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2020

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RESEARCH

THE CORPORATE EROSION OF CAPITALISM

A Firm-Level Analysis of Declining Business Investment, 1971-2017

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March 2021

EXECUTIVE SUMMARY

This research brief provides a systematic, firm-level study of declining business investment and the recent transformation of the typical American corporation's business strategy to one that disgorges cash to shareholders while failing to replenish its capital base. The study uses the Standard & Poor's Compustat database to analyze the cash flows of all companies headquartered in the United States and publicly traded on the NYSE and NASDAQ from 1971 to 2017. Firms are placed in three categories:

1. A **Grower** is a firm with capital expenditures in excess of earnings before interest, taxes, depreciation, and amortization (EBITDA), which taps capital markets to finance investment.
2. A **Sustainer** is a firm that makes capital expenditures greater than its consumption of fixed capital and also returns cash to shareholders, with EBITDA sufficient to do both.
3. An **Eroder** is a firm that consumes its fixed capital faster than it makes new capital expenditures, while still returning cash to shareholders, though its EBITDA would be sufficient to replenish its capital base.

In short, a *Grower* is the archetypical user of the financial markets. A *Sustainer* is the archetypical successful capitalist enterprise. An *Eroder* is a strange type of firm that seems to harvest its own organs for its shareholders' short-term benefit. While not all firms fit these categories, the vast majority do, accounting for 90% of market capitalization over the past half century.

The American economy has undergone a dramatic transition in recent decades, from one in which most large firms were *Sustainers* and very few were *Eroders* to one in which *Eroders* predominate.

Bryce McDonald contributed invaluable research assistance to this project.

KEY FINDINGS

- During 1971–85, *Sustainers* averaged 82% of market capitalization and *Eroders* 6%. By 2000, these shares had shifted to 59% and 19%, respectively. In 2009, *Eroder* market capitalization surpassed *Sustainer* market capitalization for the first time. In 2017, *Sustainers* accounted for 40% of market capitalization and *Eroders* for 49%; *Growers* averaged 9% of market capitalization during 1971–85 versus 3% in 2017.
- The problem is not that the economy is transitioning toward more asset-light industries; this analysis evaluates companies' investment relative to their own capital bases, not an arbitrary level of expected investment. Further, the same pattern emerges within sectors from manufacturing to information. Within the manufacturing sector, the *Eroder* share rose from an average of 7% during 1971–85 to 47% during 2009–17. Within the information sector, which includes media, communications, internet, and software companies, the *Eroder* share rose from 2% to 52% in those respective periods.
- As a result of this behavior by firms, the share of GDP flowing out of the operating economy has risen steadily. Net outflows averaged 1.5% of GDP during 1971–85 and 1.8% of GDP during 1971–99, but that rate more than doubled to 4.0% during 2009–17. The investment shortfall over this latter period is \$3.1 trillion. This offers almost a mirror image of the decline in net nonresidential investment for the economy as a whole, from an average of 4.3% of GDP during 1971–85 and 3.8% of GDP during 1971–99 to an average of 2.3% during 2009–17.

For further discussion of the causes and effects of this shift, and potential responses, see the essay that accompanies this brief:

WE'RE JUST SPECULATING HERE ...

The Rise of Wall Street
&
The Fall of
American Investment



I. METHODOLOGY

This analysis uses the Standard & Poor's Compustat database, including data for all firms headquartered in the United States, reporting results in U.S. dollars, and traded on the New York Stock Exchange or the NASDAQ. The analysis spans the years 1971 through 2017, for which reporting is most complete, and eliminates records within those years where any of the following fields is missing or equal to zero: Capital Expenditures; Depreciation and Amortization; Common Shares Outstanding; Price Close (Annual – Calendar Year).

Two financial metrics are calculated for purposes of evaluating each firm's investment level:

- *Required Investment*. For each firm for each year, this value equals the firm's Depreciation and Amortization, inflated by the inflation rate reported for that year in the Bureau of Economic Analysis's Implicit Price Deflator as a proxy for the inflationary environment. In other words, *Required Investment* equals the level of capital expenditure required in a given year for a firm to offset its consumption of fixed capital.
- *Real Net Investment*. For each firm for each year, this value equals the firm's Capital Expenditures less its *Required Investment*. In other words, *Real Net Investment* equals the excess investment made beyond that required to offset depreciation and thus replenish consumed capital.

