Implications of Stock Based Comp for the Value of Salesforce

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I have recently starting look closely at equity research available to me as a retail investor. I am in the process of building out a framework to value a company. I am looking at cases where my approach yields result that differ from the implications of equity research. The companies with *expensive valuations* are often *Tech* companies, that make extensive use of stock based compensation (SBC). The use of SBC by companies with expensive valuations is not surprising as SBC is a useful form of financing for a growth company. Since 2006, companies treat SBC as an expense when computing earnings.

Salesforce (CRM) is one company that I find puzzling. They currently have a trailing P/E ratio of about 1,000 and a "forward-looking P/E ratio" of about 30 (according to Yahoo Finance). The large P/E ratio is based on the GAAP Earnings for FY 2023, and the smaller P/E ratio is based on management guidance for Earnings computed using *non-Generally Accepted Accounting Principles* (non-GAAP) for FY 2024. As a reference point, Yahoo finance is currently reporting a P/E ratio for Apple of about 28 (both forward and trailing), which is based on GAAP earnings. What does it mean that the non-GAAP number is a lot lower?

CRM earnings per share for Fiscal Year Ended January 31, 2023 was \$0.21 (GAAP Basic Net Income per Share) and they have recently been trading at around \$200 per share. For Fiscal Year 2024, the guidance on earnings is \$2.6 per share. In early 2023, CRM announced a 10% reduction in force, which explains why management expects a large improvement in profitability. They also provide guidance for non-GAAP earnings per share of \$7.13. The reason for the large difference is the non-GAAP numbers of CRM ignore GAAP expenses related to Stock Based Compensation (SBC), Amortization of Intangibles and Restructuring Charges. At a stock price of 200 the forward looking P/E ratio based on GAAP Numbers would be 76.9 versus 28 under non-GAAP. The SBC alone is \$2.88 per share, which at a stock price of 200 would increase the Non-GAAP P/E ratio from 28 to 47. (These numbers can be found in CRM's press release that announced the Full Fiscal Year 2023 results).

People use a P/E ratio as a guide for whether a stock is trading cheap or expensive. In this note, I will illustrate that it is important to account for SBC when computing a P/E ratio. One should also consider the issue when looking at other valuation metrics such as Price to Free Cash Flow and Enterprise Value to EBITDA.

Currently, Morningstar Views CRM as Undervalued:

As of March 1, 2023, Morningstar gives CRM a target price of $245 and a four-star rating implying that they believe it will outperform the market:

"We model a five-year compound annual growth rate, or CAGR, for total revenue of 12% through fiscal 2028, which we think will be driven by strength in platform and marketing clouds. Our revenue forecast assumes modest revenue acceleration after depressed growth in both fiscal year 2023 and 2024. We forecast non-GAAP operating margin expanding from 23% in fiscal 2023 (actual) to the low 30% area in fiscal 2028, which we think is consistent with management's new profitability focus."

Morningstar has a proprietary valuation framework in which they "project full financial statements including items such as revenue, profit margins, tax rates, changes in working-capital accounts and capital spending. Based on these projections, we calculate earnings before interest, after taxes (EBI) and the net new investment (NNI) to derive our annual free cash flow forecast." They do not mention how they deal with non-GAAP accounting versus GAAP accounting or the issue of dilution in their methodology document. I understand that more details regarding these projections are available to institutional investors.

Can I Approximate Morningstar's Results?

Can I get to about the same place using Morningstar's views on margin and growth using the valuation framework that I am developing? If so, I can then assess the implications of treating SBC as if it were an actual expense in the context of my valuation framework.

The valuation framework that I am developing has its roots in a spreadsheet created by Aswath Damodaran, a corporate finance professor at NYU Stern. I am focusing on projecting forward Free Cash Flow to the firm and discounting these cash flows backwards using a reasonable weighted average cost of capital to determine the "Enterprise Value," which is how much it would cost to buy the company outright free of both debt and cash. In this context, the cash flows that are being modeled are independent of the capital structure and financing of the firm.

In Damodaran's spreadsheet, he defines Free Cash Flow to the Firm as:

$$FCFF = Operating\ Income - Taxes - Reinvestment$$

where Reinvestment is the change in the total assets of the company year on year. Many companies (including CRM) define FCF as:

$$FCF = Cash\ Flow\ From\ Operations - Capital\ Expenditures$$

in their financial reports. In principle, over time the two *should* be about the same on average when interest expense is nominal. If *Capital Expenditures* is used to cancel out depreciation and working capital is fixed, then the balance sheet of the firm is fixed and *Reinvestment* is 0. In this context, $Operating\ Income - Taxes$ should equal *Cash Flow From Operations*" on average. The differences in any one period will be due to issues of *matching* spending with earnings that the accrual-based income statement will handle better than the cash flow statement as that is the purpose of accrual accounting.

