Frankfurt School

stock buybacks

are they detrimental to the financial health of a company?

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content

- background & definition
- effects on the financial statements
- what does it mean for the shareholder?
- motivation and benefits
- drawbacks
- associated opportunity costs
- general implications
- regulating buybacks
- some recommendations

Bloomberg.com

China's Alibaba Stock Price Jumps on Buyback, Signs of ...

Alibaba Group Holding Ltd. shares rose after the Chinese e-commerce giant unveiled a new buyback plan and suggested Covid-19 restrictions...

2 days ago

Reuters

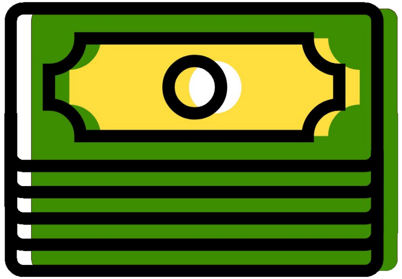
Walmart lifts annual forecast, announces $20 bln share buyback

Reuters provides business, financial, national and international news to professionals via desktop terminals, the world's media organizations,...

4 days ago

background

The amount of share repurchases taking place on an annual basis has reached incredible levels- nearly **$1 trillion** according to an estimate by Goldman Sachs (Nathan and Groman, 2019[2]).



3310 X

1 trillion of 100 dollar bills stacked together is equal to 3310 eiffel tower high.

what is stock buyback?

When a company buys its own stock from the public stock market, thus reducing the number of shares available to other investors → Buyback!

Stock buybacks can have the effect of giving the impression of earnings growth when such growth is not actually present.

effects on the financial statements

	Profit and Loss	Balance Sheet	Cash Flow
Cash financed	Reduces Net Income	Reduces Cash, Equity and Total Assets	Negative Financing Cash Flow
Debt financed	Reduces Net Income	Increases Debt Reduces Equity No change to Total Assets	

effects on financial ratios

cash-financed buyback

$$ROE\uparrow = \frac{net\ income\downarrow}{equity\downarrow} = \frac{net\ income\downarrow}{sales} * \frac{sales}{assets\downarrow} * \frac{assets\downarrow}{equity\downarrow}$$

$$debt\ to\ equity\ ratio\uparrow = \frac{total\ long\ term\ debt}{total\ equity\downarrow}$$

debt-Financed buyback

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$$debt\ to\ equity\ ratio\uparrow = \frac{total\ long\ term\ debt\uparrow}{total\ equity\downarrow}$$

$$Basic\ EPS\uparrow = \frac{net\ income\downarrow - preferred\ dividends}{weighted\ average\ number\ of\ common\ shares\ outstanding\downarrow}$$

effects on financial ratios

cash-financed buyback

$$cash\ ratio \downarrow = \frac{cash \downarrow + marketable\ securities}{current\ liabilities}$$

$$quick\ ratio \downarrow = \frac{cash \downarrow + marketable\ securities + inventory}{current\ liabilities}$$

$$current\ ratio \downarrow = \frac{current\ assets \downarrow}{current\ liabilities}$$

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effects on financial ratios

company A

pre-buyback data	
Cash balance	$1,000,000
After-tax interest rate	4%
Interest income	$40,000
Shares outstanding	100,000
Price per share	$50.00
Total market value	$5,000,000
Net income	$400,000
EPS	**$4.00**
Price-earnings	**12.5**
Earnings yield	**8.0%**

post-buyback data		changes
Cash balance	$500,000	($500,000)
After-tax interest rate	4%	
Interest income	$20,000	($20,000)
Shares outstanding	90,000	(10,000)
Price per share	$55.56	
Total market value	$5,000,000	
Net income	$380,000	($20,000)
EPS	**$4.22**	**$0.22**
Price-earnings	**13.16**	
Earnings yield	**7.6%**	**(0.4%)**

$$\textit{Earnings Yield} > \textit{Interest Rate} \rightarrow \textbf{\textit{Inflated}}\ \textit{EPS}$$

