INVESTOR TAXES AND STOCK PRICES

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The other shoe drops…

- In my last post, I looked at the Biden Administration's proposal to increase corporate taxes, to provide funding for an infrastructure bill.
- In the weeks since, the administration has come up with its follow-up proposal, this one funded by increases in individual taxes, primarily on the wealthy. While one part of the proposal, reversing the 2017 tax cuts for those in the highest tax brackets from 39.6% to 37%, was anticipated, the other one, almost doubling the capital gains tax rate for those making more than a million dollars in investment income, was a surprise.
- While supporters of the increase point to the fact that only a very small portion of individuals will be affected by the change, those individuals, through their wealth, own a significance percentage of financial assets, and how they react to the change, assuming it happens, will determine whether their pain will become all of ours.

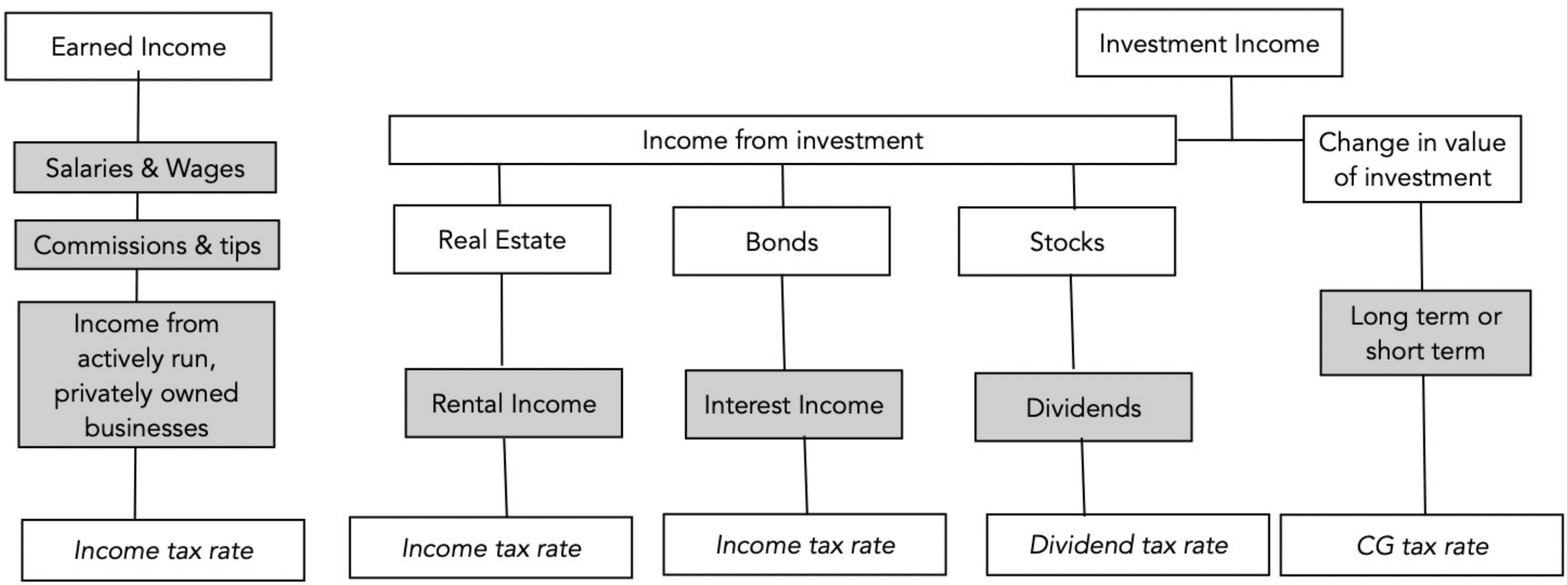
Taxing Investment Income versus Earned Income: Reasons for differences!

- Prevent or reduce double taxation: One argument, grounded in fairness, is that it is wrong to subject the same income to multiple tax hits, and it can be argued that dividend and capital gain income is particularly exposed to this critique. The dividends that companies pay comes out of the earnings that they have left over after corporate taxes, and taxing that dividend again, when investors receive it, is clearly double taxation
- Encourage savings/ capital formation: In an economy, where private capital is behind the bulk of economic investment and growth, governments are dependent up the health of capital markets (stocks and bonds) for continued growth. To encourage investors to put their savings into stock and bond markets, the tax code is sometimes tilted to make these investments more attractive.