Each firm is categorized in each year as follows:

Grower

- Real Net Investment ≥ 0 , and
- Capital Expenditures $>$ EBITDA, and
- Net Sale of Stock + Net Long-Term Debt Issuance > 0

Sustainer

- Real Net Investment ≥ 0 , and
- EBITDA \geq Capital Expenditures, and
- Purchase of Stock + Dividends > 0

Eroder

- Real Net Investment < 0 , and
- Purchase of Stock + Dividends > 0

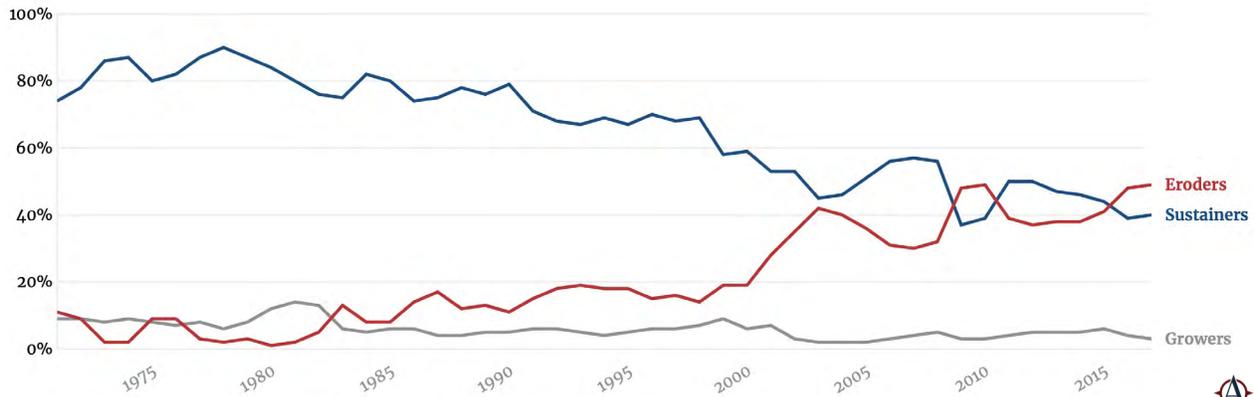
These categories are mutually exclusive; no set of financial results can fall into multiple categories simultaneously. They are not completely exhaustive; a small share of market capitalization falls in none of the above categories.

II. RESULTS

The American economy has shifted from one characterized almost exclusively by *Sustainer* firms to one in which *Eroders* predominate. The *Sustainer* share of market capitalization fell from a high of 90% in 1978 to a low of 37% in 2009. Conversely, the *Eroder* share stood at 1% in 1980 and reached a high of 49% in 2010.

FIGURE 1. Growers, Sustainers, and Eroders

Market capitalization, NYSE and NASDAQ



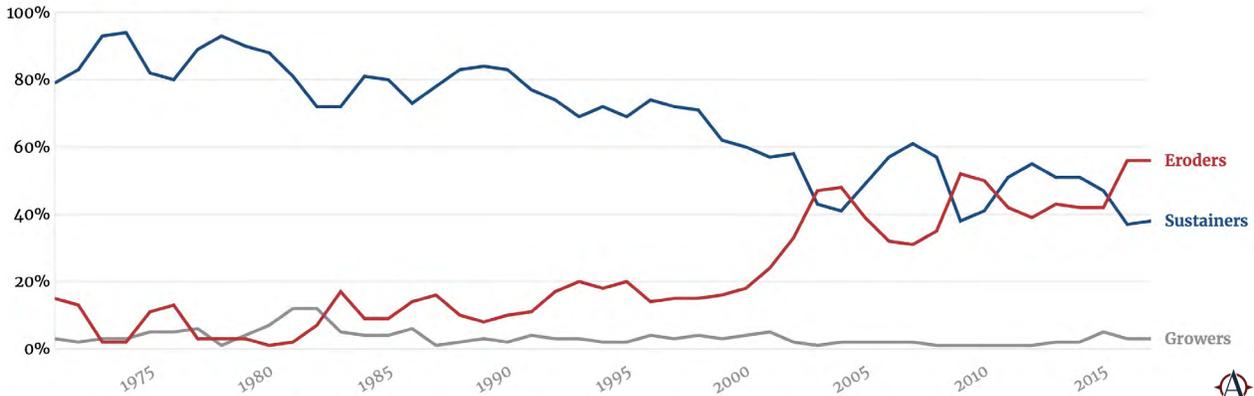
Source: Standard & Poor's Compustat database - Note: Includes U.S.-headquartered firms reporting results in U.S. dollars.



