BEHIND THE NUMBERS
EARNINGS QUALITY & DIVIDEND SUSTAINABILITY RESEARCH

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Healthcare Services Group (HCSG)- Maintain SELL 10-K Delayed by SEC Subpoena

We had hoped to have more information on the most recent jump in bad debt expense at HCSG in the 4Q18. It appeared to us that it may have written off more of its LT notes receivables as well, but not enough data was provided in the press release to fully comment. We would also like to see some clues as to why the company claims that 40% of its customers are now paying within 7-15 days and reported receivables have only moved down slightly. HCSG disclosed that the SEC inquiry into its reporting procedures has become a subpoena. Therefore its 10-K will be delayed.

Welltower (WELL) 4Q 18 Follow-Up

Welltower (WELL) released its 10-K report and we were able to add some of the numbers we were missing for the 4Q analysis. We also reviewed some of the information from Brookdale Senior Living (BKD), Ventas (VTR), and Senior Housing Properties Trust (SNH). **We maintain a bearish view on this industry and a SELL recommendation on WELL.** The supply of senior housing remains too high as much came online years too early, which is pressuring pricing and the costs for labor and retention of labor. We also see a growing issue of many older properties being modernized where they will compete more effectively at a lower price point than new construction:

- The industry continues to see weak occupancy and poor income growth on same-store comparisons. The full portfolio trends are worse.

- The industry is indicating the need for more refurbishing of older properties – and is doing it.

- This confirms our concern that FFO reported by Welltower is overstated. When adjusting for the full level of capital spending on existing properties, WELL's FFO does not cover its dividend.

- The age of WELL's portfolio should also mean higher capital spending could continue and/or more asset sales are likely to shrink the size of the asset base. 35% of its operating senior housing is over 20 years old and 55% of its Triple-Net properties are over 20 years old.

- There is already a history of WELL seeing Triple-Net operating partners in financial problems, selling off assets, and negotiating leases down. Others competitors are seeing this too. That can pressure pricing throughout the group too in our view or lead to more lease restructuring or needing to manage and upgrade more Triple-Nets too for Welltower.

What Recovery?

Welltower has been focusing on a turnaround in the business for occupancy and that it hopes this will continue. We hold to the basic fact that the age when baby boomers are most likely to enter senior housing won't be reached until 2028. New supply continues to come online although at a slower rate than in the past. Industry-wide – there is not much improvement in the Senior Housing Operating sector:

SSS Occupancy	4Q18	4Q17	4Q16
Welltower	88.3%	87.9%	90.7%
Ventas	88.5%	88.6%	90.4%
Brookdale	84.7%	86.0%	87.1%
Sr Housing Lease	81.9%	83.5%	84.7%
Sr Housing Mgd	86.2%	85.9%	86.5%

Most of these companies have had considerable transition of their portfolios in recent years. Welltower investors know it has moved many Triple Net Lease properties into operating RIDEA structures where it shares in expenses and capital investments. We used just the Senior Housing Operator units for each of these companies and we added both the leased and managed figures for Senior Housing Properties because the managed side was much smaller.

As the risks and costs increase with being part of the ownership equation, we also looked at changes to Net Operating Income for these same divisions. All of them are complaining about higher wages and other expense growth. There is also still some pressure on rents. In any event, income growth is largely negative in the industry:

SSS NOI Growth	4Q18	4Q17	4Q16
Welltower	0.6%	1.5%	1.7%
Ventas	-3.5%	-0.1%	1.1%
Brookdale	-8.4%	-6.6%	-3.3%
Sr Housing Lease	-0.7%	0.7%	1.8%
Sr Housing Mgd	-11.8%	-3.4%	-3.1%

Every operator reported weaker operating income growth for each of the last two years. And remember, these are the same-store results comps. They are trying to keep their stronger

properties and cull weaker ones, but those other properties are still out there in someone's portfolio. Look at the full numbers:

Occupancy	4Q18	4Q17	4Q16
Welltower	87.2%	87.3%	90.3%
Ventas	87.7%	88.6%	90.5%
Brookdale	84.4%	85.2%	86.0%
Sr Housing Lease	81.9%	83.5%	84.7%
Sr Housing Mgd	85.8%	95.9%	85.2%

NOI Margins	4Q18	4Q17	4Q16
Welltower	30.2%	31.9%	32.1%
Ventas	34.7%	37.1%	38.1%
Brookdale	30.6%	32.7%	34.3%
Sr Housing Lease	-950bp	+110bp	+290bp
Sr Housing Mgd	20.7%	23.3%	24.6%

Margins are dropping even faster when looking at the full portfolios. Looking at conference calls, a common theme as these companies have become more involved in operating the properties and not just collecting rent is wages are up along with employee turnover. Brookdale summed this very well on its call:

> *"Our communities have a very high fixed cost structure and think about the investments that you need to run a community, that's a step function. When you shrink occupancy below a certain level, you can't cut costs. You still need to operate your community 24x7. You still need to have nursing and staff, you still need to serve three meals a day in your dining room."*
>
> *"One thing you may not realize is, because we have to have people on staff. If we have too much turnover, we have to go to overtime and contract labor because we cannot leave our residents without and nurse on staff and we have to serve three meals a day."*

The other issue we have talked about rents and churn comes into play here too. While elderly residents may have an annual price increase, most only stay 30-36 months. The companies even say that it is the initial rent on new customers that has more to do with

pricing changes. As there has been oversupply in the industry as evidenced by the falling occupancy rates, there has been pressure to reduce rents. At the same time, wage growth is being driven by $15 minimum wages in some states and the overall tighter labor market. So, the wages are rising faster than new people are moving in via the churn. And the wages are rising faster than rents in many cases because lower occupancies allow people to shop for cheaper locations.