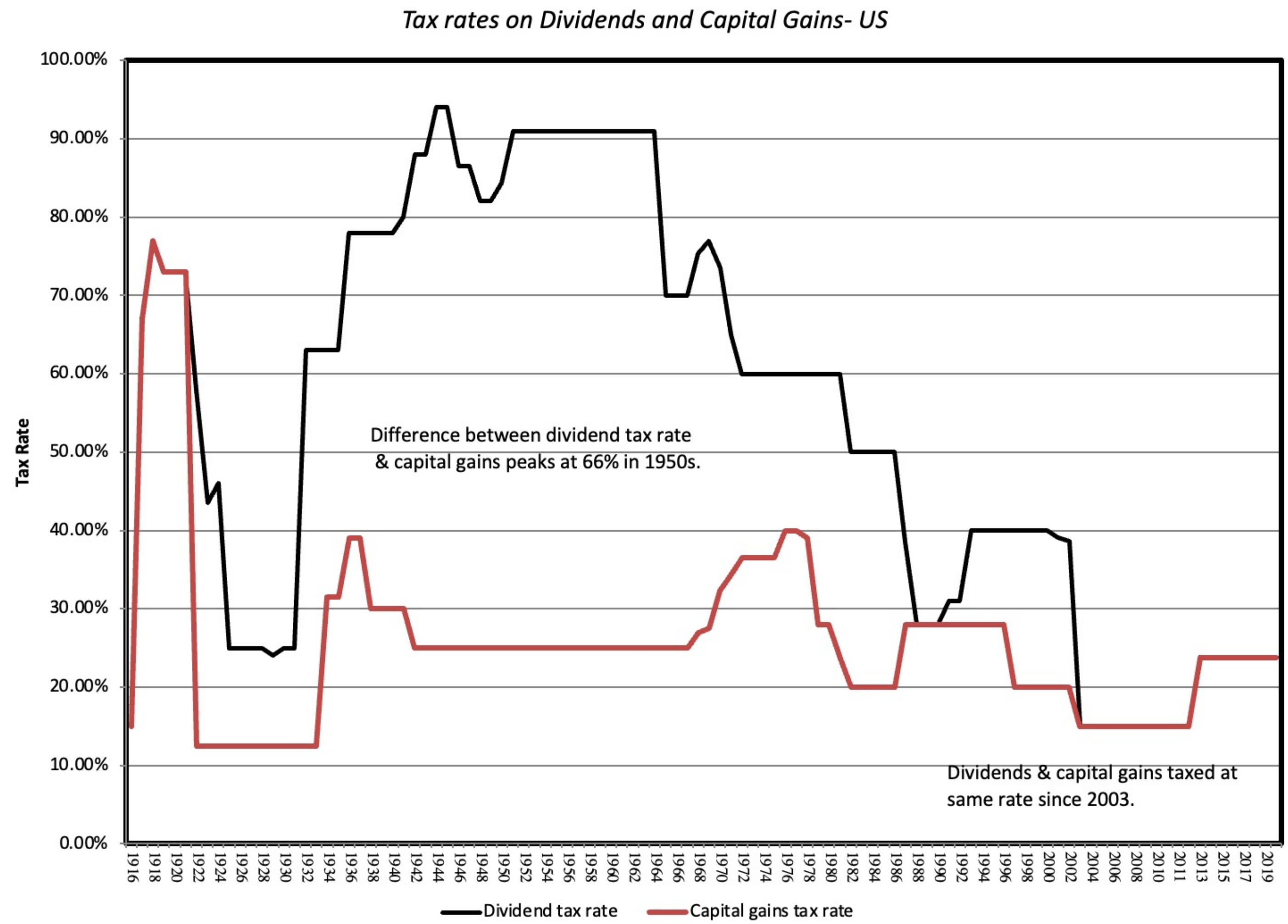
The US Tax Code for Individuals

- In the United States, the discussion of what individuals pay as taxes on their investment income is complicated by where that investment income originates.
- Income on an individual's holdings in a pension fund or a Roth IRA account are tax exempt, at least while they continue to stay in that account, but income from the rest of the individual portfolio are taxed.
- On top of all of this complexity is estate and inheritance tax law, where when an individual dies, the investments in his or her estate can be marked to market, without any tax consequences, allowing those capital gains to be sheltered from taxes.