There is an issue with SBC which is reflected as an expense when computing GAAP Operating Income. When a company finances its operations by issuing stock the proceeds are reflected as Financing Activities on the Cash Flow Statement. When a company that finances its operations with SBC, the expense is treated as a non-cash expense under Operating Activities even though it is effectively the same concept. FCF does not reflect SBC whereas FCFF does if *Operating Income* is based on GAAP.

First DCF Calculation

Below is a set of projections that generates a stream of cash flows with a discounted value of $207B using a WACC of 7.55%.[1] This set of projections is consistent with Wall Street's view of CRM. Revenue grows at 12% for the next five years before tapering off to 2% by year 10. After year 10, revenue is assumed to grow at 2% forever. The Operating Margin starts at 27% of Revenue and increases to 32% of Revenue, which is assumed to be sustained forever. The tax rate is assumed to be 21%.

In order to make the discounted value of cash flows equal to $207B, we solved for the value of Asset Turnover associated with newly purchased assets. We are assuming that CRM will have an Asset Turnover of 81% on new assets ($1 of new assets produces $0.81 of new sales). This assumption implies that in order for CRM to generate $42.1B in new annual sales over 10 ten years, CRM will increase its balance sheet by $52B. Further, this assumption implies that CRM will be much more efficient than it has been historically (CRM's Sales to Asset ratio is currently 33%). The return on investment is calculated as Operating Margin multiplied by Asset Turnover and the quantity of one minus the tax rate. It ranges from 17.3% to 20.5%, which is well in excess of the WACC.

Is such a projection a reasonable expectation for a firm? Of course, more than doubling both revenue and operating income over a 10 year period would be a substantial accomplishment, but it is not unheard of. Over the past 10 years this is approximately what Apple has accomplished. Keep in mind that this is using one scenario to do a valuation and should therefore be viewed as a baseline scenario. If we were to do multiple scenarios we would need to include some that are better and some that are worse than the one presented here to justify a valuation of $207B.

Table 1: DCF Calculation: using Non-GAAP Op Inc

FY	Revenue	Assets	OpInc	OpInc after Tax	ROI	Reinvest	FCF	Discounted
2024	35.1	103	9.48	7.49	17.3	4.64	2.85	2.65
2025	39.7	109	11.4	9.04	18.5	5.61	3.43	2.97
2026	45	116	13.7	10.8	19.5	6.56	4.24	3.41
2027	50.9	123	16.1	12.7	20.2	7.33	5.36	4.00
2028	57	131	18.2	14.4	20.5	7.54	6.87	4.78
2029	62.8	138	20.1	15.9	20.5	7.09	8.78	5.67
2030	67.8	144	21.7	17.1	20.5	6.19	10.9	6.58
2031	71.7	149	22.9	18.1	20.5	4.82	13.3	7.43
2032	74.2	152	23.7	18.8	20.5	3.09	15.7	8.13
2033	75.7	154	24.2	19.1	20.5	1.83	17.3	8.35
2034	77.2	155	24.7	19.5	20.5	1.91	17.6	153.00
								207.00

In the table above, the sum of discounted cash flows is the number in the lower right corner. It is the sum of the column above. The last number in this column is the terminal value.. The Terminal Value ($153B) is computed with a Gordon Growth Model that multiplies terminal cash flow by 18.02 and then discounts it by 48.3%. Equivalently, mutiplies terminal cash flow by 8.702. Terminal Cash Flow is $17.6B. Terminal WACC is 7.55% and terminal growth is 2%. So the terminal multiplier is the reciprocal of 5.55% (which is 18.02).

[1] $207B is approximately the current Enterprise Value of CRM. If we assume a $200 per share price and a billion shares outstanding their market capitalization is about $200B. They have about $12B in debt and $5B in cash at FY2023, which yields an enterprise value of $207B.

Second and Third DCF Calculations

For the first DCF calculation, we used non-GAAP Operating Income. Excluding the depreciation of intangible assets is appropriate as these assets were acquired through acquisitions that have already been paid for. The restructuring charge is a one-time expense related to the current reduction in force. SBC is a real expense as it dilutes existing shareholders unless the company uses cash to repurchase their own stock on the open market. For FY24, they provide guidance in which they add back Amortization of Purchased Intangibles of 5.4%, SBC of 8.3% and Restructuring of 2.5% to reconcile non-GAAP operating margins from GAAP operating margins. In the first calculation, I did not account for SBC. I can account for the SBC by subtracting 8.3% from the operating margin in every year. Doing so lowers the discounted value of the projected cash flows considerably resulting in a 32% reduction in the value of discounted cash flows. In the third set of calculations, I can get back to an enterprise value of $203B by offsetting the reduction in margin by assuming that the growth of 12% will be sustained for 11 years before tapering off to 2% by year fifteen.

