## JANUARY 2020 DATA UPDATE 7: DEBT'S DARK SIDE IS SHOWING

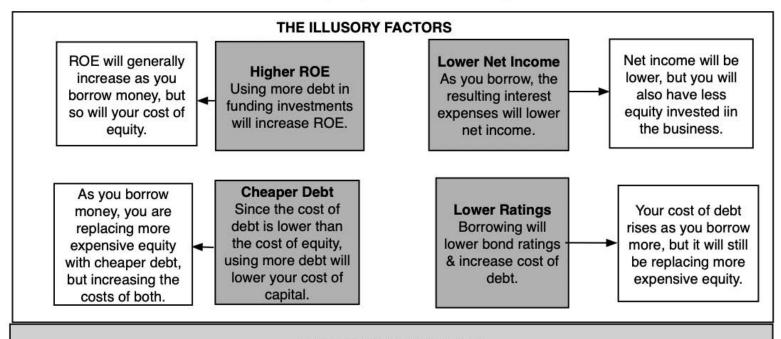
Aswath Damodaran

#### The Debt Story

- In this session, I look at the debt burden that firms operate under, since companies with higher debt burdens, other things remaining equal, are more exposed to failure and distress than companies without those burdens.
- I will look at the degree of indebtedness of companies around the world, broken out by industry and region, partly with an eye on assessing how much danger they are exposed to right now, as their near term business prospects collapse, and partly to see which firms, industries and regions are best positioned to make it through this crisis.

## The Debt Trade off: Illusory Factors

#### Debt versus Equity: The Illusory Benefits

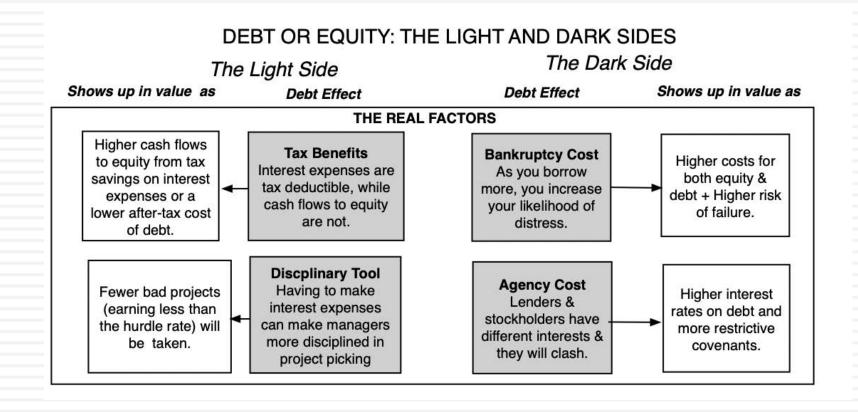


#### THE TRANSIENT FACTORS

To the extent that your equity is mipriced or your debt carries the wrong interest rate, market frictions can affect your debt/equity mix, in either direction:

- If equity is over priced and debt carries too high an interest rate, you will use more equity & less debt
- If equity is under priced and debt carries too low an interest rate, you will use more debt & less equity.

## The Real Debt Equity Trade off



#### Implications for Debt

- Tax benefits are lower: In the United States, for instance, the corporate tax reform act of 2017, in addition to lowering the federal corporate tax to 21% from 35, also put limits on interest deductions, thus making debt significantly less beneficial to companies.
- Good times don't last: Even before this crisis hit, there were questions about whether a long stretch of good times for companies had made them too complacent about distress risks and expected bankruptcy costs, and now after the crisis, there is no debating that many companies have too much debt, given near term earnings and perhaps even long term earnings.