Classifying Income for taxes



US taxation of Investment Income: History



Pre and Post Tax Returns from Investing

- Assume that you are a taxable investor who pays a 25% tax rate and that you are considering investing in a company, where you believe that you need to make 6%, after personal taxes, to break even. You will need to make 8% on a pre-personal tax basis, to break even:

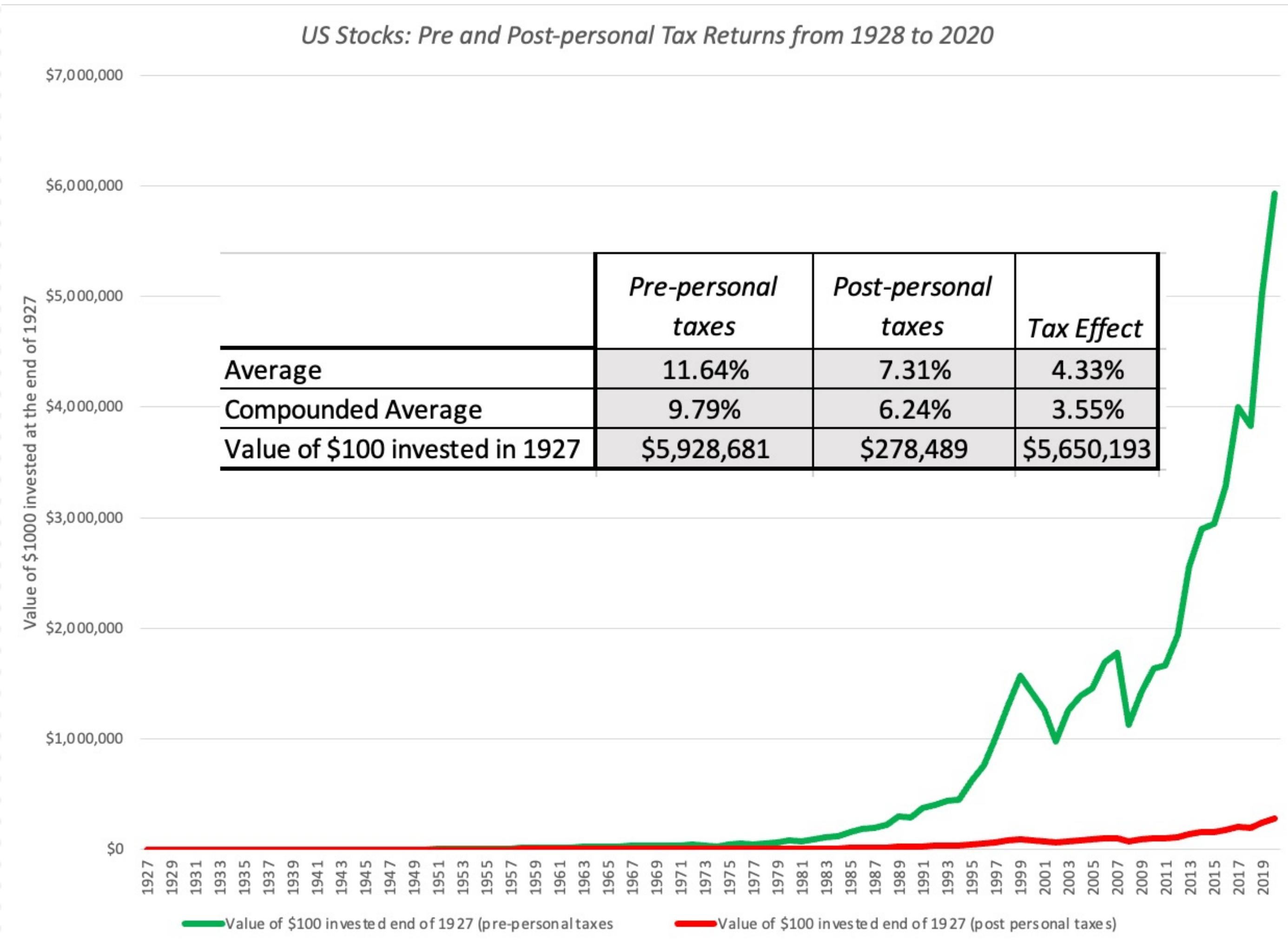
  Pre-personal tax return (with 25% tax rate)