These trends progressed saw a particular inflection point around the year 2000. For manufacturers (two-digit NAICS codes of 31, 32, and 33), the *Eroder* share of market capitalization climbed from an average of 16% during 1998–2000 to 45% during 2003–05.

FIGURE 2. Erosion in the Manufacturing Sector

Market capitalization, NYSE and NASDAQ



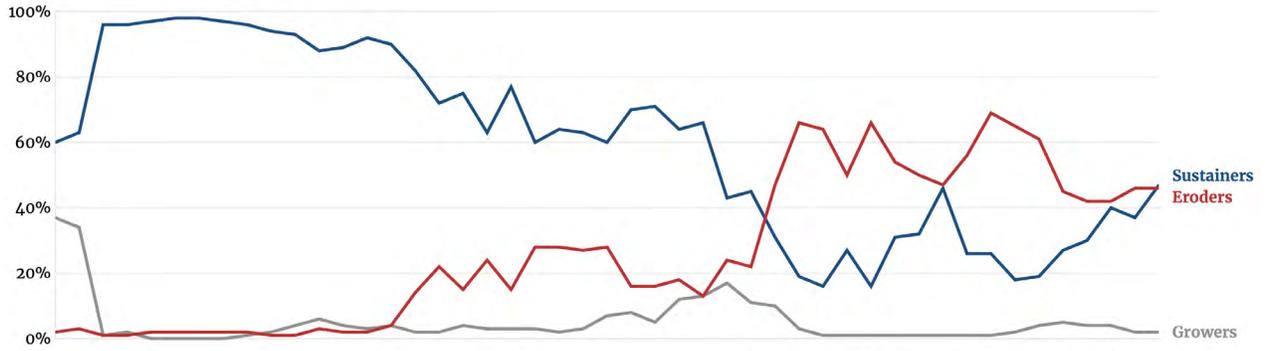
Source: Standard & Poor's Compustat database - Note: Includes U.S.-headquartered firms in NAICS codes 31, 32, 33 reporting results in U.S. dollars.



In the information sector (two-digit NAICS code of 51), the *Grower* share fell from an average of 14% during 1998–2000 to less than 1% during 2003–05, while the *Eroder* share rose from 20% to 60%.

FIGURE 3. Erosion in the Information Sector

Market capitalization, NYSE and NASDAQ



Source: Standard & Poor's Compustat database - Note: Includes U.S.-headquartered firms in NAICS code 51 reporting results in U.S. dollars.