effects on financial ratios

company B

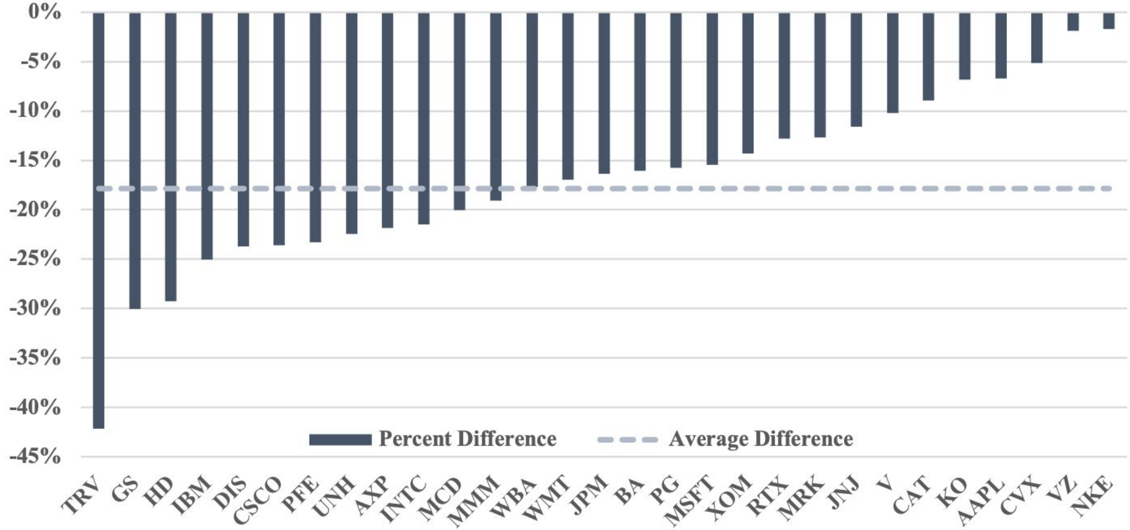
pre-buyback data	
Cash balance	$1,000,000
After-tax interest rate	4%
Interest income	$40,000
Shares outstanding	100,000
Price per share	$50.00
Total market value	$5,000,000
Net income	$150,000
EPS	**$1.50**
Price-earnings	**33.3**
Earnings yield	**3.0%**

post-buyback data		changes
Cash balance	$500,000	($500,000)
After-tax interest rate	4%	
Interest income	$20,000	($20,000)
Shares outstanding	90,000	(10,000)
Price per share	$55.56	
Total market value	$5,000,000	
Net income	$130,000	($20,000)
EPS	**$1.44**	**($0.06)**
Price-earnings	**38.5**	
Earnings yield	**2.6%**	**(0.4%)**

$$\text{Earnings Yield} \boxed{<} \text{Interest Rate} \rightarrow \boxed{\textbf{Deflated}\ \text{EPS}}$$

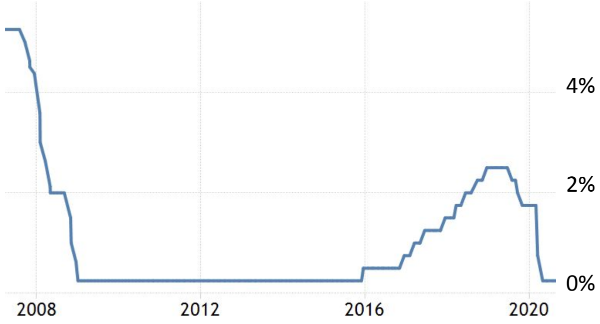
what does it mean for the shareholder?

- a common thinking among investors and analysts → instituting a stock buyback program is in and of itself a positive and creates shareholder value;
- this could be flawed thinking since it does not consider whether the company's earnings are fundamentally growing in the absence of stock buybacks (Sherman, 2017[3]).



Effect of stock buybacks on the 29 components of the DJIA indexed between 2010 and 2019 (WRDS data) [1]

← interest rates were very low in the depicted time frame, supporting inflated earnings per share



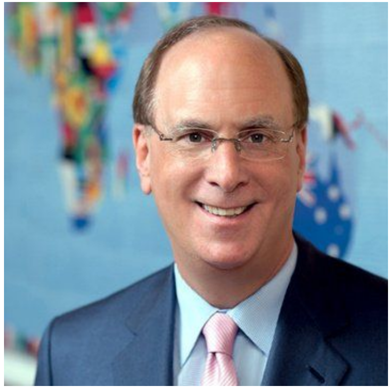
US Federal Reserve Interest Rate from 2007 to 2021 [4]

motivation & benefits

- compensate management with stock options rather than cash payments
- increased earnings per share (EPS)
- reduced threat of hostile takeovers
- management's ability to give signals to investors
- tax advantages
- stock price increase (short-term)
- Stock price is below book value

drawbacks

"*Too many companies have cut capital expenditure and even increased debt to boost dividends and increase share buybacks… [which] can jeopardize a company's ability to generate sustainable long-term returns*"



Laurence Fink
CEO - BlackRock, Inc.

- Buyback affect a company's credit rating if it borrows money to repurchase the shares.

