BEHIND THE NUMBERS
EARNINGS QUALITY & DIVIDEND SUSTAINABILITY RESEARCH

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International Business Machines Corp. (IBM) EQ Review- 9/20 Qtr.

Current EQ Rating*	Previous EQ Rating
2-	na

6- "Exceptionally Strong"
5- "Strong"
4- "Acceptable"
3- "Minor Concern"
2- "Weak"
1- "Strong Concerns"

Note that a "+" sign indicates the earnings quality improved in the most recent quarter while a "–" sign indicates deterioration

*For an explanation of the EQ Review Rating scale, please refer to the end of this report

We are initiating earnings quality coverage with a 2- (Weak) rating.

IBM recently announced it would spin-off some of its older technology units and focus on the remaining "growth" units. Our problem is IBM has been doing this for 20 years now – not with a full spin-off but culling lower margin units and making 172 acquisitions of new growth companies. Coming into the spin-off, IBM has almost tripled its debt and despite all the deals, it is posting nearly the same income as it was 15-years ago.

IBM hit forecasts in 3Q20 and beat slightly in 2Q and 1Q. We believe the company has benefited from cutting advertising, R&D, and depreciation to achieve its earnings goals. Adjusted earnings are inflated as it ignores all acquisition-related amortization and both adjusted and GAAP earnings are inflated by assigning the bulk of acquisitions to goodwill which is not being expensed at all. With $2.5 billion in new restructuring charges expected in 2021, we expect earnings quality to get worse.

What concerns us?

- IBM is earning about the same profit now as in 2005 – about $12 billion. That is being helped by nearly $1 billion by using longer amortization lives for Red Hat than prior deals.

- After buying over 100 software companies in the last 15-17 years, IBM has seen R&D spending decline and invested less in software on the cash flow statement.

- Goodwill is now 350% of equity and debt has almost tripled to fund acquisitions. Non-expensing of goodwill is also boosting income.

- Adjusted earnings add back several recurring charges related to pensions and acquisitions.

- ROI appears lower than when all this portfolio turnover began. That's before adjusting for lack of expensing for acquired assets or using longer life assumptions.

What is strong?

- IBM has over $14 billion in cash on hand so we do not see the dividend or debt facing near-term problems.

- The company has reduced its financing services and has picked up cash flow from selling and collecting receivables – this has produced about $17 billion since 2018.

What to watch

- The cash from receivables may dry up going forward and IBM would have a difficult time funding share repurchases without it in our view. Lack of share repurchases has already become a headwind for EPS growth in 2020 vs. a historical 3% tailwind.

- IBM has taken about $11 billion in charges to right-size its workforce since 2003. It leaves these in adjusted EPS. With the spin-off and $2.5 billion in charges – will these workforce charges find their way into adjustments in 2021 and create higher EPS growth?

- IBM realized a $939 tax benefit from an intra-company transfer or intangible assets in 1Q20. Will a spin-off result in more of these types of one-time benefits in 2021?

- Capital spending recently turned up after seeing it decline for several years. Will this become a new trend and result in lower free cash flow? Will this cause depreciation to be a drag on margins?

Big Picture – IBM Over Time

This company has been around for a long time. It has changed its products and services multiple times. Since 2003, IBM has made 172 acquisitions – largely in software – and spent over $11 billion cutting workforce – about $500 million per year. All of that is with the goal of boosting revenue growth and profitability.

Just looking through the annual reports investors will see continual references to:

- IBM is reinventing itself
- IBM has culled out lower-margin businesses
- IBM will pursue high-value innovation over commodity technology via acquisitions

We think a snapshot of what IBM was doing in 2003-05 (non-recession years) compared to 2017-19 (recent non-recession years) may be enlightening:

	2019	2018	2017	2005	2004	2003
Sales	$77,147	$79,591	$79,139	$91,134	$96,293	$89,131
Gross Profit	$36,488	$36,936	$36,943	$36,532	$35,569	$32,547
EBIT	$11,232	$12,663	$12,214	$12,561	$11,205	$10,016
Gross Margin	47.3%	46.4%	46.7%	40.1%	36.9%	36.5%
EBIT Margin	14.6%	15.9%	15.4%	13.8%	11.6%	11.2%
Debt	$62,899	$45,812	$46,824	$22,641	$22,927	$23,632
Equity	$20,985	$16,929	$17,725	$33,098	$31,688	$27,864
ROI	13.4%	20.2%	18.9%	22.5%	20.5%	19.5%

This table makes very modest adjustments. It shows GAAP revenue and gross profit. Getting to EBIT, we added back interest expense, added back restructuring costs and charges for workforce reductions, and removed gains on asset sales. Just looking at that, it appears IBM is making basically the same profit now as it did 15 years ago on lower sales. In 2019, Red Hat results only reflect partial year results in 2019 against the full amount of debt which is why the ROI fell in 2019. In 2005, selling the low margin PC business to Lenovo was a big part of the margin gain.

In addition to negative top-line growth, what jumps out at us is IBM has clearly elevated its debt levels as it acquired more companies over the years rather than build in-house. That also means IBM never expensed much of the purchase price as it held a rising goodwill figure on the balance sheet. Looking over time, it appears that IBM viewed items like capital spending and R&D as places to save money. For a company that bought many software companies, it is spending less on new software development now than 15-years ago.

	2019	2018	2017	2005	2004	2003
Capital Exp.	$2,286	$3,395	$3,229	$3,842	$4,368	$4,393
Software Dev.	$621	$569	$544	$792	$688	$581
R&D Spend	$5,989	$5,379	$5,590	$5,842	$5,874	$5,314
Acquisitions	$32,630	$139	$496	$1,482	$1,738	$1,836
Goodwill	$58,222	$36,265	$36,788	$9,441	$8,437	$6,921
Acq. Intangibles	$15,235	$3,087	$3,742	$1,663	$1,789	$1,724
Equity	$20,985	$16,929	$17,725	$33,098	$31,688	$27,864

Goodwill and intangibles have gone from less than one-third of equity to 350% of equity. It's not expensing the goodwill at all. That is where IBM picked up about 1-2 points in EBIT margin and ROI. Also, the acquired intangibles were amortized over 3-7 years in 2005. Now, amortization is as long as 20 years. That is helping margins too. For non-GAAP results, IBM adds back all the amortization of acquired intangibles arguing those are non-cash expenses. Go tell the people who loaned IBM $58 billion that the acquisitions didn't use cash. Until 2019, IBM was also picking up margin from having lower depreciation.

With this big picture in mind, and IBM having announced it will split into two companies next year, we decided to look more closely at IBM's accounting methods and earnings quality.

Recent GAAP vs. Non-GAAP Show EPS Is Inflated by Ignoring Recurring Costs

In the last eight quarters, IBM has routinely reported adjusted Non-GAAP EPS about 40% higher than GAAP.

IBM's EPS	3Q20	2Q20	1Q20	4Q19
GAAP EPS	$1.89	$1.52	$1.31	$4.11
Add Acq. Exp.	$0.40	$0.41	$0.42	$0.42
Add Retirement Chgs	$0.26	$0.25	$0.28	$0.20
Add Tax Issues	$0.03	$0.00	-$0.17	-$0.02
Non-GAAP EPS	$2.58	$2.18	$1.84	$4.71
Non-GAAP Inflation	36.5%	43.4%	40.5%	14.6%
	3Q19	2Q19	1Q19	4Q18
GAAP EPS	$1.87	$2.81	$1.78	$2.15
Add Acq. Exp.	$0.66	$0.24	$0.18	$0.19
Add Retirement Chgs	$0.14	$0.11	$0.13	$0.38
Add Tax Issues	$0.01	$0.01	$0.16	$2.15
Non-GAAP EPS	$2.68	$3.17	$2.25	$4.87
Non-GAAP Inflation	43.3%	12.8%	26.4%	126.5%

We are willing to live with the tax issues that are largely immaterial. The 4Q18 tax adjustment relates to the tax law changes that every company had to deal with.