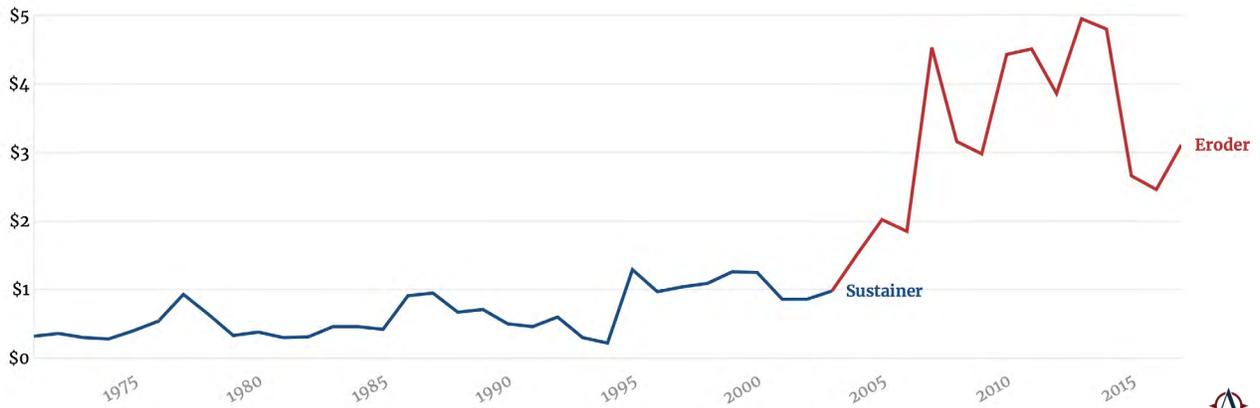


The information sector's trajectory is also notable for its unique starting point, with more than 30% of market capitalization associated with *Growers* during 1971–72. AT&T accounts for most of this market capitalization. In the early 1970s, it was still making annual capital expenditures larger than its total EBITDA, while raising new funds through the sale of stock. Its decline from a *Grower* to a *Sustainer* to an *Eroder* by the mid-1980s is in some sense the story of the nation's economic transition.

AT&T's trajectory is somewhat confounded by its break-up in the mid-1980s, but the same pattern appears at IBM. During the 1970s, IBM consistently sent just thirty cents to investors for every dollar of capital expenditure. That figure rose steadily and then skyrocketed in 2004 as the firm transitioned from a perennial *Sustainer* to a permanent *Eroder*.

FIGURE 4. The Transformation of IBM

Cash to shareholders per dollar of capital expenditure



Source: Standard & Poor's Compustat database - Note: Cash to shareholders includes both dividends and stock buybacks.



The shift toward a less asset-intensive “knowledge economy” might seem a plausible reason for the transition in firm behavior, but the benefit of a firm-level analysis is that each firm is evaluated relative to its *own* capital investment and consumption, not an arbitrary threshold. Thus, less asset-intensive firms could still themselves be *Growers* and *Sustainers*, albeit at lower investment levels. Instead, the typical firm profile has transitioned from *Sustainer* to *Eroder* regardless of business model.

Indeed, the massive technology firms with the largest market capitalization—Apple, Alphabet, Microsoft, Amazon, and Facebook—all had sufficient capital expenditures to qualify as *Sustainers* in 2017 (though Amazon falls in none of the categories because it returned no cash to shareholders). The economy’s transformation is playing out economy-wide, at firms such as Johnson & Johnson, Exxon Mobil, Wal-Mart, AT&T, Pfizer, and Cisco. Whereas 1 of the 60 largest firms in 1977 was an *Eroder*, and 9 of the 60 largest in 1997, 37 of the 60 were *Eroders* in 2017.

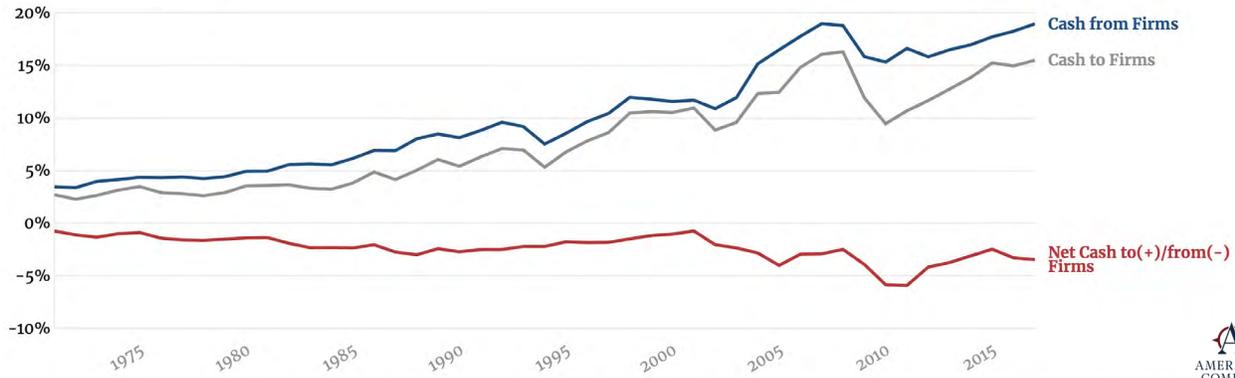
Cisco is an especially striking example, having flipped from *Sustainer* to *Eroder* in 2003 and remained there ever since. While policymakers rightly excoriate China’s mercantilist efforts to boost Huawei as a national champion, a fair share of blame must also go to the U.S. leader that has executed \$101 billion in share buybacks over the past 15 years while making only \$15 billion in capital expenditures.