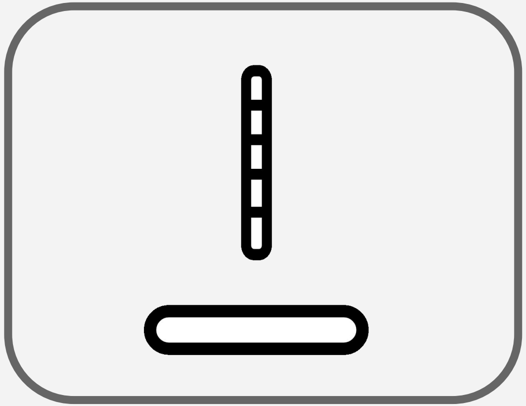
- Many companies finance stock buybacks because the loan interest is tax-deductible. However, debt obligations drain cash reserves.

opportunity cost

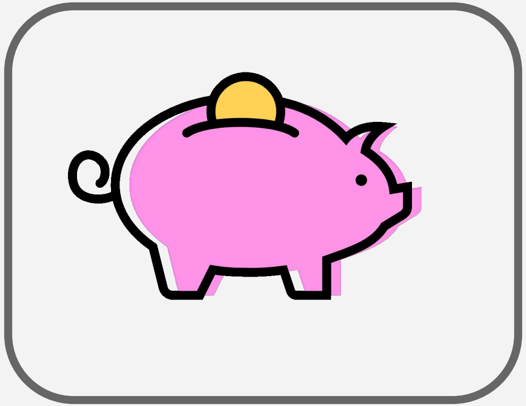
Is a stock buyback an effective use of capital?

Might as well utilize the money somewhere else…

foregone investment

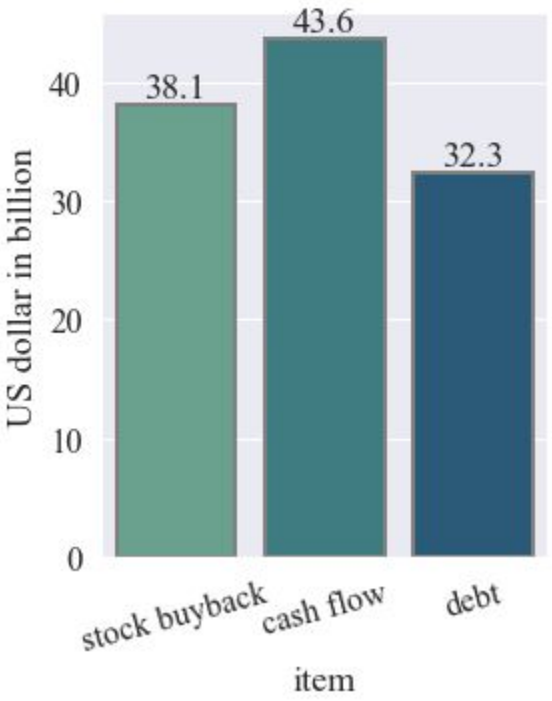


rainy day funds



dividends

general implications



-5 US airlines spent about 87.3% of their cash flow on repurchasing stock 2010 to 2019
-To maintain operations, these same airlines debt funded 84.7% (worth of buybacks).

cheap debt after 2008 let buybacks explode but made companies vulnerable to even small economic shocks

regulating buybacks

In 1982, the SEC adopted Rule 10b-18, which allowed companies to execute repurchases of their own common stock without violating the 1934 Act, as long as the structure of the transactions met four specific safe harbor requirements:

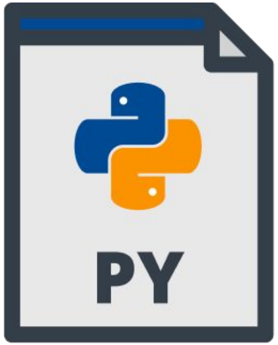
1. Manner of Purchase Condition: Companies can only use a single broker to submit an order to buy its stock.
2. Timing Condition: Companies may not make any purchases of their own stock during the first and last half hour of the trading day.
3. Price Condition: The SEC rule instituted a maximum price premium that a company can pay for its own stock.
4. Volume Condition: While there are varying rules for different types of Securities, the general rule for most companies is a maximum daily purchase of 25% of the average daily trading volume (ADTV) over the trailing four calendar week period.

some recommendations

1. limit the amount of stock buybacks to the amount that companies grant to employees as equity compensation

2. buybacks may be taxed in the same manner as dividends, as they largely have the same result of increasing the value of an investor’s holdings

3. the SEC may impose restrictions and lower the amount of stock that can be repurchased by a company and its affiliated purchasers during a predetermined time period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references

literature

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2. Nathan, Allison and David Groman. "Buyback Realities." 11 April 2019. Goldman Sachs Global Macro Research. <https://www.goldmansachs.com/insights/pages/top-of-mind/buyback-realities/report.pdf>
3. Sherman, Leonard. "Why Are We in Business?." If You're in a Dogfight, Become a Cat! Strategies for Long-Term Growth. Columbia University Press, 2017.
4. https://tradingeconomics.com/united-states/interest-rate
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github

- https://github.com/nilsmart96/financial-effects-of-stock-buybacks

Thank you!

effects in the financial statements

→ Financed with excess cash

No impact to the income statement

Balance Sheet

Assets	Liabilities
…	Debt
Cash ↓	Equity ↓
Total ↓	**Total** ↓

effects in the financial statements

→ Financed with new debt

Interest payments rise in the income statement, reducing taxes, but also reducing net income

Balance Sheet

Assets	**Liabilities**
…	Debt ↑
Cash	Equity ↓
Total —	**Total —**