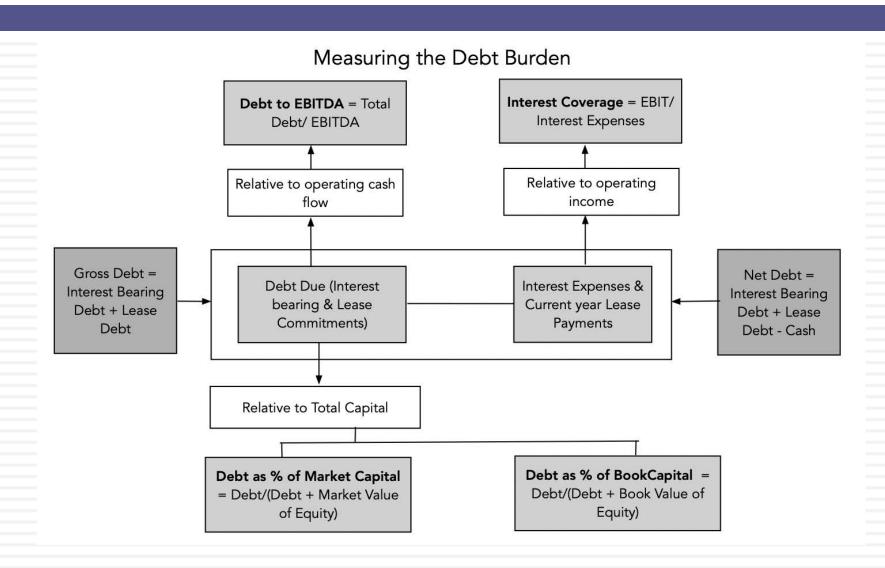
#### The Debt Burden: Defining Debt

- For those who trust accounting statements, this may seem redundant, given that there is a debt number listed on balance sheets, reflecting what companies owe at least on the date of the statement.
- As someone who does not share that trust, I use a two-part test to determine whether to include a claim in debt or not:
  - Does the claim give rise to a contractual commitment that you have to meet in good times and in bad?
  - If you fail to meet that commitment, what are the consequences?

#### Putting the tests to work...

- All interest-bearing debt, short term as well as long term, floating or fixed, meets the requirements for debt.
- Accounts payable and supplier credit don't meet that test, because they do not have explicit interest expenses.
- All lease commitments are debt, though we can debate the maturity of the commitment (based upon escape clauses and renewal terms in the leases) and whether it is secured or unsecured debt.
  - Until 2019, accountants followed a misguided practice, allowing companies to categorize leases, based upon ownership rights, into operating and capital leases, with only the latter being treated as debt. In the process, operating leases became the biggest source of offbalance sheet debt for retailers, restaurants and other big lessees.
  - In 2019, both GAAP (FASB 842) and IFRS (IAS 16) came to their senses and required companies to treat all leases as debt.

#### Measuring Debt Burden



## The Debt Danger

Debt to Capital	Debt/EBITDA	Revenue Predictability	Interest Coverage Ratio	Extent of Debt Burden
High	High	Low	Low or negative (with negative EBIT)	Code Red
Low	High	Low	Low or negative (with negative EBIT)	Highly exposed to distress, if capital markets shut down.
High	High	High	Low	Manageable, as long as costs stay controlled.
Low	High	High	Low or negative (with negative EBIT)	Dependent on earnings growth and capital access for safety.
High	Low	Low	High	Exposed to earnings shocks
High	Low	High	High	Manageable, as long as costs stay controlled.
Low	Low	Low	High	Low risk, unless earnings collapse.
Low	Low	High	High	Lowest danger from debt

#### Debt at the start of 2020

- I have included all interest bearing debt, as reported by the company, on its most recent financial statements as both the book value and market value of debt.
- I have computed the lease debt, using lease commitments and an estimated cost of debt for each company, rather than trust the accounting estimates of this debt, at least for 2019.
  - That is partly because the rule change applies only to those sections of the world that are covered by IFRS and GAAP and partly because I don't trust accountants yet, on this measure.
  - To compute the net debt, I subtract out the cash and marketable securities that the company reports on its latest financial statements.
- Since debt to a financial service firm is more raw material than capital and determining what comprises debt is almost an unsolvable puzzle, I have excluded banks, insurance companies and brokerage firms/investment banks from my sample.

## Debt Levels: A Regional Breakdown

Industry	Total Debt	Lease Debt	Total Debt with Leases	Cash	Net Debt	Debt/Market Capital	Debt/Book Capital	Debt/Market Capital	Net Debt/Book Capital
Africa and Middle East	\$651,763	\$73,477	\$725,240	\$167,318	\$557,922	22.76%	40.52%	18.48%	34.38%
Australia & NZ	\$224,810	\$69,063	\$293,873	\$66,961	\$226,912	25.35%	40.32%	20.78%	34.28%
Canada	\$882,863	\$84,980	\$967,843	\$83,430	\$884,412	45.23%	49.44%	43.00%	47.19%
China	\$5,343,831	\$311,811	\$5,655,642	\$1,824,317	\$3,831,325	34.40%	45.47%	26.21%	36.10%
EU & Environs	\$4,790,314	\$518,738	\$5,309,052	\$1,051,432	\$4,257,620	37.86%	49.20%	32.82%	43.71%
Eastern Europe & Russia	\$227,778	\$22,711	\$250,489	\$58,010	\$192,479	35.78%	30.10%	29.98%	24.86%
India	\$519,009	\$46,961	\$565,970	\$76,957	\$489,013	30.78%	47.75%	27.76%	44.12%
Japan	\$3,007,862	\$206,129	\$3,213,991	\$1,078,436	\$2,135,555	43.41%	44.13%	33.76%	34.42%
Latin America & Caribbean	\$709,666	\$62,126	\$771,792	\$124,487	\$647,305	37.87%	46.17%	33.83%	41.83%
Small Asia	\$2,146,402	\$175,153	\$2,321,555	\$573,257	\$1,748,298	40.57%	41.82%	33.95%	35.12%
UK	\$1,035,800	\$168,839	\$1,204,639	\$216,077	\$988,563	41.65%	50.25%	36.94%	45.32%
United States	\$9,537,006	\$948,295	\$10,485,301	\$1,605,140	\$8,880,161	29.34%	56.21%	26.01%	52.09%
Global	\$29,077,106	\$2,688,282	\$31,765,388	\$6,925,822	\$24,839,565	34.05%	48.66%	28.76%	42.57%