The 1Q20 tax issue was the result of transferring intangible assets to a different IBM entity. That led to setting up a deferred tax asset of $3.4 billion and a one-time benefit on income taxes of $939 million. To IBM's credit, it adjusted this benefit out of non-GAAP earnings. **We will be skeptical if we see several more of these types of tax benefits from transfers taken during the spin-off process during 2021** – especially if the company announces that its $2.5 billion cost forecast for the spinoff came in lighter due to moving other intangible assets to create one-time income from taxes.

The non-operating retirement adjustments are certainly a recurring charge. IBM defines these as "*Non-operating retirement-related costs are primarily related to **changes in pension plan assets and liabilities which are tied to financial market performance**, and the company considers these costs to be outside of the operational performance of the business.*" Much of these represent the recognition of actuarial losses. These adjustments can also include "*defined benefit plan and nonpension postretirement benefit plan amortization of prior service costs, interest cost, expected return on plan assets, amortized actuarial gains/losses, the **impacts of any plan curtailments/settlements** and pension insolvency costs and other costs.*" We think that given much of the continual workforce realignments, pension settlements may also be a part of this adjustment.

These changes can impact pension funding levels and result in additional cash infusions to the pension plans. IBM specifically calls this out as an issue for foreign pensions, "**Financial market performance could increase the legally mandated minimum contributions in certain non-U.S. countries that require more frequent remeasurement of the funded status.** We are not quantifying any further impact from pension funding because it is not possible to predict future movements in the capital markets or pension plan funding regulations."

The jump in recent acquisition expenses being added back are primarily the amortization of intangible assets and transaction costs for Red Hat. We are going to say that we consider these cash expenses as IBM pays cash for all these intangible assets. We are also going to say that these are recurring expenses as IBM made 172 acquisitions between 2003-2020. There are periods when the transaction costs and integration are at higher levels, but those represent cash payments also, just like realigning workforce levels and real estate are. Here are the recent pre-tax charges that IBM is adding back:

Acquisition Adjustments	3Q20	2Q20	1Q20	4Q19	3Q19	2Q19	1Q19	4Q18
Amort. Intang.	$458	$472	$473	$482	$473	$169	$173	$195
Transactions	$0	$0	$0	$26	$254	$102	$39	$12

We believe the recurring amortization of intangibles is impacted by IBM changing the amortization assumptions. Here are some assumptions in past years:

Amort Lives in Yrs	Red Hat	2017	2015	2013	2011
Client Relations	10	5-7	5-7	6-7	7
Completed Tech	9	5	5-7	5-7	7
Trademark/Patents	20	1-5	2-7	2-7	1-7

With Red Hat, IBM added $13.5 billion in intangible assets that are being expensed. It also assumed they had longer lives than most of the other deals they have made.

- Red Hat Client Relationships were valued at $7.2 billion and are creating a $720 million annual expense. However, at 7-years, the amortization would be $1.03 billion per year. EPS would be $0.27 lower per year.

- Red Hat Completed Technology was valued at $4.6 billion created at $511 million annual expense. At a more consistent 5-year policy, it would be $920 million in expense. That would cut EPS by $0.36 per year.

- Red Hat Trademarks and Patents were valued at $1.7 billion and are only being expensed $85 million per year. Past assumptions would indicate, 5-years may be more reasonable. That would cut EPS by $0.22 per year.

Remember the first table comparing IBM's recent results to 2005-2003 where EBIT is essentially flat at $12 billion. Simply giving Red Hat much longer amortization lives on intangible assets is adding almost $1 billion to EBIT. Using more consistent amortization lives makes current results look considerably less attractive.

Also, they still assigned the bulk of acquisition costs to Goodwill. IBM has $58 billion in Goodwill with $23 billion from Red Hat (Red Hat cost $35 billion so 66% of the purchase price is not being amortized at all.) Had IBM built any of these assets assigned as goodwill in-house, margins would be considerably lower. This is supposed to be tech company – are there any assets here with eternal life? Think of the personal computer – it essentially didn't exist 40 years ago. It came out and grew and IBM divested it for a modest sum 15-years ago. There was a solid 10-12 years where that was a big part of the business, but that is a far cry from saying its value today should still be carried on the books as goodwill forever.