  = Post-personal tax/ (1- personal tax rate) = 6%/ (1- .25) = 8%
- If the tax rate were raised to 40%, all else being held equal, your expected pre-personal tax return will have to increase to 10%:

  Pre-personal tax return (with 40% tax rate)

  = Post-personal tax/ (1- personal tax rate) = 6%/ (1- .40) = 10%
- Extending this concept to actually investing in stocks, you are faced with complications. The first is that you pre-personal tax return on stocks is composed of dividends and price appreciation, and as we noted in the earlier section, the tax rates on the two can diverge. Thus, the post personal-tax return on stocks can be written as:
  - Post-personal tax return on stocks = Dividend yield (1 - tax rate on dividends) + Expected Price Appreciation (1 - tax rate on capital gains)
- Thus, if a stock has a 2% dividend yield and an expected price appreciation of 6%, and your tax rates were 20% for dividends and 40% for capital gains, your post-personal tax return would be:
  - Post-personal tax return = 2% (1-.20) + 6% (1-.40) = 5.20%

Historical Returns on Stocks, Bonds and Bills



	Pre-personal taxes	*Post-personal taxes*	*Tax Effect*
Average	11.64%	7.31%	4.33%
Compounded Average	9.79%	6.24%	3.55%
Value of $100 invested in 1927	$5,928,681	$278,489	$5,650,193

Forward-looking Expected Returns

Earnings Forecasts

I start with the earnings forecasts for 2021 from analysts who track the index, and then assume a smoothed out growth rate over the following four years down to a growth rate of 1.57% a year in perpetutiy (to match the risk free rate).

Cash Flow Forecasts

To forecast the cash flows that will be paid out to equity investors each year, I start with the percent of earnings returned in 2020 (84.90%, lower than the 90% in 2019) and adjust it over time to a sustainable payout ratio of 88.12% (based upon growth of 1.57% and a ROE of 13.22%)

Step 1: Compute the implied expected return on stocks today

Implied Equity Risk Premium Calculator

Implied Risk Premium in current level of Index =		4.16%	(Go under Tools and choose Solver or Goal Seek: See below)				
Implied Expected Return on Stocks today =		5.73%					
	Last 12 months	1	2	3	4	5	*Terminal Year*
Expected Earnings	139.76	174.70	183.88	193.54	203.71	214.41	217.78
Expected cash payout (dividends + buybacks) as % of earnings	84.90%	85.55%	86.19%	86.84%	87.48%	88.12%	88.12%
Expected Dividends + Buybacks =	$118.66	$149.45	$158.49	$168.06	$178.20	$188.95	191.91
Expected Terminal Value =						$ 4,612.36	
Present Value =		$ 141.35	$ 141.77	$ 142.19	$ 142.60	$ 3,633.71	
Intrinsic Value of Index =	$ 4,201.62						

Solve for the expected return (IRR)

$$4201.62 = \frac{149.95}{(1+r)} + \frac{158.49}{(1+r)^2} + \frac{168.06}{(1+r)^3} + \frac{178.20}{(1+r)^4} + \frac{188.95}{(1+r)^5} + \frac{191.91}{(r-.0157)(1+r)^5}$$

Pre and Post Personal Taxes: Current Tax Law

Start by assessing effective tax rate on dividends and capital gains

	Stated tax rate	*Percent of investors paying tax*	*Adjusted tax rate*
Dividends	23.80%	63%	14.99%
Capital Gains	23.80%	50%	11.90%

And use these tax rates to get post-personal tax returns

	Pre-personal taxes	*Post-personal taxes*
Dividend Yield	1.36%	1.16%
Capital Gains	4.37%	3.85%
Expected Return	5.73%	5.01%