In the first waves of this squeeze, the real estate companies were collecting triple-net lease payments from operators with rent escalators. The operators were being squeezed by lower occupancy and lower rents on new customers on the top and by rising labor and rents from underneath. That's a reason Brookdale restructured master leases with Genesis and Brookdale and bought another group out of bankruptcy. Getting into the business of operating the properties simply exposes Welltower to more of these problems, which are not ending. Here is what Senior Housing Properties said about its largest operator:

> *"In November, our largest tenant and operator of our senior living communities, Five Star Senior Living announced that there is substantial doubt about its ability to continue as a going concern. We are currently engaged in discussions with Five Star about a possible restructuring of our agreements to address its operating and liquidity issues."*
>
> *"Furthermore, any changes to our agreements with Five Star may negatively impact our cash flows and possibly our distributions to shareholders in the future. Because of the ongoing nature of these discussions, we are not going to comment beyond these prepared statements or answer any questions on the potential, theoretical outcomes that may possibly occur. We will publicly announce the results of these discussions if and when they are completed."*

Brookdale is an operator for both Ventas and Welltower. It has already restructured lease agreements there and is still planning to dump more properties back to them:

> *"So, let me start with the big picture, and then Steve can kind of jump in. As I look at our portfolio restructuring, we certainly have the 13 assets that are included in assets held-for-sale. In our agreements with both Ventas and Welltower last year, we had the ability to slightly prune those portfolios. We have reached an initial set of assets that we would like Ventas to market and they are working on marketing those.*

That's likely coming in the back half of the year given the time to do the marketing and transition."

Brookdale also does not believe that restructuring into a series of RIDEA deals like Welltower makes as much sense. In order to generate value, the operating partner has to be viable and trade at a premium. Plus, if the operator has issues, that reflects poorly on the value of the real estate. It spoke of this on its call and concluded that this structure would not unlock value or provide safety for the real estate value, boost liquidity, or reduce exposure to operators while it boosts capital commitments.

The Industry Is Remodeling/Upgrading Older Properties to Compete with New Ones

Investors have accepted that much of the senior housing space was built too early. However, they believe that new construction is slowing now which will allow demographics to fill more rooms and older properties will be unable to compete without considerable investment. The problem we see is that considerable investment is happening. Brookdale laid out its plans in the last call:

"Expected 2019 adjusted free cash flow results will be driven by the significant additional community level CapEx investments. These include major building infrastructure projects which are necessary to ensure that our communities are in appropriate condition to support our strategy and that we protect the value of our portfolio."

"So, our major projects really include end-of-life projects, like roofs, pavement, HVAC, water heaters with the building integrity around exterior paint, the building envelope and the skin, windows, doors plumbing and drainage. We got life safety, including nurse call systems, fire suppression that sort of thing. And then we do have some resident enhancement which is, landscaping walls and fences as well as exterior lighting that gets added to some apartment refurbs and that's partially offset by lower corporate CapEx."

Senior Housing Properties agreed:

"Repairs and maintenance increased over 10% in 2018. As we have discussed over the past several quarters, increased turnover costs are the result of our commitment to investing where needed to keep our units up to the quality standards of today's demand, and in line with new competition."

What the operators are seeing is they can keep more staff from leaving if they have better properties. That would reduce training costs and overtime. It makes it more difficult for newer properties to pull their staff away. We have seen this type of refurbishing happen in other types of infrastructure like oil rigs and airplanes as well as real estate with malls and apartments. The basic math is it can be cheaper to upgrade older properties than to build a new one. That means the older one doesn't go away from supply. It also allows the older property to hold or boost rents. However, it still does not require the same level of leasing rates as the new property.

To use rough numbers that we will make up just to illustrate – let's say the current situation is new properties charge $2000 per month while something 25 years old charges $1,000 per month. The new property has better amenities, it's cleaner, it may have a more energized staff. It can charge the premium rent and get it because it's more of an apples-to-oranges comparison. New competes against new and old competes against old. However, if the older property can be upgraded to match much of what the new one offers, but still have rent at $1,500 – that becomes a tougher competitor for new properties and can pressure rents there. Maybe the new place has to lower rents to $1,800. Going forward, that could take the steam out of rents from new properties and lower ROI's there, crater rents on older properties that are not upgraded, offset only by older properties that underwent considerable investment improvements.

This is the situation we see developing and the more some of these players like Welltower move toward RIDEA structures, it will need to pay its share of rising capital spending investments.