Given IBM's goodwill a 40-year life and expensing it – it would cut another $1.5 billion off of EBIT. That would make EBIT in the $9.5-$10.0 billion range and ROI would be about

11%-12% and EBIT margins would about 12%-13% - roughly equal to 2004-2005. That may still be overly generous. Had they built these assets in-house a 10-15 year life may be more reasonable and that would cut the returns even more.

That's why we say these are real expenses. IBM is spending real cash and incurring real debt to pay for these assets. Lengthening amortization lives and then calling the amortization a non-recurring cost is inflating income figures. Plus, assigning the bulk of the purchase price to goodwill and not amortizing it all is inflating income even more. The goodwill argument is always that *Mickey Mouse* and *Oreos* represent iconic assets that have demonstrated proven value for much longer than 40 years. We counter that we have seen far more assets like VCRs or 35mm film where new technology made the older assets obsolete quicker than most people expected. What we would expect is IBM to see a growing risk of impairments for intangible assets including goodwill – or investors will see it cull assets it acquired 5-10 years ago at lower prices as tech changes further. We will be curious to see if the spin-off in 2021 results in some impairments of intangible assets that are moved to the spin-off entity. Of the $2.5 billion in charges expected with the spin-off, $1.0 billion are expected to be non-cash.

Recent EPS Was Helped by Reduced Costs

Most people are going to give passes for 2020 results. IBM also has issues with Red Hat being a significant acquisition during 2019 that can skew y/y results. Red Hat was spending about $600 million on R&D per year or $150 million per quarter. It was spending about $30 million per quarter on advertising as well. We were looking for quarters where spending was up for the combined company by at least that much:

3Q20 saw reported EPS of $1.89 and IBM met forecasts:

- R&D declined by $38 million – which added 3-cents to EPS.
- If R&D should have risen – the EPS would have had a negative impact.
- Advertising declined by $20 million – which added 2-cents to EPS.
- Same as R&D, it probably should have increased and thus the EPS would have dropped.
- Workforce expenses fell by $6 million – which added another 0.5 cents.

2Q20 saw reported EPS of $1.52 and IBM beat forecasts by 9-cents:

- Advertising fell by $58 million – which added 5-cents to EPS.
- Workforce expenses fell by $358 million – which added 32-cents to EPS.
- R&D rose by $175 million which looks fine or even a 2-cent headwind.

1Q20 saw reported EPS of $1.31, which beat by 4-cents adjusted for the tax benefit of $0.17 from transferring intangibles to another intra-company entity:

- Advertising fell by $4 million – adding 0.4 cents to EPS, and probably helped by 3-cents as advertising should have risen by $30 million.
- Depreciation fell by $131 million. Red Hat should have added about $15 million. That likely added by another 12-cents.
- R&D looked fine as it rose nearly $200 million y/y.
- Workforce reductions also jumped over $700 million y/y.

While not directly impacting immediate EPS, we did notice that investing in software remained flat at IBM after the Red Hat deal. Also, capital spending remained flat until 3Q20 when it did increase.

Also, as we noted earlier, IBM has taken a charge to cut its workforce every year for over 18 years now. In both GAAP and non-GAAP EPS, the company does not adjust for that. We will be curious to see with the spin-off where it expects $2.5 billion in charges – if workforce reductions become part of that $2.5 billion and are added back going forward. That would set up apples-to-oranges EPS comps where 2021 has the charges added back while 2020 did not.

