

SECTOR IN-DEPTH

16 May 2017

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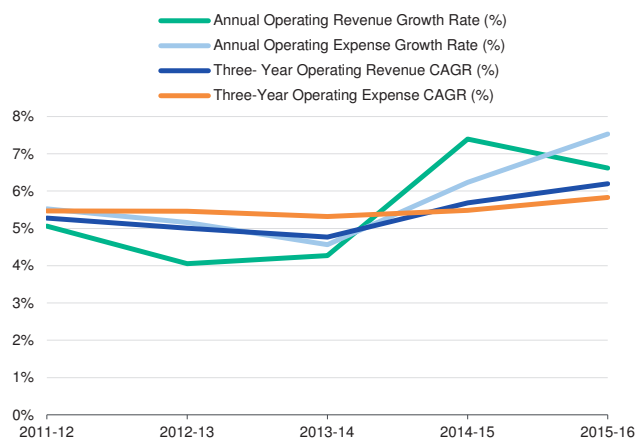
Not-for-profit Healthcare and Public Hospitals - US Preliminary 2016 Medians Skew Lower As Revenue and Expense Pressures Hinder Profitability

Not-for-profit healthcare and public hospitals' operating margins and liquidity balances remain in-line with historical levels while demand trends remain generally positive, according to our preliminary fiscal 2016 medians. However, the sector is experiencing an overall softening in operating performance and liquidity measures relative to last year's medians. Debt measures are also marginally weaker because of a pronounced rise in annual expense growth and a slowed rate of revenue growth.

Over the next year, rising labor and pharmaceutical costs will continue to pressure the expense growth rate, and revenue growth will temper amid declining reimbursement from both private and governmental payors. Uncertainty over federal healthcare policy also poses a strong headwind.

- » **Annual expense growth of 7.5% overtakes annual revenue growth.** Labor and pharmaceutical costs drove expense growth higher while the pace of revenue growth declined to 6.6% from 7.4%, reflecting the effects of stressed insurance exchanges and changes to reimbursement.
- » **Profitability margins tempered, but still sound.** However, the 2.7% operating margin and 9.6% operating cash-flow margin are down from the multi-year high seen in 2015.
- » **All major balance sheet measures eased in early fiscal 2016.** Absolute unrestricted cash and investments increased over fiscal 2015 levels. However, increased capital spending, more modest profitability, weaker investment market performance and pension funding, as the liability gaps widened, contributed to a moderation of all major balance sheet metrics.
- » **All clinical volumes continue to increase, though growth trajectory bifurcated.** Despite rising absolute demand across all clinical service categories, the rate of growth slowed for each hospital-based measure, including inpatient admissions and observation stays. Outpatient visits and surgery growth rates accelerated.

Exhibit 1
 Reflecting a Sharp Reversal From Last Year, Annual Expenses Grew At A Faster Rate Than Annual Revenue

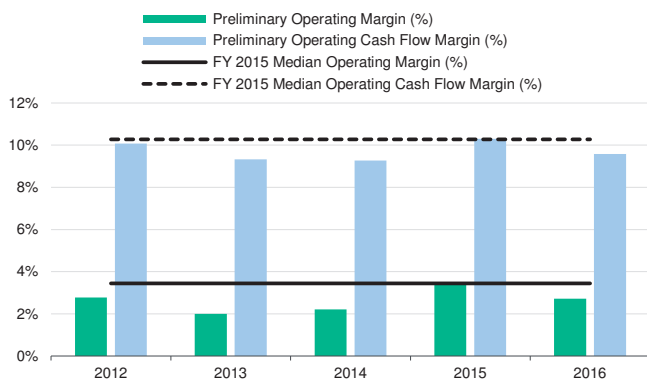


Source: Moody's Investors Service

Accelerated Annual Expense Growth Rate Is Key Indication of Softening Industry Performance

- » Annual operating expenses growth of 7.5% from 2015-16 overtook 6.6% growth of annual operating revenue. Staffing expenses grew 7.8% and supply costs rose 8.7%, pressuring expense growth to a multi-year high. A rising Medicare Case Mix Index of 1.73, reflecting higher clinical acuity, underscores the pressure on staffing.
- » The decline in annual revenue growth — to a still healthy 6.6% — reflects reimbursement pressures from commercial and governmental payors, ongoing shifts to value based reimbursement and declining benefit of increased insured under the Affordable Care Act (ACA).
- » The three-year operating revenue compound annual growth rate (CAGR) of 6.2% outpaced the three-year expense CAGR of 5.8% for the second consecutive year. This dynamic will be reversed in the near term as revenue pressures persist and expenses are stressed by salary, benefits and premium labor, pension funding, as well as pharmaceutical costs pushing supply expenses up.

