BEHIND THE NUMBERS
EARNINGS QUALITY & DIVIDEND SUSTAINABILITY RESEARCH

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Verisk Analytics (VRSK) EQ Review

Current EQ Rating*	Previous EQ Rating
4+	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 initiate earnings quality coverage of VRSK with a 4+ (Acceptable) rating.

We do not have a high degree of concern with VRSK's accounting quality. We do believe the period over which it amortizes developed software assets is unrealistically long. Also, the adding back of the amortization of intangible assets along with acquisition earn-outs to non-GAAP results distorts that measure as a true picture of VRSK's earnings profile, but this is a common problem among technology companies. Acquisitions are a key part of the company's growth strategy, but there is organic growth without the acquisitions and cash flow covers the dividend, buyback, and acquisition spending in a typical period.

More specifically:

- The largest asset in the property, plant and equipment category is internally developed software which the company amortizes over 3-7 years. However, comparing software amortization to the average gross balance of capitalized software development costs indicates an effective amortization period of over 6 years. (Note that it amortizes purchased third party software over 3 years.) Given the speed of technological advancement, we doubt that code written

today will still be adding a great deal of value to the company's operations in 6 years without considerable investment to keep it current. We estimate that if the company had cut its amortization period of developed software to 4 years, it would have taken about 31 cps off the 2019 non-GAAP earnings figure of $4.38.

- The company's acquisition strategy has resulted in a sizeable intangibles balance. It amortizes the acquired technology portion of the intangibles balances over 7 years. Again, this seems unrealistically long. Cutting the amortization period of acquired intangible technology assets to 3 years would have boosted 2019 intangible annual amortization expense by 43 cps.

- Like most of its technology peers, VRSK adds back intangibles amortization to non-GAAP EPS. For 2019, non-GAAP net income of $729 million had $109 million of after-tax intangibles amortization added back. This distorts the true earnings picture of the company, but we note that this is not as pronounced as some companies we see where half of non-GAAP earnings evaporate without intangibles amortization added back.

- VRSK's acquisitions regularly include contingency components whereby VRSK makes additional payments to the seller if the acquired operations meet certain performance targets. VRSK adds these "earn-outs" back to non-GAAP earnings. The amounts are volatile with some quarters having none and some accounting for 10-15% of non-GAAP earnings. While we agree that some sort of adjustment for these larger amounts is necessary when analyzing core growth rates, we caution analysts not to completely dismiss these amounts as they represent real cash investments.

- While the Energy and Specialized Markets segment accounts for only about a quarter of sales, acquisitions have driven goodwill related to the segment to more than 60% of the total company goodwill balance. The fair value of these assets is reviewed for impairment regularly with the valuation based on estimates of revenue and EBITDA assumptions years into the future. The valuation of the Energy and Specialized Markets segment was cited as a critical audit matter in the 10-K which simply means it is a key point of valuation for the company that is heavily reliant on estimation. The 2019 10-K does not caution investors about a small cushion between fair value and carrying value which would ordinarily make this a non-issue in our minds.

However, given the rapid deterioration in the energy markets, it is possible that future goodwill valuation could lead to an impairment charge.

- Lower stock compensation expense added about a penny per share to EPS growth in the 12/19 quarter. This is not a material issue, and we would complement the company for not adding back stock compensation expense to non-GAAP results as many of its peers do.

Company Description

VRSK's origins go back to 1971 when the Insurance Service Office (ISO) began as a non-profit advisory and rating organization consisting of an association of insurance companies gathering statistical data and other information from the insurance markets. The original purpose was to develop solutions to help insurance companies build and manage programs and product offerings. In 2009, ISO went public as Verisk Analytics.

Through a series of acquisitions, the company has expanded its services into other insurance-related functions such as data analytics, catastrophe modeling, and fraud prevention. Also, the company has built an Energy and Specialized Markets segment that provides data and analytics to natural resources companies, as well as its Financial Services Segment which provides competitive benchmarking, decision algorithms, and analytic services to financial institutions, payment networks and processors, alternative lenders, regulators, and merchants. For 2019, insurance accounted for 71% of total revenue, Energy and Specialized Markets accounted for 22% and Financial Services 7%.