Pre and Post Personal Taxes: Proposed Tax Law

Recompute effective tax rates on dividends and capital gains

	Stated tax rate	*Percent of investors paying tax*	*Adjusted tax rate*
Dividends	23.80%	63%	14.99%
Capital Gains	23.80%	20%	17.90%
	43.80%	30%	

And adjust your pre-personal tax returns to get same post-personal tax returns

	Pre-personal taxes	*Post-personal taxes*
Dividend Yield	1.36%	1.16%
Capital Gains	4.69%	3.85%
Expected Return	6.05%	5.01%

Updated Index Value

Index Revaluation
Earnings and cash flows are unchanged, but I am now discounting these cashflows at 6.05%, the higher pre-personal tax expected return

Step 3: Revalue the index using the updated equity risk premium							
	Last 12 months	1	2	3	4	5	*Terminal Year*
Expected Earnings	139.76	174.70	183.88	193.54	203.71	214.41	217.78
Expected cash payout (dividends + buybacks) as % of earnings	84.90%	85.55%	86.19%	86.84%	87.48%	88.12%	88.12%
Expected Dividends + Buybacks =	118.66	$ 149.45	$ 158.49	$ 168.06	$ 178.20	$ 188.95	191.91
Expected Terminal Value =						$ 4,289.84	
Present Value =		$ 140.93	$ 140.94	$ 140.93	$ 140.92	$ 3,339.92	
Intrinsic Value of Index =	**3903.64**						
Step 4: Compute the effects of changes in tax code							
Current value of the index =	**4201.62**						
Value of the index with tax code changes =	**3903.64**						
% Change in value of index =	**-7.09%**						

Expected Value Effect
Assuming the tax code change has no effects on interest rates or earnings growth, the value of the index drops by 7.09%.

Thoughts on Tax Law

- Not only does it pick on a tiny group of individuals as deserving of paying more in taxes, but it seems to be motivated less by the desire to raise revenues, and more by the urge to punish.
  - The wealthiest among us can afford to pay more in taxes, but insulting them or treating them as a pariah class, while asking them to pay more, will only induce them to find ways to avoid doing so, and who can blame them?
  - If they decide to do so, this is also the group with the most weapons at its disposal for sheltering income from taxes, and I have a feeling that one group that will clearly benefit, if this proposal goes through, are tax accountants and lawyers.
- If you are not among that tiny targeted group, it is delusional to think that forcing individuals in this group to pay more in taxes will have no effect on you, since this group punches well above its weight. There is a very real danger here that as we take aim at what we think are the idle rich, we risk shooting ourselves in the foot.
- Finally, if the most effective tax codes are simple and direct, changes like the proposed one, where segments of taxpayers are assessed a higher tax rate on portions of income are exactly what cause them to become complex and inefficient.

A Preemptive Defense

- When I started this post, my intent was less to focus in on the Biden proposal, and more to open a discussion of how personal taxes affect not only valuation, but also corporate finance behavior. That effect is often missed by analysts because it is not explicitly part of the valuation of publicly traded companies, but it implicitly plays a role, and perhaps even a key one.
  - Investor behavior: As capital gains and dividend tax rates are changed, the changes percolate through into expected returns and risk premiums, and through those into value. It is one more reason that blindly using historical risk premiums can lead to static and strange values.
  - Corporate Behavior: Companies, faced with investing, financing and dividend questions, may answer them differently, when personal taxes change. Thus, is it possible that the increase in capital gains taxes could reduce cash returned, especially in the form of buybacks? Absolutely, and especially so at closely held firms.
- For governments, changing the tax rates on investment income to increase tax revenues is fraught with uncertainties. For instance, if the capital gains tax change goes through, it will almost certainly not begin until 2022, and there will be a significant amount of selling towards the end of 2021, as some wealthy investors lock in the current favorable capital gains tax rate. Going forward, a higher expected return on stocks will mean lower market valuations, which reduces capital gains in general, and tax collection from those capital gains, as a consequence. One reason to be wary of government forecasts of large tax collections from increases in capital gains tax rates is that these forecasts are built on the presumption that the market is the goose that lays this golden egg, since rising markets deliver higher capital gains, and the tax rate hike may kill that goose.