#### Debt Levels: Most and lest levered

	Industries with the least debt								
Industry	Total Debt with Leases	Debt/Market Capital	Debt/Book Capital	Debt/Market Capital	Net Debt/Book Capital				
Software (Entertainment)	\$113,384	5.16%	21.07%	1.29%	6.00%				
Retail (Online)	\$185,347	8.31%	47.20%	5.05%	34.39%				
Software (System & Application)	\$306,991	9.05%	43.09%	5.40%	30.29%				
Semiconductor Equip	\$49,051	10.83%	32.32%	3.96%	13.94%				
Heathcare Information and Technology	\$85,086	11.55%	40.00%	8.65%	32.58%				
Drugs (Biotechnology)	\$160,945	11.56%	45.36%	4.82%	24.33%				
Information Services	\$182,072	11.81%	43.20%	8.52%	34.60%				
Semiconductor	\$232,340	12.08%	31.93%	5.96%	17.78%				
Healthcare Products	\$216,467	12.54%	36.19%	9.05%	28.24%				
Software (Internet)	\$25,578	12.66%	54.54%	8.68%	44.03%				
	Industries with the most debt								
Industry	Total Debt with Leases	Debt/Market Capital	Debt/Book Capital	Debt/Market Capital	Net Debt/Book Capital				
Real Estate (Development)	\$1,273,061	63.83%	56.22%	54.02%	46.09%				
Air Transport	\$602,608	61.10%	68.09%	58.06%	65.28%				
Auto & Truck	\$1,219,906	56.88%	54.18%	49.86%	47.13%				
Shipbuilding & Marine	\$304,327	56.55%	51.69%	51.71%	46.82%				
Food Wholesalers	\$73,946	55.05%	60.74%	51.19%	56.98%				
Retail (Distributors)	\$565,026	54.63%	54.05%	49.56%	48.98%				
Real Estate (General/Diversified)	\$491,351	54.43%	41.53%	49.54%	36.87%				
Engineering/Construction	\$693,298	53.77%	50.23%	41.23%	37.84%				
Investments & Asset Management	\$762,026	53.34%	55.35%	46.15%	48.17%				
Power	\$1,955,497	52.48%	55.74%	50.25%	53.53%				

# Debt Buffer: By Region

			Interest	Net Interest		EBIT/Interest	Net	EBIT/ Net Interest
Region	Total Debt	Net Debt	Expenses	Expenses	Debt/EBITDA	Expenses	Debt/EBITDA	Expenses
Africa and Middle East	\$651,763.15	\$557,922.16	\$30,616.15	\$20,937.18	1.76	9.41	1.51	13.75
Australia & NZ	\$224,810.11	\$226,912.04	\$10,317.03	\$8,615.76	1.96	6.83	1.98	8.18
Canada	\$882,862.90	\$884,412.49	\$41,208.41	\$38,645.15	3.85	2.95	3.86	3.14
China	\$5,343,831.40	\$3,831,325.21	\$177,116.65	\$65,129.55	4.76	4.10	3.42	11.16
EU & Environs	\$4,790,314.20	\$4,257,619.82	\$141,189.52	\$105,466.88	3.33	5.93	2.96	7.93
Eastern Europe & Russia	\$227,778.47	\$192,479.11	\$11,614.22	\$4,469.61	1.66	8.28	1.40	21.52
India	\$519,008.78	\$489,012.64	\$40,554.58	\$30,533.04	2.41	2.87	2.27	3.82
Japan	\$3,007,862.06	\$2,135,555.06	\$30,963.21	\$24,207.74	3.65	15.52	2.59	19.85
Latin America & Caribbean	\$709,666.21	\$647,305.40	\$39,535.62	\$29,316.61	3.33	3.42	3.03	4.61
Small Asia	\$2,146,402.34	\$1,748,298.04	\$74,825.24	\$47,347.87	3.65	4.12	2.97	6.51
UK	\$1,035,799.90	\$988,562.53	\$35,613.44	\$29,453.83	3.05	5.54	2.91	6.69
United States	\$9,537,006.32	\$8,880,160.84	\$300,675.65	\$253,803.45	3.63	5.44	3.38	6.44
Global	\$29,077,105.85	\$24,839,565.37	\$934,229.71	\$637,926.66	3.54	5.37	3.02	7.86