Welltower Capital Spending Is Already Rising

We have said this many times - Welltower has transitioned from nearly 100% Triple-Net leasing to a majority of revenues coming from participating in operating revenues and costs of the actual property. Now occupancy moving up or down and higher labor costs have a direct impact on WELL cash flows. It also has to pay for part of the maintenance and

upgrading capital spending. The company likes to tout FFO (Funds from Operation) as essentially cash earnings and compare that to the dividend payment. The higher revenue stream from being in operations rather than triple-net is pushing up FFO. Now the company needs to subtract the capital spending made on existing properties to report net FFO – just like free cash flow:

($000s)	4Q18	3Q18	2Q18	1Q18
FFO	$382.8	$285.3	$378.7	$353.2
Maint. CapEx	$92.6	$62.3	$64.8	$46.5
Net FFO	$290.2	$223.0	$313.9	$306.7
FFO/Share	$1.01	$0.76	$1.02	$0.95
Net FFO/Share	$0.76	$0.60	$0.84	$0.82

($000s)	4Q17	3Q17	2Q17	1Q17
FFO	$380.3	$295.7	$384.4	$306.2
Maint. CapEx	$91.2	$66.0	$51.0	$42.1
Net FFO	$289.1	$229.7	$333.4	$264.1
FFO/Share	$1.02	$0.80	$1.04	$0.84
Net FFO/Share	$0.78	$0.62	$0.91	$0.72

The dividend per share is $0.87 per quarter the company is not earning it on a net figure. This maintenance figure on existing properties has been increasing for years at this point as WELL has focused more on operating arrangements like RIDEA:

($000s)	2018	2017	2016	2015	2014
Maint. Cap Ex	$266.2	$250.3	$219.1	$187.8	$132.9

We think this is going to continue to increase. First, because the company has more properties that it is responsible for maintaining. At the end of 2015, it had 380 properties classified as operating investments. In the latest 10-K, it's up to 487. Second, it has a large number of aged properties:

Built in	# of SHOs	% Total
1960s and before	17	3%
1970s	15	3%
1980s	50	10%
1990-1998	87	18%
Total > 20 years	169	35%

From what we have seen, older properties are becoming less competitive especially in a glut of properties as new supply continues to exceed demand. If WELL doesn't upgrade its properties while others do invest, it could see these properties lose more appeal. We also believe that many of the new Senior Housing Operating properties came from the Triple Net Lease side where the operators ran into fiscal problems. In our view, troubled operators were unlikely to have made more than the minimum maintenance efforts to conserve crimped cash flow. We explored this in our original report more in depth.

Will Age Make the Remaining Triple Net Lease Properties a Problem Too?

The investment case behind triple net leasing is the owner does not have to pay for taxes, insurance, or maintenance. The leasing company pays for all that and writes a check for rent to the owner regardless of the profitability of the underlying operation that will vary based on occupancies, customer revenues, maintenance spending, and operating costs.

These operating companies will have to compete against newer properties, updated older properties and deal with oversupply that already exists in the market. Moreover, as Brookdale said very well – operators cannot cut costs much if occupancy falls because they have obligations to the remaining customers. All the players in the industry are seeing margins squeezed in their efforts to be operators. Why wouldn't Welltower's other tenant operators be seeing similar problems? They are dealing with much older properties than Welltower's Senior Housing Operating units:

Built in	# Triple Net	% Total
1960s and before	51	8%
1970s	53	8%
1980s	80	12%
1990-1998	185	27%
Total > 20 years	369	55%

Welltower lists 673 triple net properties in the latest 10-K, with 55% over 20 years old. Welltower has had several instances where its operators ran into problems and had to restructure the deals and take back properties. Brookdale is on that list, so is Genesis. Sunrise was an operator that ran into problems a few years ago and is Welltower's largest

tenant. Senior Housing Properties is already dealing with problems with its largest operator too.

Welltower had to make loans to former operators, waive rent increases, reset rents lower, and move properties to its own operating division and out of triple-net. We would not be surprised if many more of these remaining triple-net properties needs to be upgraded too, especially with 55% being over 20 years old. Look at the stocks of operators Brookdale and Senior Housing Properties. Those are top-notch compared to many others. It bought HCR Manorcare as an operator out of bankruptcy last year. Who is going to pay for all this?

Counterparty and property values could both pose risks that arise without much warning for Welltower in its triple-net portfolio if the industry is changing to newer and upgraded properties. Our original report and updates from April 26, 2018 and July 6, 2018 will show how big this problem can be. FFO could become impaired if there are more problems in this large portfolio going forward.

Starwood Property Trust (STWD)- 4Q18 Update

STWD remains an interesting case to follow and **we maintain a BUY recommendation**. (BTW- if you ever grow weary of listening/reading other companies' earnings reports with trite comments of "hey, you will see us do better" or "we plan to cut a $1 billion in costs – and trust us we can do that." – STWD calls are very refreshing! If you have spare time, STWD conference calls have some of the best descriptions of their rationale, risk and upside potentials, and structuring of investment decisions you will find.) They will talk about why they are risk-averse to specific areas and why they found better deals in affordable housing deals with rising rents that are more immune to the economy.