Revenue Recognition and Cash Flow Profile of Acquisition Strategy

VRSK's product and services are generally sold on a subscription basis where customers are invoiced either annually, quarterly or monthly. Revenue is recognized on a ratable basis over the contract term, generally ranging from 1-5 years. As a result, the company's cash receipts are front-loaded and growth in revenue leads to an immediate growth in cash flow. As shown in the following table, VRSK carries a

substantial deferred revenue balance representing the cash received ahead of being recognized as revenue on the income statement:

	12/31/2019	12/29/2018	12/30/2017
T12 Revenue	$2,607	$2,395	$2,145
Deferred Revenue	$440	$383	$385
Deferred Revenue Days	61.6	58.4	65.5

Deferred revenue is greater than receivables in most periods:

	12/31/2019	12/29/2018	12/30/2017
T12 Revenue	$2,607	$2,395	$2,145
Accounts Receivable	$442	$356	$346
DSOs	61.8	54.3	58.8

Note that the jump in DSOs is impacted by both acquisitions and divestitures.

As we will discuss in a later section, VRSK regularly makes acquisitions as part of its growth strategy. The following table shows a history of deals made over the last three years:

2019	
Flexible Architecture & Simplified Tech- 12/23/2019-	$192.4
Commerce Signals- 12/5/2019	$3.8
Genscape- 11/5/2019	$353.2
BuildFax - 10/10/2019	$40.4
Property Pres Wizard - 8/28/2019	$15.0
Keystone Aerial Surveys - 7/31/2019	$29.8
CaaS Business of and Enterprise App Provider	$69.1

2018	
Rulebook- 12/14/2018	$86.5
Validus-IVC Limited - 6/20/2018	$46.1
Business Insight Limited - 2/21/2019	$18.0
Marketview Limited	$4.0

2017	
PowerAdvocate - 12/29/2017	$200.4
Service Software - 12/22/2017	$6.8
Rebmark Legal Solutions - 11/9/2017	$2.5
Lundquist Consulting - 8/31/2017	$150.6
Sequel Business Solutions - 8/23/2017	$320.3
G2 Web Services	$112.0
"Aerial Imagery Acquisitions" - 6/30/2017	$28.1
MAKE Consulting A/S - 5/19/2017	$16.9
Fintellix Solutions Private Limited - 3/31/2017	$16.9
Emergent Network Intelligence Limited - 2/24/2017	$6.1
Healix International Holdings Limited - 2/16/2017	$52.4
Arium Limited - 1/21/2017	$1.9

In an acquisition-heavy year such as 2019, free cash does not cover acquisitions, buyback, and dividend.

	12/31/2019	12/29/2018	12/30/2017	12/31/2016
T12 Operating Cash Flow	$956	$934	$744	$578
T12 Capex	$217	$231	$184	$157
T12 Free Cash Flow	$740	$703	$560	$421
T12 Dividends	$164	$0	$0	$0
Dividend % of Free Cash	22.1%	0.0%	0.0%	0.0%
T12 Net Stock Repurchases	$300	$439	$276	$327
Cash Flow after Buyback	$276	$265	$284	$94
T12 Net cash for acquisitions	$704	$153	$915	$74
Cash After Buyback and Acquisitions	-$428	$112	-$631	$20

Note that for 2019, the bulk of the acquisition spending was in the fourth quarter which means the cash spent on acquisitions was fully reflected in the above numbers while the acquired operations generated less than a quarter of cash flow.

VRSK does generate organic growth without acquisitions as shown in the following table which compares reported revenue growth to growth adjusted for acquisitions and divestitures:

	2019	2018	2017
Reported Revenue Growth	8.9%	11.6%	7.5%
Excluding Acquisitions, Held for Sale and Disposition	6.2%	6.5%	4.5%

The fourth quarter 2019 acquisition spree drove debt up to 2.4 times adjusted EBITDA and leverage has ranged in the 2-2.4 range over the last two years.