Cashflow Has Been Helped by Winding down Financing and Selling Receivables

If we look at the basic parts of cash flow from operations being income plus non-cash items like depreciation and amortization against cash needs like capital spending, dividends, and share repurchases – IBM has not had much wiggle-room of late:

Cash Flow	2020 ytd	2019	2018	2017
Net Income	$4,234	$9,431	$8,728	$5,753
Non/Cash Items	$5,734	$4,115	$5,996	$4,158
Cash In	$9,968	$13,546	$14,724	$9,911
Capital Spend	$1,940	$2,286	$3,395	$3,229
Software Spend	$469	$621	$569	$544
Free Cash Flow	$7,559	$10,639	$10,760	$6,138
Dividends	$4,343	$5,707	$5,666	$5,506
Share Repos	$0	$1,361	$4,443	$4,340

We have already highlighted that IBM has been spending less on R&D and advertising recently to help income and cash flow. It has been spending less on capital expenditures and software too. The business has had a tough time covering dividends and share repurchases in recent years at prior levels. And we know they have spent money on acquisitions.

What is less obvious is they have pulled a sizeable amount of cash out of the various receivables. IBM has stopped doing commercial financing for OEM IT distributors.

- In 2018, total receivables fell by $1.5 billion from $41.2 million.
- In 2019, they dropped $7.2 billion more.
- So far in 2020, they are down by $8.2 billion. IBM has even accelerated that further by selling receivables and picked up $1.6 billion of the $8.2 billion in 2020 with that method.

So this is cash coming in to cover acquisitions and other spending. It's not going to hit zero. And it's already down nearly $17 billion. This source of cash flow may have less of an impact going forward and leave IBM to deal with a cash flow statement that looks more like the table above which does not show working capital benefits.

The fact that share repurchases slowed considerably in 2019 and stopped in 2020 is starting to show up in reduced EPS growth:

EPS Growth	3Q20	2019	2018	2017
y/y Income growth	1.5%	8.4%	51.5%	-51.5%
EPS growth	1.0%	11.1%	54.9%	-50.4%

IBM had been getting about 3% extra growth for EPS due to share repurchases. That already became a headwind in 2020.

Explanation of EQ Rating Scale

6- "Exceptionally Strong"	Indicates uncommonly conservative accounting policies to the point that revenue and earnings are essentially understated relative to the company's peers. Higher possibility of reporting positive earnings surprises
5- "Strong"	Indicates the company has no areas of concern with its reported results and we see very little risk of the company disappointing due to recent results being overstated from aggressive reporting in recent periods.
4- "Acceptable"	Indicates the company may have exhibited a minor "red flag", but the severity of the issue is not yet a concern. Minimal risk of an earnings disappointment resulting from previous earnings or cash flow overstatement
3- "Minor Concern"	Indicates the company has exhibited either a larger number of or more serious warning signs than companies receiving a 4. The likelihood of an immediate earnings or cash flow disappointment is not considered to be high, but the signs mentioned deserve a higher degree of attention in the future.
2- "Weak"	Indicates the company's recently reported results have benefitted materially from aggressive accounting. Follow up work should be performed to determine the nature and extent of the problem. There is a possibility that upcoming results could disappoint as the impact of unsustainable benefits disappears.
1- "Strong Concerns"	Indicates that the company's recent results are significantly overstated and that we view a disappointment in upcoming quarters is highly likely.

In addition to the numerical rating, the EQ Review Rating may also include either a minus or plus sign. A minus sign indicates that our analysis shows the overall earnings quality of the company has worsened since the last review and there is a possibility the numerical rating will fall should the problem continue into the next quarter. Likewise, a positive sign indicates that the overall earnings quality is improving, and the company may see an upgrade in its numerical rating should the trend continue.

Key Points to Understand About the EQ Score

The EQ Review Rating is much more than a blind, quantitative scoring method. While we utilize proprietary adjustments, ratios, and methods developed over decades of earnings quality analysis, the foundation of all of our analysis is reading recent SEC filings, press releases, conference call transcripts and in some cases, conversations with managements.

The EQ Review Rating is not comparable to a traditional buy/sell rating. The Rating is intended to specifically convey the extent to which reported earnings may be over/understated. Fundamental factors such as forecasts for future growth, increasing competition, and valuation are not reflected in the rating. Therefore, a high score does not in itself indicate a company is a buy but rather indicates that recent results are a good indication of the underlying earnings and cash generation capacity of the company. A low score (1-2) will likely result in us performing a more thorough review of fundamental factors to determine if the company warrants a full-blown sell recommendation.

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