors, those beneficiaries would likely spend much of their enhanced earnings at least initially on immediate needs of food, clothing, shelter, etc., and to the extent they use it to purchase automobiles, they might purchase Fords or Toyotas. Moreover, although there is an optimistic logic to the prediction that binary growth would in the aggregate be greener growth because poor and middle-class people will be able to afford greener technologies, nevertheless, just as many poor and middle class people may not spend their enhanced capital income to buy the products of the corporations whose shares earned that income, so too many people may also prefer to spend their enhanced capital income on brown rather than greener products and services.

Nevertheless, there is reason to believe that with cooperative planning among major corporations and government leadership, both of these problems may be effectively addressed. The collective action problem would be somewhat mitigated by the encapitalization of customers in proportion to their patronage of the goods and services produced by the participating corporation.¹² It would also be mitigated by any tax benefits given to participating corporations whose dividends on binary shares yield increased government tax revenues and reduced welfare payments. It would also be mitigated in company towns and city neighborhoods in which the greater wealth of “neighbor” residents of the participating corporations result in benefits to the participating corporations such as lower property or other local tax rates, and improved neighborhoods, schools, and hiring conditions. There would also be a mitigating direct benefit resulting from the good will that might be engendered from the public toward corporations willing to broaden their share ownership by way of the ownership-broadening trusts.

If the binary analysis is accepted and deemed a desirable approach to corporate finance in the aggregate as described above, then the expected benefits are greater as the approach is more broadly understood and implemented in a coordinated fashion. If the principle of binary growth is valid, then it would seem that most market participants would benefit from its widespread implementation.

Up to this point in the analysis, government involvement in the process has not been discussed. In the U.S., the most important government reform would be to follow the approach prevalent in most European nations by eliminating the corporate tax on corporate income paid as dividends (at least to the ownership-broadening trusts in order to enable them to repay the lender and to pay dividends to binary beneficiaries). This tax relief can be wholly justified on grounds of both justice and economics. Because the corporations have no use of the income but must pass it on to the trustees, there is no reason to tax it. Moreover, taxing the income would severely retard the repayment of the acquisition debt and reduce the enhanced (taxable) earning capacity of the beneficiaries which is precisely the economic impetus for the benefits outlined above. Moreover, in all nations, eligibility and anti-discrimination rules for determining beneficiary participation and rules governing the qualification and duties of binary trustees and capital credit insurers would be needed as they are for other special types of fiduciaries and insurance providers.

Beyond such reform, the government could take an active role with respect to the collective action and environmental sustainability issues. For example, the qualified binary financing might be promoted for and restricted to basics economic needs, such as food, clothing, shelter, health care, education, communication, mobility and energy. Second, the government might promote and condition producer eligibility based on environmental standards more stringent than mandatory standards imposed on all producers. Third, dividends might be paid in the form of special script usable only for the goods

and services of qualified producers. Fourth, to facilitate the availability and reduce the cost of private capital credit insurance, the government might establish a national ownership-broadening capital credit reinsurance entity modeled after the FHA home loan reinsurance program. Fifth, to bring down the cost of credit for ownership broadening financing, a nation's central bank might apply its quantitative easing program to monetize ownership-broadening loans until they are retired.

If widely understood and implemented, the ownership-broadening binary approach to corporate finance offers promise to transform the present economic and environmental crisis into a sustainable future of greater and more broadly shared prosperity, ecological harmony, distributive justice, and reduced strife.

About the Authors

Robert Ashford is Professor of Law at Syracuse University. He holds a J.D. from Harvard Law School. Professor Ashford is a member of the Editorial Board of the *Journal of Socio-Economics*, the academic honor societies of Phi Kappa Phi and Sigma Pi Sigma (physics), and the American Law Institute. He has authored and co-authored articles, book chapters, and monographs on various subjects including banking, binary economics, evidence, tax law, and workers compensation. His book *Binary Economics: the New Paradigm* (1999), with Rodney Shakespeare, is available from the University Press of America. Professor Ashford can be reached at rhashford@aol.com. His web site is <http://law.syr.edu/deans-faculty-staff/profile.aspx?fac=14>.

Ralph P. Hall is an Assistant Professor in the School of Public and International Affairs at Virginia Tech. He holds a PhD in Technology, Management, and Policy from MIT and a MEng in Civil Engineering from the University of Southampton. Dr. Hall has over a decade of academic and professional experience in applying the concept of sustainable development to large-scale infrastructure systems with a specific emphasis on transportation, water supply, and sanitation systems. He is the Research Chair for the U.S. Transportation Research Board (TRB) Committee on Transportation and Sustainability. Dr. Hall can be reached at rphall@vt.edu. His web site is: <http://ralphphall.wordpress.com/>.