STWD has the ability right now to make $3.9 billion in new investments without issuing new capital, which gives room to boost EPS further and take advantage of market blips that create opportunity. The company's diversification efforts are yielding fruit, the dividend looks more than secure at 8.6% based on current prices. Core earnings have room to grow in a number of areas and dilution from the convertibles should be over in 1Q19. Our quick recap shows:

- **Core EPS is ready for interest rate changes either way.** STWD primarily focuses on variable rate investments that will grow cash flows if LIBOR rises. It also has floors on many of these deals as well if rates decrease. Their stress test shows 100-200bp drop in LIBOR at worst costs STWD 1-cent per quarter in core EPS and 100-200bp increase in LIBOR adds 2-4 cents per quarter.

- **Core EPS should be past the dilution from convertible instruments after 1Q19 and the company has considerable liquidity to put to work without raising debt or capital.** Portfolio growth is expected and the transitions inherent with buying the GE infrastructure lending business should see less drag going forward.

- **Gains in the real estate portfolio demonstrate success in the plan STWD has laid out to acquire longer duration assets with rising cash flows, less directly tied to the bond market spreads, retail internally generated capital by having depreciation reduce income, and overall boost the value of the company.**

Interest Rate Stress Tests – Impact on Core EPS Still Very Positive

We have talked several times that what makes STWD different from many other mortgage REITs is it benefits from rising interest rates. A traditional mortgage REIT like NLY or AGNC can often get hurt if interest rates increase. Essentially, their spread has fixed rate assets and variable rate funding. Higher interest rates boost funding costs and squeeze their spread. It further hurts them because the average life of the assets also stretches out as fewer people move and prepay their mortgage. Thus, assets fall in value from discounting flat cash flows at a higher hurdle rate and discounting them for a longer time.

STWD's loan book is 86% floating rate, its property segment has rising rents, and its infrastructure book has floating rate notes too. On top of that, it fixes much of its funding costs and has floors where rates on floating rate assets can no longer decline. STWD talked about both situations and stressed-tested the full portfolio for 4Q:

> *"We've seen a dramatic flattening of the yield curve in the last year; with a 10-year treasury rate down 21 basis points from 290 to 269 while one-month LIBOR increased by over 80 basis points from 166 to 249.* ***As interesting as that, 100-plus basis point flattening of the curve is, is that forward LIBOR is now below spot LIBOR for the first time in 10 years.*** *You will see in our supplemental that we released this morning that we disclosed, for the first time, our estimation of the impact to earnings of LIBOR following the forward curve lower.*
>
> *Due to our diversified business model and the after money LIBOR floors we typically put in all of our CRE loans,* ***our earnings are only forecast to fall by $0.01 per share for 200 basis point drop in LIBOR from today's levels, which we believe is exemplary versus both our peers and versus the $0.15 in gains we will have per share if LIBOR rises by the same amount.*** *I will also note that we expect our property portfolio to perform better in a lower rate environment as well."*

The company listed 100bp and 200bp moves in its presentation:

LIBOR Change	-200 bp	-100 bp	+ 100 bp	+ 200 bp
Core EPS Impact	-$0.01	-$0.04	$0.07	$0.15

These are annual changes in EPS from a change to LIBOR. So, keep in mind, Core EPS is about $2.20 per year. This looks like a great scenario, if rates decline, EPS is simply not

impacted very much. If they increase – STWD has positive earnings leverage to a much greater degree. If anything, the upside has increased as it was 6 and 13 cents at the end of 3Q18. A 300bp increase in LIBOR was worth 21 cents at that time, it should be higher as well.

STWD also stress tests its portfolio to reflect falling real estate values and widening of spreads as people price mortgages lower in times of turmoil. They assumed a 20% drop in property values and a 250bp wider spread.

STWD found that its asset coverage on mortgages would remain solid – LTV would increase from the low 60% range to the low 80% range. There would still be a cushion. Also, they could mark all securities to market at a 250bp wider spread and still have cash and liquidity available to take advantage of the market by buying more at the wider spreads and lower valuations. At the same time, other buyers would be on the sidelines allowing STWD to find greater bargains on high-quality assets.

Core EPS Strong Even with Some Headwinds in 4Q18

	4Q18	3Q18	2Q18	1Q18	4Q17
Core EPS	$0.54	$0.53	$0.54	$0.58	$0.55
Dividend	$0.48	$0.48	$0.48	$0.48	$0.48
Payout	89%	91%	89%	83%	87%

STWD is still a REIT and has to pay out the bulk of EPS as dividends. As we have noted throughout 2018, compared to 2016 when EPS was about 50-cents vs a 48-cent dividend this is an improvement.

There were several headwinds for the 4Q that should lessen going forward. First, the company has largely dealt with its dilutive securities and the remaining ones should be completed in 1Q19. These are connected to the 2019 convertible bonds and units issued in connection with the Woodstar II affordable housing deal. There were $105.9 million of 2019 converts outstanding at the end of 3Q18. STWD settled $28 million in 4Q with $5 million in cash and 1.2 million shares. In 1Q19, the rest were settled for $12 million in cash and 3.6 million shares. When the accounting change was made in June 2018 whereby STWD announced it would not assert it would settle all convertible bonds in cash – these bonds were in the money and became part of fully diluted shares. During 1Q19, those convertible bonds are now fully retired. The Woodstar units are convertible and issuance was

contingent upon receiving lower taxes on the property. STWD has now issued 1.7 million of the possible 1.9 million units, so 89% of the possible dilution has occurred.