Exhibit 2
 Modest Weakening of Financial Performance With Margins Declining from Peak Levels



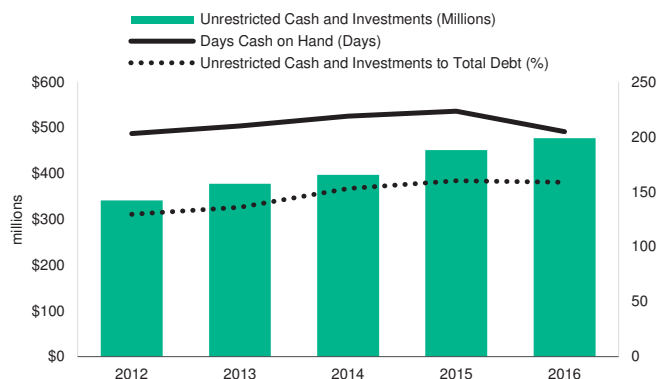
Source: Moody's Investors Service

Headwinds Evident in 2016 with Profit Margins Incrementally Lower but Sturdy

- » Operating margins and operating cash-flow margins of 2.7% and 9.6%, respectively, remain in the range of the levels seen in the last five years. Still, operating margins and operating cash-flow margins declined from 2015 levels after showing two years of strengthening.
- » Margins demonstrated sizable reversals in the rate of growth, with each measure evidencing the stress of lower reimbursement rates and the material rise in expenses.
- » Operating cash-flow tempered to \$75.9 million from 2015 peak of \$76.4 million as top-line revenue growth came under pressure while expenses climbed.

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Exhibit 3
Balance Sheet Measures Restrained Despite Growth in Absolute Dollars

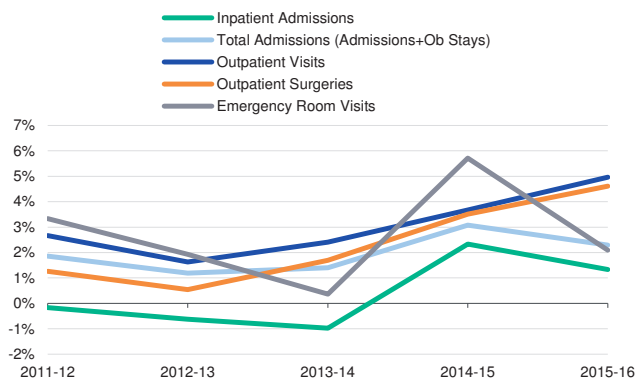


Source: Moody's Investors Service

Tempered operating performance and higher capital spending will lead to stable balance sheet metrics for full fiscal 2016

- » Median days cash on hand of 204.8 and median unrestricted cash and investments to total debt of 158.8% have moderated from 223.4 and 160.1%, respectively, after years of continued strengthening.
- » Contracting margins (discussed above), a rise in capital spending — evidenced by median capital spending ratio of 1.2 times, and weak equity market returns through midyear 2016 contributed to the moderating measures.
- » Investment market strength in the second half of 2016 will buffer more material balance sheet dilution in the full year medians. However, an expected year-over-year rise in expenses, modest cash-flow expectations and an acceleration of capital spend, reflected in an 11.3% rate of growth, will slow the rate of balance sheet strengthening in the future.