Amortization Period of Software Development Costs Appears Long

VRSK spends heavily on developing its software primarily for internal use. While the company does sell software as a service with some of its products, internally developed software is vital to the company's model as efficiently collecting and processing enormous amounts of data is the bulk of the company's s value add. The largest component of its property, plant, and equipment balance is the $400 million "Software Development Costs line." According to its accounting policy discussion in the 10-K, it amortizes software development costs over 3-7 years. However, if we take the annual amortization of software development costs for 2019 and compare it to the average gross balance of software development costs, it appears that the effective useful life over which the amortization is calculated is over 6 years:

	2019
Amortization of Internal Use Software Development	$100
Amortization of Software Developed for Sale	$13
Total Internally Developed Software Amortization	$113
Avg Gross Capitalized Software Development Costs	$714
Implied Amortization Period	6.3 yrs

6 years is longer than most amortization periods we see for such capitalized developed technology costs. Intuitively, given the rapid pace of technology, we doubt much of the code being written today will still be adding value more than 6 years from now without significant spending to keep it updated. At the very least, we believe it would take an accelerated amortization schedule to most closely reflect actual experience rather than the straight-line method employed by VRSK. Interestingly, VRSK amortizes purchase software over 3 years.

Software development amortization currently costs approximately 54 cps. To put this in perspective, if the effective amortization period was reduced to just 4 years, it would result in a 31 cps increase in developed software amortization expense which represents about 7% of 2019's non-GAAP EPS of $4.38.

We note that the company has begun to pare back its capital spending which fell to 8.1% of revenue in 2019 from 9.6% in 2018. As such, it projected in the fourth-quarter conference call that fixed asset depreciation and amortization will decline to $170-$180 million in 2020 from $186 million in 2019.

Amortization of Intangible Assets

In most cases, VRSK books the majority of the fair value of its acquired companies under goodwill with most of the balance recorded as an amortizable intangible asset. The goodwill is never amortized thus erasing the impact of that cost on future earnings. Intangible assets are amortized to earnings and the following table shows the gross balance of the intangible asset categories and the weighted average useful lives of each for the last several quarters:

Weighted Average Useful Lives of Intangible Assets

	Gross Balance at 12/19	12/31/2019	9/28/2019	6/29/2019	3/30/2019	12/29/2018	9/29/2018	6/30/2018
Technology	$519.2	7	8	8	8	8	8	8
Marketing	$265.3	16	16	16	16	16	17	16
Contract	$5.0	6	6	6	6	6	6	6
Customer	$901.2	13	14	14	14	14	14	14
Database	$484.6	19	19	19	19	19	19	19
	$2,175.3							

On the positive side, the amortization periods for acquired intangibles have remained very stable over the last two years. However, the company's acquired technology assets, which likely are made largely of investments in software, are being amortized over 7-8 years. As we discussed in the section above, we believe the company's effective amortization period of internally developed software costs of more than 6 years is too high to accurately reflect how long these assets are generating value for the company. We would argue that the useful life of acquired assets should be even shorter as the technology likely requires additional investment to integrate into the company's systems and some will likely be abandoned for all practical purposes.

Amortization expense associated with acquired technology assets currently amounts to 33 cps. If the effective amortization period was reduced to 3 years from 7, it would cost an additional 43 cps.

Adding Back Amortization of Intangibles Distorts Non-GAAP Numbers

As we noted in the previous section, the amortization of acquired technology assets appears unrealistically low. However, like many technology companies, VRSK adds back amortization of acquired intangibles to its non-GAAP earnings figures. In 2019, non-GAAP net income of $729 million had $109 million (after-tax) of intangibles amortization expense added back. As we have pointed out with several similar companies, we view this as a major distortion as the company would have spent cash to develop those assets itself had it not acquired them, either in the form of internally developed technology or through the costs to acquire contracts. Management has implied that internally developed technology is a major component of capital spending, so these amounts represent very real cash expenses the company would have otherwise occurred if the cash has not been spent to acquire it. We do note that the distortion is not as large for VRSK as it is for some companies we have looked at where half or more of non-GAAP earnings evaporate if the amortization expense is taken out.

Adding Back Earn-Outs Also Distorts Non-GAAP Results

Also on the non-GAAP adjustment front, we note that the company adds back acquisition-related earn-outs in its non-GAAP results. The following table shows these adjustments versus non-GAAP EPS for the last eight quarters:

	12/31/2019	9/28/2019	6/29/2019	3/30/2019
EPS Impact of Acquisition Earn-Outs	$0.16	$0.16	$0.04	$0.06
Non-GAAP EPS	$1.13	$1.12	$1.10	$1.03
% of Non-GAAP EPS	14.0%	14.5%	3.7%	5.8%