The company is not settling these convertible securities with cash because it is earning higher returns on its investments and set up a stock repurchase plan to counter the dilution impacts at its convenience should it not find investments to earn accretive returns. Primarily with these two items and the accounting change, the share count has bumped up noticeably in 2018:

	4Q18	3Q18	2Q18	1Q18
Shares O/S	273.9	265.4	261.0	260.7
Unvested Stock	2.5	2.4	2.5	1.7
Woodstar	11.0	9.9	9.8	5.1
Other Dilution	0.5	0.1	0.1	0.2
Fully Diluted Shares	287.9	277.8	273.4	267.7

The convertible bonds boosted the shares outstanding as soon as the company announced it would not settle them solely with cash. That is the move from 261 million shares to 274 million. The Woodstar units account for the bulk of the remaining dilution and those are now 89% issued. We would expect little additional dilution.

The key here is Core EPS is essentially flat despite the dilution at 54-cents. It would have been 56-cents using 3Q's share count or 58-cents using last year's total. So, the business is showing growth and the dilution impacts are now largely over.

The second headwind is from the GE Infrastructure purchase – which produced 1-cent in EPS for the 4Q. This closed at the end of 3Q, but some of the loan purchases were not completed until the 4Q, so not was still not a 100% STWD portfolio for a full period. Also, whenever STWD buys a large pool of assets, it reviews every loan and asset individually. It sells off loans it is not comfortable with or low ROI loans and essentially shrinks the portfolio early on as it starts to make new loans. The company announced it expects between culling and maturities to cut the size of the acquired portfolio in half by the end of 3Q19. It has started to make new loans and added $250 million during the 4Q18. The new loans are earning higher returns, but there is often a lag between selling an existing loan and making a new one. None of this is new and STWD has done this process and many different portfolios over the years. In our view, 4Q likely represents the low point of earnings here at 1-cent per share. EPS should start to increase in 2019 and still be offset by culling and by 3Q19 and 4Q19 should see the headwinds mitigate.

The third headwind was the Commercial Lending segment hit a record high in terms of portfolio size at $7.8 million with $1.1 billion funded and $800 million repaid. This segment along with residential is 37-cents of core EPS. However, during the period, the company noted that **the market pulled back during December and while it funded $1.1 billion, it originated $1.6 billion. The company is already at $1 billion funded loans through February heading for $1.5 billion in the first quarter.** So, while 4Q18 was a very solid result for this unit, the rest of the work from 4Q will appear in 1Q19. The company did warn that the momentum for deals slowed the pipeline in December, that could have a negative impact on 2Q19, we shall see.

STWD estimates that it has $3.9 billion of investment capacity without issuing new shares. The company routinely earns over 7% on commercial loans and over 10% on other investments. If they put out only half its remaining capacity at a net 4% after interest costs, there would be another 27-cents per share in income. A 1% change adds 7-cents per year. It could also buy back shares and achieve higher EPS that way and there is a buy-back authorization in place.

Property Results Working as STWD Planned

When STWD started to buy physical real estate, it had several goals in mind. It wanted to boost its duration on investments with high returns. Owning the mortgage loan often meant it would refinance and shrink their duration. It wanted to find areas with high occupancy where cash flows would increase via higher rents. This would copy their model of buying floating rate securities. It wanted to be able to fix their costs so the spread would at worst case stay the same. It wanted areas without much exposure to economic cycles so they could hold through cycles.

It came with the added benefits that as a REIT it was required to distribute 90% of earnings. Depreciation lowers earnings and thus a rising cash flow stream from property could be reinvested in other parts of the business without raising capital. Flash forward a few years and STWD is now starting to harvest a few real estate holdings and the results are very attractive. For example, it has sold several of the Cabela’s and Bass leases it acquired in a large transaction and booked core gains (which would effectively add back all the depreciation too), cut its equity exposure in half and they still have about half the portfolio

generating over a 13.5% cash yield up on the reduced investment level by 200bp and getting contractual rent increases. They are financing it over 9 years at a fixed 3.8%.

> *"the Bass Pro and Cabela sale which we made to date which have returned approximately half of our equity and left us with a core portfolio of 16 assets with long term fixed rate financing that now return a 13.5% cash return, inclusive of contractual rents step ups, on a company that's performing beyond our expectations since their acquisition, as evidenced by their term loan, which trades at approximately par today versus 90 when we acquired the portfolio."*
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> *"We also talked about our low-income housing tax credit multifamily portfolio in Florida, which has seen rent increases far in excess of our underwriting, tax abatements that have added significant equity value and have additional upside in units rolled to market rental rates in future years. These apartment investments are extremely consistent and durable and make up nearly half of the overall gains in our Property Segment."*

The other part of this that STWD is focused on is what happens with interest rates. They again think if rates decline – they benefit because new construction would be afraid of the economy. They are still 100% leased and getting higher rents against lower rates. If rates rise with a better economy, they bought the property cheap and can sell into that. The rent increases protect against the higher rates and the company is disciplined to pull equity out over time to reduce exposure and funnel money into its greatest opportunities. With baskets that include the energy infrastructure, property, global property, non-qualified residential loans with high FICO scores, commercial lending, etc. – they are diversified enough and have experience in all areas. Barry Sternlicht summed this up well on the call too:

> *"I also think that again you have to look at where we are in the cycle. The slowing economy is good for us. We like rates low. Slow growth is nirvana for the property cycle. It doesn't induce tons of new supply, people are kind of reticent to begin construction.*
>
> *You've already seen those factors in the multifamily start numbers you saw I guess this week. And one of the reasons driving the drop in construction is the extreme rise in construction prices. The cost of construction is up probably 10% in some markets year-over-year, driven at least half by labor, which is really scarce and also by materials, particularly steel prices in high rises.*

So existing property and all of our roughly $8 billion of loan book is worth more, because it's harder to replace and rents have to rise and to justify new construction. Slower economy, rather than a galloping economy, keeps the real estate community, development community, keeps their capital in their pocket as they contemplate whether they should start consumption now or not."

"Jeff (DiModica) and I debate with the board taking some of these gains in real estate book. As Jeff says the gain is not earning anything, right? So, ***we have $600 million of gains and you put it out 12% this is hitting earnings value for us.*** *My issue is duration. I love the duration of these assets and the cash flows are growing… -- we will probably harvest some of the gains and just prove to the street that they exist okay since they don't seem to always believe us."*

Keep in mind - $600 million in gains is about $2 per share. If you want more cushion on book value and the dividend – there it is in our view.

Ball Corp. (BLL) EQ Update-12/18 Quarter

Current EQ Rating*	Previous EQ Rating
2-	2-

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

We maintain our earnings quality rating of 2- (Weak).

- Factored receivables outstanding at the end of the 12/18 period almost doubled from a year ago driving factored DSOs to 34.1 from 18.6. We estimate that this increase could have added as much as $400 million to cash flow growth for the year.

- Trade receivables DSO adjusted for outstanding factored receivables rose by 3 days over the 12/17 quarter. This could indicate that more generous terms were granted to customers to drive sales in the period. Management's comment in the 10-K that its DSOs were down in the period does not account for the factored receivables.

- Payables continued to rise, jumping over ten days from the end of last year by our calculation.

- If the cash flow boost from rising factoring and payables gives out in 2019, management's forecast of an increase in operating cash flow could prove optimistic.

- Management warned that its Asia Pacific and AMEA beverage packaging unit goodwill is at risk of a future write-down.

Rapid Increase in Receivables Factoring Continues

We have noted in past reviews that BLL has increased its receivables factoring program in recent quarters. This trend continued into the 12/18 period.

Just looking at balance sheet receivables, it appears that days of sales (DSO) increased by 5 days over the year-ago quarter. However, there are many adjustments we must make to BLL's receivables to get an accurate view of revenue recognition and cash flow trends.

First, BLL's adoption of ASC 606 had a minor impact on sales but resulted in significant amounts being shifted from inventory to unbilled receivables which is recorded under accounts receivables in the balance sheet. BLL discloses current balances for these accounts as if they had been calculated under the old revenue recognition method which we can use to compare to historical periods.

In addition to trade receivables and unbilled receivables, the balance sheet receivables numbers contain an "other receivables" segment which includes tax receivables, certain vendor rebate receivables, and other miscellaneous receivables. This segment is not relevant to revenue recognition trends and we therefore remove it from balance sheet receivables to calculate DSOs. We assume that these amounts were not materially impacted by the new revenue recognition standards.

Finally, as we have noted in past reviews, BLL maintains a receivables factoring program which results in the removal of sold receivables from the balance sheet. It is necessary to add back receivables that have been sold but are still outstanding at the end of the period to get a clear picture of BLL's revenue recognition trends. BLL does not disclose an exact amount of receivables sold and outstanding, but it does disclose the limits on its factoring program and the amounts available under the program at the end of each quarter which we can use to generate an estimate of sold receivables outstanding as shown in the following table:

	12/31/2018	09/30/2018	06/30/2018	03/31/2018
Limit of Factoring Facility	$1,200	$1,150	$977	$800
Available for Sale	$178	$208	$139	$211
Implied Amount Sold and Outstanding	$1,022	$942	$838	$589

	12/31/2017	09/30/2017	06/30/2017	03/31/2017
Limit of Factoring Facility	$1,000	$1,000	$1,000	$865
Available for Sale	$439	$354	$342	$323
Implied Amount Sold and Outstanding	$561	$646	$658	$542

We put all these pieces together to calculate an adjusted balance sheet receivables DSO, a factored receivables DSO, and a total adjusted receivables DSO shown in the following table:

	12/31/2018	9/30/2018	6/30/2018	3/31/2018
Sales Under Pre 606	$2,734	$2,985	$3,143	$2,752
Receivables Under Pre-606 Accounting Method	$1,485	$1,622	$1,722	$1,745
Other Receivables	$522	$472	$373	$339
Receivables moved to "held for sale"	$0	$0	$78	$0
Adjusted Balance Sheet Receivables	$963	$1,150	$1,427	$1,406
Adjusted Balance Sheet Trade Sheet Receivable DSOs	***32.1***	***35.2***	***41.4***	***46.6***
Receivables Sold and Outstanding	$1,022	$942	$838	$589
Outstanding Factored Receivables DSOs	***34.1***	***28.8***	***24.3***	***19.5***
Adjusted Receivables	$1,985	$2,092	$2,265	$1,995
Adjusted Receivables DSOs	**66.3**	**64.0**	**65.8**	**66.1**