Exhibit 4
Vital Signs for Utilization Trends Mixed



Source: Moody's Investors Service

Hospital-based utilization measures show slowed growth rates while outpatient utilization growth rates increase

- » Volume trends all remained favorable in 2016, owing to an increasing rise in inpatient clinical acuity and continued mergers. However, while the absolute levels of inpatient and total admission (including observations stays) increased in 2016, the growth rates for each measure declined. The slow down reflects the maturity of the gains under the ACA and migration to pay for performance reimbursement.
- » In contrast, outpatient visits and outpatient surgeries showed absolute and relative growth in 2016, with visits growing 5.0% and surgeries growing 4.6%, rates that exceed historic levels.
- » These growth trends align with industry incentives to manage population health in low cost settings. We expect this dynamic to persistently thwart momentum from increasing clinical acuity and merger-related volumes.

Basis for Medians

The preliminary medians are based on an analysis of audited fiscal 2016 financial statements for 150 freestanding hospitals, single-state health systems and multi-state healthcare systems that are eligible to be included in the medians, representing 37% of all rated entities. These medians primarily reflect audit year ends of September 30, 2015 and before. Entities not eligible to be included in the medians include children's hospitals, hospitals for which five years of data are not available and certain specialty hospitals (e.g. cancer centers).

The preliminary medians are the outcome of a complex rating process that incorporates a broad variety of quantitative and qualitative factors. As such, there is a wide range of values for individual ratios within each rating category. We do not assign an organization's precise rating level simply by comparing its ratios to medians, but rather weigh core credit variables over time as well as in relation to broad variables in the industry.

Each year, the three-year range for preliminary medians is newly computed from a unique set of healthcare entities. The exact set of hospitals used to calculate the medians changes from year to year. Therefore, historical median results are likely to change somewhat from year to year.

In the appendices beginning on page 5, we present the medians in two formats including: (1) by year for three years, 2014-16, including fiscal 2015 full year medians for comparison (see Appendix 1); (2) by broad rating category for 2016 (see Appendix 2).

Appendices

Exhibit 5

Appendix 1: Freestanding Hospitals, Single-State & Multi-State Healthcare Systems, Preliminary Medians Fiscal Years 2014-2016 [1]

	2014	2015	2016	Published Medians FY 2015
Sample Size	150	150	150	340
Utilization [2]				
Maintained Beds	507	515	553	534
Inpatient Admissions	26,468	28,231	29,812	27,735
Observation Stays	7,272	8,108	8,758	7,950
Combined Admissions & Observation Stays [3]	34,487	37,715	40,387	36,401
Patient Days	138,141	141,559	150,185	136,028
Medicare Case Mix Index	1.69	1.69	1.73	1.68
Average Length of Stay (Days)	4.7	4.8	4.8	4.7
Maintained Bed Occupancy	65%	66%	67%	64%
Emergency Room Visits	94,422	99,299	110,236	103,743
Outpatient Visits	422,660	440,558	480,479	428,462
Outpatient Surgeries	13,697	14,239	15,264	14,267
Financial Performance (\$'000)				
Net Patient Revenues	606,115	689,927	778,117	703,513
Total Operating Revenue	752,308	842,617	894,892	772,902
Interest Expense	10,718	11,760	11,755	10,190
Depreciation and Amortization	44,905	45,601	47,938	41,756
Total Operating Expenses (\$'000)	725,735	809,596	876,355	744,812
Income from Operations	11,621	21,291	20,634	24,802
Operating Cash Flow	63,761	76,368	75,926	75,697
Excess of Revenues over Expenses	34,948	44,936	41,300	45,860
Net Revenues Available for Debt Service	88,589	96,338	97,663	95,498
Total Debt Service (\$'000)	19,426	21,559	21,074	20,655
Additions to PP&E (\$'000)	47,116	50,959	50,129	50,588
Balance Sheet				
Unrestricted Cash and Investments	397,211	451,322	476,948	399,112
Total Debt	311,800	305,536	302,258	291,191
Total Adjusted Debt	466,413	474,035	458,137	414,483
Net Property, Plant and Equipment	454,560	454,579	466,510	410,727
Unrestricted Net Assets	551,675	597,981	571,315	511,261
Monthly Liquidity [4]	390,290	427,301	476,948	392,441
Annual Liquidity	402,957	451,121	488,913	413,178