	12/29/2018	9/29/2018	6/30/2018	3/31/2018
EPS Impact of Acquisition Earn-Outs	$0.01	$0.00	$0.00	$0.01
Non-GAAP EPS	$1.04	$1.08	$1.05	$0.94
% of Non-GAAP EPS	1.3%	0.1%	0.1%	1.6%

Most of the company's acquisitions contain a contingency component whereby the company has to pay additional amounts if the acquired company meets certain pre-determined performance targets. We do not disagree that analysts should make their own adjustments in periods such as the 12/19 and 9/19 quarters in which the earn-outs materially distort reported growth rates. Some may even view these payments as a good sign as they indicate that the acquired operation is performing well. However, we caution analysts from totally ignoring these costs as they are very real cash payments that the company is incurring that is essentially being ignored by the non-GAAP results.

Energy and Specialized Markets Goodwill

Despite accounting for less than a quarter of revenue, acquisitions have resulted in the Energy and Specialized Markets segment accounting for more than 60% of the goodwill on the company's balance sheet as shown in the table below:

	2019	2018	2017
Insurance	$999	$834	$749
Energy and Specialized Markets	$2,390	$2,055	$2,150
Financial Services	$476	$473	$470
	$3,864	$3,362	$3,369

As we mentioned above, this goodwill is not amortized so that portion of the cost associated with the acquisition never impacts the income statement. However, the goodwill is subject to annual impairment review and the Energy and Specialized segment goodwill was specifically cited as a critical audit matter in the 2019 10-K. This does not mean that auditors found anything wrong in the reporting of goodwill, but rather indicates it is a material matter relating to the valuation of the company which is reliant on a particularly large degree of estimation. Consider the following comment from the auditor's letter in the 10-K:

> *"Given the significant judgments made by management to estimate the fair value of the reporting unit within the Energy and Specialized Markets reportable segment including management's judgments in selecting significant assumptions to forecast future revenues, EBITDA margins, and the discount rate, as well as the selection of revenue and EBITDA multiples, performing audit procedures to evaluate the reasonableness of management's estimates and assumptions for the reporting unit within the* ***Energy and Specialized Markets reportable segment required a high degree of auditor judgment and an increased extent of effort, including the need to involve our fair value specialists."***

The company did not mention that the cushion between fair value and carrying value was narrow in the goodwill and intangible footnotes. Therefore, we would not have mentioned this issue at all were it not for the recent carnage in the energy sector. Below is a description from the 10-K regarding the services offering by the Energy and Specialized Markets segment:

> *"We provide research and consulting services focusing on exploration strategies and screening, asset development and acquisition, commodity markets, and corporate analysis. We offer consultancy in the areas of business environment, business improvement, business strategies, commercial advisory, and transaction support."*

Given that most exploration companies have slashed their capex budgets for 2020 due to the plunge in oil prices, we would not be surprised to see significantly below-plan results from this segment. This could materially impact the fair value estimates for the associated goodwill and therefore, a write-down in the value of the goodwill does not seem out of the question in our minds.

Lower Stock-Based Compensation Added a Penny

Stock compensation expense fell by about a penny per share in the 12/19 quarter as shown below:

	12/31/2019	9/28/2019	6/29/2019	3/30/2019
Stock based compensation	$6.300	$8.800	$18.400	$9.200
EPS Impact of Difference in Stock-Based Compensation	$0.010	$0.007	-$0.035	-$0.002

	12/29/2018	9/29/2018	6/30/2018	3/31/2018
Stock based compensation	$8.400	$10.300	$11.000	$8.800
EPS Impact of Difference in Stock-Based Compensation	-$0.004	-$0.007	-$0.010	-$0.011

This is not a material issue at present. *We also want to compliment the company on not adding back stock compensation expense to its non-GAAP results as is common in many of the company's technology peers.*

Change in Long-Term Incentive Compensation Will Cause a Shift in Expense

Just as a housekeeping matter, we note that the company cautioned investors in the conference call that a change in the timing of long-term incentive compensation will result in a material shift in expense recognition in the first half of the year:

> *"The company recently changed the timing of the grant of long-term incentive compensation into the first quarter from the second quarter previously. This timing change aligns Verisk with a greater market and more closely times employee compensation with calendar year results.* ***The resulting impact will be increased expense of $10 million in the first quarter related to long-term incentive compensation, but that will reverse to a benefit in the second quarter."***

Explanation of EQ Rating Scale

Rating	Description
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.

Disclosure

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