	12/31/2017	9/30/2017	6/30/2017	3/31/2017
Sales Under Pre 606	$2,747	$2,908	$2,855	$2,473
Receivables Under Pre-606 Accounting Method	$1,634	$1,793	$1,637	$1,695
Other Receivables	$291	$368	$305	$341
Receivables moved to "held for sale"	$0	$0	$0	$0
Adjusted Balance Sheet Receivables	$1,343	$1,425	$1,332	$1,354
Adjusted Balance Sheet Trade Sheet Receivable DSOs	***44.6***	***44.7***	***42.6***	***50.0***
Receivables Sold and Outstanding	$561	$646	$658	$542
Outstanding Factored Receivables DSOs	***18.6***	***20.3***	***21.0***	***20.0***
Adjusted Receivables	$1,904	$2,071	$1,990	$1,896
Adjusted Receivables DSOs	**63.2**	**65.0**	**63.6**	**70.0**

Total trade receivables DSOs (factored and remaining on the balance sheet) rose by 3 days over the 12/17 period and over 2 days sequentially. This could be an indication that the company extended more generous terms to suppliers in order to pull revenue into the 12/18 quarter at the expense of the 3/19 quarter. However, we temper this conclusion with the observation that the company's aerospace division (approximately 10% of sales) does a large part of its business with the federal government and collections could have conceivably been impacted late in the year by the government shutdown. Regardless, we take issue with the company's comment in the liquidity and capital resources section if its 10-K:

> *"Cash flows provided by operations were higher in 2018 compared to 2017, primarily due to higher earnings and lower pension contributions, partially offset by lower*

*working capital inflows. Excluding the impact of the new revenue recognition standard and the sale of the U.S. steel food and steel aerosol packaging business****, the impact of a reduction of days sales outstanding from 45 to 32 days****, a reduction of inventory days on hand from 61 to 58 days and an increase in days payable outstanding from 110 to 112 days was partially offset by increases in other receivables."*

Clearly, management's reference to the DSO decline from 45 to 32 days is directed at the adjusted balance sheet receivables amount. This leaves readers with the impression that the company became more strict on its collection policies which drove up cash flow. However, the increase in our total adjusted receivables DSO number indicates that was not the case. Total receivables rose noticeably faster than sales in the period and cash flow improvement from receivables came from an increase in factoring activity which drove factored receivable DSOs to 34.1 from 18.6. Just looking at the outstanding factored receivables at the end of each period, it appears that cash from operations could have received a boost of around $400 million in 2018 from the increased pace of factoring.

Meanwhile, payables continue to rise. While the company's above commentary indicates days payable jumped to 112 from 110, this appears to be calculated on a trailing-12 average basis. When we calculate the ratio with ending period payables and quarterly cost of sales, we get that days payable jumped from 118 to almost 129. This jump was key to payables being a source of cash of $592 million in 2018.

BLL contributed about $65 million to pension plans in 2018, down $144 million from the $209 million contributed in 2017. Pension contributions are actually expected to be up to $92 million in 2019, implying an approximate $30 million drag on cash from operations in the next year.

The company is forecasting operating cash flow of about $1.60 billion in 2019, up slightly from the 2018 figure of $1.56 billion. However, this target may be difficult to hit if the sizeable boosts from increased factoring and payables extension lose steam. Keep in mind that factored receivables have almost doubled from last year and now exceed what is left on the balance sheet. In addition, payable days have been well over 100 for the last 5 quarters. How much room is left for improvement?

Warning of Potential Goodwill Write-down

Management provided the following warning in its 10-K related to a possible future goodwill write-down to its Asia Pacific and AMAE beverage packaging segments.

> *"We continue to see the industry supply of beverage packaging exceed demand in China, resulting in significant pricing pressure and negative impacts on the profitability of our beverage packaging, Asia Pacific, reporting unit. The worsening business climate in Saudi Arabia has resulted in negative impacts to the profitability of our beverage packaging, AMEA, reporting unit. If it becomes an expectation that these situations will continue for an extended period of time, it may result in a noncash impairment of some or all of the goodwill associated with these reporting units, totaling $78 million and $100 million, respectively, at December 31, 2018. The company's annual goodwill impairment test completed in the fourth quarter of 2018 indicated the estimated fair value of the beverage packaging, Asia Pacific, and beverage packaging, AMEA, reporting units exceeded their carrying amounts, including goodwill, by 11 percent and 15 percent, respectively. The goodwill associated with the beverage packaging, Asia Pacific, reporting unit predominantly relates to the China beverage packaging facilities. On December 13, 2018, we announced an agreement to sell our beverage packaging facilities in China. The transaction is expected to close during the second half of 2019."*

While the company is in talks to sell its Chinese beverage packaging unit which is the source of most of the Asia Pacific goodwill, this deal has not closed at the time of writing and the company elected not to disclose the operations as discontinued at the end of the year due to the possibility of the deal not going through.