In the aggregate, the effect of these corporate decisions has been to turn the relationship between the real economy and the financial markets on its head, so that it is now the former that seems to be serving the latter. This can be seen most clearly in the aggregate flow of funds. In a well-functioning market economy, capital would flow from financial markets into firms that required financing, and some share of profits would flow back from firms to the financial market—paying through interest and dividends for the capital used. This is not the state of the American economy.

This analysis defines “Cash to Firms” as the sum of long-term debt issuance and stock issuance, and “Cash from Firms” as the sum of long-term debt retirement, stock buybacks, interest payments, and dividends. Recall, the share of market capitalization attributable to *Growers* has fallen by half in recent decades, which indicates a reduced tapping of financial markets by publicly traded firms for needed investment capital. Yet at the same time, the gross flows of funds into and out of firms has quadrupled as a share of GDP, from averages of 3.1% in and 4.6% out during 1971–85 to averages of 12.9% in and 16.9% out during 2009–17. Thus, the net outflow of resources from the real economy has more than doubled as a share of GDP, from 1.5% to 4.0%.

FIGURE 5. Outflows from the Real Economy

Cash to and from operating firms as share of GDP



Source: Standard & Poor's Compustat database · Note: Includes U.S.-headquartered firms reporting results in U.S. dollars. Cash to Firms includes debt issuance and sale of stock. Cash from Firms includes debt retirement, purchase of stock, interest, and dividends.



Note especially the collapse in the flow of cash *to* firms in the aftermath of the Great Recession. In theory, this should have been a period in which a recovering economy relied most heavily on financial markets to support renewed investment. Instead, inbound investment declined sharply even as payouts held relatively steady. The net effect was that resources rushed out of the real economy at their fastest pace on record.

As compared to the average of 1.8% of GDP that flowed out from the real economy to the financial sector during 1971–99, the 4.0% of GDP that flowed out during 2009–17 represented an excess outflow of \$3.1 trillion.

III. FURTHER RESEARCH

This report depicts changes in firm behavior that have led to the investment declines observed at the macroeconomic level. The proposed categories of *Grower*, *Sustainer*, and *Eroder* map intuitively onto the assumptions that both economists and policymakers typically make about the market economy, but they are intentionally oversimplified. Differently defined categories and more refined distinctions may improve the analysis, as could a view that accounts for firm behavior over time rather than treating each year's results as a standalone snapshot subject to the noise typical of financial reporting.

Specific issues for consideration include:

- Treatment of sectors where capital stock has different meaning than for the typical operating company, e.g., the financial services industry itself;
- Reconciliation of real net investment (calculated on the basis of capital expenditures, depreciation, and inflation in each year) with real value of property, plant, and equipment and with year-to-year changes in its value, which can occur independent of investment levels for a number of reasons;
- Incorporation of research and development spending, which is not counted as a capital expenditure (and also is not depreciated) though it shares some of the same characteristics and carries related economic importance;
- Disaggregation of domestic and international operations and investment;
- Correction for the effects of mergers, acquisitions, and divestitures; and
- Accounting for non-public companies and the changing mix of those companies whose stocks are traded on public exchanges.

Such analyses would offer improved precision and may help to explain why firms are behaving the way that they are. Regardless of the model specifications, though, the underlying story likely remains that a market once dominated by *Sustainers* has shifted to one in which *Eroders* are the norm. That erosion poses a major threat to America's future prosperity.

For further discussion of the causes and effects of this shift, and potential responses, see the essay that accompanies this brief: [*We're Just Speculating Here: The Rise of Wall Street and the Fall of American Investment*](#)



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