	2014	2015	2016	Published Medians FY 2015
Key Ratios				
Operating Margin	2.2%	3.4%	2.7%	3.4%
Excess Margin	5.1%	6.1%	5.7%	6.1%
Operating Cash Flow Margin (%)	9.3%	10.3%	9.6%	10.3%
Cash on Hand (Days)	218.9	223.4	204.8	211.8
Unrestricted Cash and Investments to Total Debt (%)	152.9%	160.1%	158.8%	154.0%
Unrestricted Cash and Investments to Total Adjusted Debt (%)	108.8%	110.7%	107.8%	117.9%
Maximum Annual Debt Service Coverage (x)	4.5	5.0	4.6	4.8
Annual Debt Service Coverage (x)	4.9	5.6	5.2	5.2
Total Debt-to-Cash Flow (x)	2.9	2.7	2.8	2.7
Total Debt-to-Operating Revenue (%)	36.1%	35.0%	32.5%	34.5%
Annual Operating Revenue Growth Rate	4.3%	7.4%	6.6%	7.5%
Annual Operating Expense Growth Rate	4.6%	6.2%	7.5%	6.6%
3 Year Operating Revenue CAGR	4.8%	5.7%	6.2%	5.8%
3 Year Operating Expense CAGR	5.3%	5.5%	5.8%	5.5%
Total Debt to Capitalization	33.5%	33.9%	35.6%	33.7%
Current Ratio (x)	2.0	2.0	2.0	2.0
Cushion Ratio (x)	19.7	20.9	21.0	20.6
Return on Assets	4.2%	4.6%	4.1%	4.8%
Accounts Receivable (Days)	51.0	48.4	48.2	48.4
Average Payment Period (Days)	63.4	64.8	61.8	64.3
Capital Spending Ratio (x)	1.1	1.1	1.2	1.1
Average Age of Plant	10.7	11.0	11.2	11.0
Monthly Liquidity to Demand Debt	317.3%	321.0%	316.5%	399.7%
Annual Liquidity to Demand Debt	371.5%	365.6%	349.5%	466.5%
On Demand Debt as % of Total Direct Debt	26.4%	26.1%	26.3%	35.8%
Cash to Demand Debt	373.6%	384.3%	359.6%	476.5%
Monthly Liquidity as % of Unrestricted Cash and Investments (%)	97.8%	97.6%	97.1%	94.2%
Patient Revenue Sources by Gross Revenue (%) [5]				
Total Medicare	43.9%	44.4%	45.0%	45.1%
Total Medicaid	13.3%	14.0%	14.2%	14.4%
Total Commercial	32.6%	32.8%	32.9%	32.0%
Total Self Pay & Other	7.2%	5.9%	5.9%	5.9%

(1) Financial data are based on 150 freestanding hospitals, single-state and multi-state healthcare systems. Ratings are as of 3/15/2017

(2) Utilization based on a smaller sample size where five years of consistent data are available.

(3) Combined Admissions and Observations Stays is a separately calculated median and does not equal the sum of median Admissions and median Observation Stays.

(4) Monthly and Annual Liquidity statistics are based on a smaller sample size where five years of consistent data are available.

(5) Payor Mix columns do not sum to 100% because each entry is a separately calculated median.

Source: Moody's Investors Service

Exhibit 6

Appendix 2: Freestanding Hospitals, Single-State & Multi-State Healthcare Systems, Preliminary Medians by Broad Rating Category, Fiscal Year 2016 [1]