Nicholas A. Ashford is Professor of Technology & Policy and Director of the Technology & Law Program at the Massachusetts Institute of Technology. He holds both a Ph.D. in Chemistry and a Law Degree from the University of Chicago. Dr. Ashford also is visiting scientist in Occupational and Environmental Health at the Harvard School of Public Health and teaches intensive courses in Sustainable Development, and European & International Environmental Law at Cambridge University, UK and at the Cyprus University of Technology. He recently co-authored *Environmental Law, Policy and Economics: Reclaiming the Environmental Agenda* (2008, MIT Press). He can be reached at nashford@mit.edu. His web site is: <http://web.mit.edu/ctpid/www/tl/>.

References

1. As used in this article, "capital" includes land, animals, structures, and machines – anything capable of being owned and employed in production. It does not include "financial capital," which is a claim on, or ownership interest in, real capital.
2. Kelly, M. (2012). *Owning Our Future: The Emerging Ownership Revolution*. Barrett-Koehler, San Francisco.
3. See Rosen, C. (1983). Employee Stock Ownership Plans: A New Way to Work. *Business Horizons*, September-October: 4-54; Rosen, C., Case, J., and Staubus, M. (2005). *Equity: Why Employee Ownership Is Good for America*, Harvard Business Review Press, Cambridge; and Rosen, C. and Rodrick, S. (2008). Understanding ESOPs. The National Center for Employee Ownership, Oakland.
4. The approach that came to be known as binary economics was first advanced in the writings of Louis Kelso in a number of books and articles. The most authoritative collection of his works can be found at www.kelsoinstitute.org
5. See note 10, *infra*.
6. The assertion that capital does work does not negate the fact that both capital and labor are generally needed to complete specific kinds of work, or the fact that labor is needed to invent, build, install, operate, maintain, store, repair, manage, and finance capital. But the labor work involved in inventing, building, creating, installing, operating, maintaining, storing, repairing, managing, and financing capital is not the work of the capital itself.
7. For a fuller description, see Ashford, N. A. and Hall, R. P. (2011). *Technology, Globalization, and Sustainable Development: Transforming the Industrial State*, Yale University Press, New Haven, pp. 638-651; Ashford, R. (2009). "Broadening the Right to Acquire Capital with the Earnings of Capital: The Missing Link to Sustainable Economic Recovery and Growth," 39 *Forum for Social-Economics*, 89; and Ashford R. and Shakespeare, R. (1999). *Binary Economics: The New Paradigm*, University Press of America, Lanham, pp. 236-272.
8. Source: Russell Investment, Russell U.S. Indexes, http://www.russell.com/Indexes/data/US_Equity/Russell_US_equity_indexes.asp.
9. During the fifteen year period from 1989 through 2003, in the case of major American companies, the sources of funds for capital acquisition, in approximate terms, reveal that annually retained earnings accounted for at least 70% and more usually 80% of the capital acquisition. Borrowing accounted for almost all of the rest. Sale of stock as a source of funds never exceeded 5% and was negative in most years. See Chapter 14 (pp. 561-563) in Brealey, R. A., Myers, S. C., and Allen, F. (2004). *Principles of Corporate Finance*, 3rd edition. McGraw-Hill, New York; and Stout, L. A. (1988). The Unimportance of Being Efficient: An Economic Analysis of Stock Market Pricing and Securities Regulation. 87 *Mich. L. Rev.*, pp. 613-648.
10. See Wolff, E. N. (2011). Recent Trends in Household Wealth in the U.S.: Rising Debt and the Middle Class Squeeze. In Gonzales, J. M. (Ed.), *Economics of Wealth in the 21st Century* (pp. 1-41). Nova Science Publishers, Inc., New York; Wolff, E. N. (1995). Top Heavy: A Study of the Increasing Inequality of Wealth in America. Twentieth Century Fund, New York; and Wolff, E. N. (1995) How the Pie is Sliced: America's Growing Concentration of Wealth. *The American Prospect*, No. 22, (Summer 1995), pp. 58-64.
11. Although perhaps less familiar to readers than other institutions that facilitate corporate finance, capital credit insurance has been available for centuries. Lloyds of London and AIG are well-known examples. And while the AIG debacle is certain evidence that capital credit insurance can be abused and corrupted, few people familiar with the benefits of commerce are suggesting that the institution should be abolished. To the contrary, the Government of the USA has taken steps to preserve and fortify that institution for the benefit of those who routinely participate in capital acquisition with the earnings of capital even as the sleep. Why should that benefit not also be routinely extended to poor and middle class people?
12. Somewhat like many frequent flier programs, customers who have a continuing relationship with corporations like energy utilities, telephone companies, internet and entertainment access companies, airlines, major retailers, and banks can be paid dividends in the form of credits against future purchase.