#### Debt Buffer: Most and Least Buffered

	Most Buffered Industries, based upon 2019 Earnings									
Industry Group	Total Debt	Net Debt	Interest Expenses		Debt/EBITDA	EBIT/Interest Expenses	Net Debt/EBITDA	EBIT/Net Interest Expenses		
Software (Entertainment)	\$84,834.22	\$27,120.02	\$1,877.34	-\$3,031.98	0.83	39.44	0.26	-24.42		
Oil/Gas (Integrated)	\$849,640.72	\$764,879.24	\$27,604.85	\$13,897.93	1.26	15.30	1.13	30.39		
Semiconductor	\$223,222.49	\$107,148.74	\$7,723.71	\$3,846.04	1.48	10.83	0.71	21.75		
Shoe	\$24,169.28	\$23,787.98	\$610.35	\$298.30	1.65	16.59	1.63	33.94		
Semiconductor Equip	\$46,718.21	\$16,642.92	\$1,887.10	\$1,200.05	1.69	10.93	0.60	17.19		
Computers/Peripherals	\$328,505.02	\$179,754.76	\$11,934.35	\$1,294.11	1.76	10.15	0.96	93.65		
Oil/Gas (Production and Exploration)	\$386,537.30	\$356,476.35	\$20,124.97	\$16,833.76	1.88	4.24	1.74	5.07		
Business & Consumer Services	\$201,701.15	\$174,711.07	\$7,597.12	\$6,455.82	1.89	6.15	1.64	7.24		
Household Products	\$182,181.28	\$146,278.79	\$5,740.17	\$3,613.09	1.93	12.91	1.55	20.50		
Coal & Related Energy	\$98,171.06	\$47,420.58	\$5,909.24	\$3,353.41	1.93	5.89	0.93	10.38		
				Least Buffered Indust	ries, based upo	on 2019 Earnings				
Industry Group	Total Debt	Net Debt	Interest Expenses	Net Interest Expenses	Debt/EBITDA	EBIT/Interest Expenses	Net Debt/EBITDA	EBIT/ Net Interest Expenses		
Investments & Asset Management	\$738,026.81	\$571,432.00	\$13,702.28	\$10,587.87	11.70	3.95	9.06	5.11		
R.E.I.T.	\$1,481,213.87	\$1,475,334.17	\$34,809.35	\$32,466.53	11.17	2.61	11.13	2.80		
Real Estate (Operations & Services)	\$402,605.34	\$376,528.56	\$10,902.49	\$9,378.22	7.46	3.66	6.97	4.26		
Real Estate (Development)	\$1,259,110.63	\$847,585.50	\$24,264.52	\$5,834.61	7.27	6.78	4.89	28.18		
Real Estate (General/Diversified)	\$452,825.35	\$403,919.22	\$9,734.01	\$5,056.44	6.61	5.37	5.90	10.35		
Trucking	\$145,255.92	\$136,347.46	\$4,593.53	\$3,652.65	6.25	1.00	5.87	1.26		
Auto & Truck	\$1,199,542.33	\$919,635.73	\$12,644.87	\$9,135.67	6.14	8.30	4.71	11.48		
Utility (General)	\$483,234.77	\$461,390.56	\$17,570.91	\$15,017.21	5.83	2.47	5.56	2.89		
Oil/Gas Distribution	\$315,769.22	\$308,069.01	\$14,410.06	\$13,362.75	5.73	2.40	5.59	2.58		
Farming/Agriculture	\$183,876.92	\$162,893.21	\$5,224.87	\$3,136.92	5.62	3.64	4.98	6.07		

#### Lessons: Learned & Unlearned

- Every crisis creates lessons that are temporarily learned, but quickly forgotten. This one is a reminder to firms that debt, while making good times better for equity investors, makes bad times worse.
- For some of these firms, that debt will threaten their continued existence of companies and result in liquidations, fire sales and distress. For others, it will create constraints for the near future on growth and investment plans and change business plans.
- For firms that are lightly burdened, it may create opportunities, as they use their liquidity as a strategic weapon in acquisitions and to increase market share.
- If you were worried about winner take all markets before this crisis, you should be doubly worried now!