Church & Dwight (CHD) EQ Update-12/18 Quarter

Current EQ Rating*	Previous EQ Rating
3+	2+

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

We are raising our earnings quality rating to 3+ (Minor Concern)

- One of our concerns about CHD is that it does not disclose quarterly data on its receivables factoring program, making the quarterly analysis of revenue recognition trends difficult. For example, while DSOs declined by almost 4 days in the 9/18 quarter, one cannot tell if receivables being sold and removed from the balance sheet could have impacted the trend. However, CHD disclosed in its 2018 10-K that total receivables factored in 2018 fell to $7.5 million compared to $45.3 million in 2017. The lower activity indicates there was not a hidden increase in receivables and that cash flow did not receive an artificial boost. This prompts us to raise our EQ rating to 3+ (Minor Concerns)

- We noted in our review of the last quarter that inventory days (DSI) rose with most of the increase centered in finished goods. The trend continued in the 12/18 quarter as DSI rose to 58.2 from 54.7 a year ago. Finished goods as a percent of total inventory jumped from 64.8% last year to 69.0% at 12/18. Management has indicated that its Waterpik business requires a higher degree of working capital. However, the Waterpik deal already lapped in the last quarter so the year-over-year impact should be removed by now. Management also indicated on the call that its gross margin disappointment was partly due to faster than expected international sales of Waterpik which has built up increased costs in inventory from tariffs. Regardless, the jump in finished goods inventory at best indicates that there are pent-up costs still posed to hit the income statement in future periods. We therefore remain cautious on the inventory build.

- We recommend clients read last week's overview of goodwill at several companies including CHD for more detail regarding the makeup of the company's intangibles. Spoiler alert - we are not as concerned about a material negative surprise from a goodwill write-down at CHD as we are some other consumer products companies. CHD did warn that in 2017, a personal care trade name had deteriorated in value

due to competition, but actions the company took in 2018 have increased the buffer between estimated and carrying value reducing the chance of a write-down at least for now.

Fortune Brands (FBHS) EQ Update-12/18 Quarter

Current EQ Rating*	Previous EQ Rating
3-	3-

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

We maintain our earnings quality rating on FBHS of 3- (Weak)

FBHS's adjusted 12/18 quarter EPS of $0.94 fell 8 cps short of expectations.

- We warned in our review of the 9/18 quarter that EPS received a non-operational 2.5 cps boost from a decline in warranty provision. However, this tailwind reversed in the 12/18 quarter as warranty provision expense for the period rose by over $5 million, representing an almost 3 cps headwind to EPS growth. This was possibly a factor in the earnings disappointment.

- We also noted in our review of the previous quarter that the company took $27 million in intangible tradename write-downs and had warned two tradenames with an estimated carrying value of $190 million were at risk of further impairment. The 12/18 quarter saw an additional $35.5 million in charges to write-down these tradenames.

- We remind clients that FBHS's share count continues to benefit from its massive buybacks in the 3/18 and 6/18 quarters (share count was 7% lower in the 12/18 period versus the year-ago quarter.) The company did not buy back shares in the 9/18 quarter due to its acquisition. While it did start the buyback up again in the 12/18 quarter, its current net debt level of 2.4 times EBITDA will likely keep it from returning to such a dramatic rate of share count reduction in the near future. The negative impact will be felt on EPS growth in the back half of the year.

- FBHS announced in the fourth quarter that it was changing its inventory accounting from LIFO to FIFO method for products in which metal is a significant component. This resulted in a $7.3 million one-time benefit to cost of sales as the company adjusted certain inventories in Plumbing and Doors and Security segments to FIFO. The company disclosed that impacted inventories amounted to $259.3 million at 12/17, or about 45% of total inventory. The 2016 and 2017 results were not restated

as the impact was not deemed to be material. The impact was removed from adjusted EPS, so there was not a non-operational boost to EPS in the quarter. Regardless, we view this as a negative development for earnings quality as the FIFO method matches older inventories against current sales on the income statement which results in an understatement of current costs in a rising cost environment.

- Inventory days (DSI) jumped by 8 days year-over-year to 67.4. There was a 5.5-day year-over-year increase in the 9/18 quarter which was driven by the late third-quarter Fiberon acquisition. If we adjust out the above-mentioned FIFO adjustment, the 12/18 quarter increase is still about 6.6 days. Given that the 12/18 quarter had a full contribution of Fiberon cost of sales in the calculation, the large increase in days of sales is concerning, especially since the quarter featured slower than expected sales and management citing inventory builds at customers.

- One final note on inventory, the company disclosed in the 10-K that inventory provision for obsolete or slow-moving inventory was $45.3 million at the end of the 12/18 quarter versus $45 million a year ago. The increase in total inventory caused the allowance as a percentage of gross inventory to fall to about 6.3% from 7.2% last year. This could be due to the addition of the Fiberon inventories acquired in September which could imply the company may be boosting the reserves there to match its existing reserve levels. We estimate it would take about 4 cps in charges to do so.

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 recent 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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