Table 2: DCF Calculation: Treat SBC as an Expense

FY	Revenue	Assets	OpInc	OpInc after Tax	ROI	Reinvest	FCF	Discounted
2024	35.1	103	6.57	5.19	12	4.64	0.543	0.505
2025	39.7	109	8.15	6.44	13.1	5.61	0.831	0.718
2026	45	116	9.94	7.86	14.2	6.56	1.29	1.040
2027	50.9	123	11.8	9.35	14.9	7.33	2.02	1.510
2028	57	131	13.5	10.7	15.2	7.54	3.13	2.180
2029	62.8	138	14.9	11.7	15.2	7.09	4.66	3.010
2030	67.8	144	16.1	12.7	15.2	6.19	6.5	3.910
2031	71.7	149	17	13.4	15.2	4.82	8.6	4.800
2032	74.2	152	17.6	13.9	15.2	3.09	10.8	5.610
2033	75.7	154	17.9	14.2	15.2	1.83	12.3	5.960
2034	77.2	155	18.3	14.4	15.2	1.91	12.5	109.000
								138.000

In the table above, the sum of discounted cash flows is the number in the lower right corner. It is the sum of the column above. The last number in this column is the terminal value.. The Terminal Value ($109B) is computed with a Gordon Growth Model that multiplies terminal cash flow by 18.02 and then discounts it by 48.3%. Equivalently, mutiplies terminal cash flow by 8.702. Terminal Cash Flow is $12.5B. Terminal WACC is 7.55% and terminal growth is 2%. So the terminal multiplier is the reciprocal of 5.55% (which is 18.02).

Concluding Remarks

The first calculation presents a set of projections in which CRM is as successful in growth of earnings and revenue over the next ten years as Apple has been at growing revenue over the past ten years. These calculations are not defensible as they ignore the expense of SBC. The second set of calculations treat SBC as an expense, but lower the enterprise value of CRM by 33%. The third set of calculations are consistent with the current enterprise value of CRM. They treat SBC as an expense and they extend the period of 12% growth for eleven years before tapering off. The third calculation calls for revenue and operating income to both grow five fold over 15 years. Pricing for such growth feels expensive to me as does a *non-GAAP P/E ratio* of 47, which I constructed earlier by adding SBC back to non-GAAP earnings. This note illustrates the importance of understanding how SBC has been treated when evaluating non-GAAP valuation metrics, as well as the challenges for comparing different P/E ratios for the same firm and P/E ratios across firms in the presence of SBC and non-GAAP accounting.

Table 3: DCF Calculation: Treat SBC as an Expense SBC and Sustain Growth for 11 years

FY	Revenue	Assets	OpInc	OpInc after Tax	ROI	Reinvest	FCF	Discounted
2024	35.1	103	6.57	5.19	12	4.64	0.543	0.505
2025	39.6	109	7.65	6.04	12.4	5.55	0.492	0.425
2026	45	116	8.96	7.08	12.7	6.62	0.452	0.364
2027	51.4	124	10.5	8.33	13.1	7.89	0.439	0.328
2028	59	133	12.5	9.84	13.5	9.36	0.474	0.329
2029	67.9	144	14.7	11.6	13.9	11	0.598	0.386
2030	78.4	157	17.4	13.8	14.2	12.9	0.878	0.528
2031	90.4	172	20.6	16.3	14.6	14.8	1.43	0.797
2032	104	188	24.1	19.1	14.9	16.6	2.43	1.260
2033	118	206	27.9	22	15.1	17.8	4.21	2.030
2034	132	224	31.4	24.8	15.2	17.5	7.28	3.270
2035	145	239	34.3	27.1	15.2	15.4	11.7	4.900
2036	155	251	36.6	28.9	15.2	11.9	17	6.610
2037	161	258	38	30.1	15.2	7.36	22.7	8.190
2038	164	262	38.8	30.7	15.2	3.96	26.7	8.960
2039	167	266	39.6	31.3	15.2	4.12	27.1	164.000
								203.000

DCF Calculation: Treat SBC as an Expense SBC and Sustain Growth for 11 years In the table above, the sum of discounted cash flows is the number in the lower right corner. It is the sum of the column above. The last number in this column is the terminal value.. The Terminal Value ($164B) is computed with a Gordon Growth Model that multiplies terminal cash flow by 18.02 and then discounts it by 33.6%. Equivalently, mutiplies terminal cash flow by 6.047. Terminal Cash Flow is $27.1B. Terminal WACC is 7.55% and terminal growth is 2%. So the terminal multiplier is the reciprocal of 5.55% (which is 18.02).