	2016	Aa	A	Baa	Below Baa
Sample Size	150	30	76	33	11
Utilization					
Maintained Beds	553	1,272	500	298	192
Inpatient Admissions	29,812	68,772	29,500	13,680	10,686
Observation Stays	8,758	22,210	8,951	5,521	2,239
Combined Admissions and Observation Stays [3]	40,387	90,087	41,599	18,696	12,955
Patient Days	150,185	320,637	131,780	63,784	57,097
Medicare Case Mix Index	1.73	1.86	1.73	1.64	1.60
Average Length of Stay (Days)	4.8	5.3	4.8	4.3	4.8
Maintained Bed Occupancy (%)	67.4%	71.0%	67.4%	63.9%	70.6%
Emergency Room Visits	110,236	232,321	111,971	63,174	54,160
Outpatient Visits	480,479	1,028,548	483,569	314,576	267,498
Outpatient Surgeries	15,264	28,707	15,515	7,302	5,183
Financial Performance (\$000)					
Net Patient Revenues	778,117	2,314,071	762,429	372,033	409,094
Total Operating Revenue	894,892	3,031,852	869,098	391,996	414,103
Interest Expense	11,755	30,384	11,241	7,103	5,264
Depreciation and Amortization	47,938	138,164	47,470	19,628	15,068
Total Operating Expenses	876,355	2,833,894	828,761	379,334	414,119
Income from Operations	20,634	120,157	22,489	5,026	-17
Operating Cash Flow	75,926	309,250	86,835	38,873	21,781
Excess of Revenues over Expenses	41,300	230,294	45,797	19,875	4,933
Net Revenues Available for Debt Service	97,663	420,150	105,149	52,164	27,871
Debt Service	21,074	47,729	19,183	11,717	11,143
Additions to PP&E	50,129	211,607	52,523	22,105	9,125
Balance Sheet (\$000)					
Unrestricted Cash and Investments	476,948	2,325,152	509,313	167,039	106,416
Total Debt	302,258	886,856	286,983	166,177	92,519
Total Adjusted Debt	458,137	1,175,519	446,159	224,250	383,977
Net Property, Plant and Equipment	466,510	1,432,712	426,330	191,851	104,563
Unrestricted Net Assets	571,315	2,545,771	602,749	195,762	72,941
Monthly Liquidity [4]	476,948	1,667,729	490,243	145,183	107,058
Annual Liquidity	488,913	2,223,147	528,384	155,424	111,727

	2016	Aa	A	Baa	Below Baa
Key Ratios					
Operating Margin	2.7%	4.4%	3.1%	1.6%	0.0%
Excess Margin	5.7%	7.2%	6.0%	3.8%	1.4%
Operating Cash Flow Margin (%)	9.6%	9.4%	10.1%	9.1%	5.8%
Cash on Hand (Days)	204.8	234.2	214.4	167.9	138.4
Unrestricted Cash and Investments to Total Debt (%)	158.8%	235.0%	178.4%	99.8%	95.6%
Unrestricted Cash and Investments to Total Adjusted Debt (%)	107.8%	139.7%	115.2%	74.7%	56.9%
Maximum Annual Debt Service Coverage (x)	4.6	6.9	5.1	3.7	2.8
Annual Debt Service Coverage (x)	5.2	8.9	5.6	3.7	2.4
Total Debt-to-Cash Flow (x)	2.8	2.2	2.7	3.5	4.6
Total Debt-to-Operating Revenue (%)	32.5%	27.5%	32.8%	40.6%	37.0%
Annual Operating Revenue Growth Rate	6.6%	7.1%	6.1%	7.7%	8.4%
Annual Operating Expense Growth Rate	7.5%	8.5%	7.5%	8.7%	5.9%
3 Year Operating Revenue CAGR	6.2%	8.0%	5.9%	5.8%	5.4%
3 Year Operating Expense CAGR	5.8%	7.5%	5.5%	5.4%	4.3%
Total Debt to Capitalization	35.6%	26.5%	33.5%	48.1%	58.5%
Current Ratio (x)	2.0	1.6	2.1	2.2	2.2
Cushion Ratio (x)	21.0	32.4	22.4	13.6	10.5
Return on Assets	4.1%	5.9%	4.4%	3.2%	1.5%
Accounts Receivable (Days)	48.2	48.8	48.9	46.3	39.8
Average Payment Period (Days)	61.8	76.2	59.8	58.0	60.7
Capital Spending Ratio (x)	1.2	1.2	1.2	1.1	0.9
Average Age of Plant	11.2	10.1	11.7	12.0	12.3
Monthly Liquidity to Demand Debt (%)	318.7%	408.9%	314.5%	164.2%	263.5%
Annual Liquidity to Demand Debt (%)	351.8%	451.9%	348.2%	167.2%	263.5%
On Demand Debt as % of Total Direct Debt	26.3%	33.0%	26.9%	10.0%	0.1%
Cash to Demand Debt	359.6%	467.2%	362.9%	239.2%	170.2%
Monthly Liquidity as % of Unrestricted Cash and Investments (%)	97.0%	94.6%	96.1%	98.8%	100.0%
Patient Revenue Sources by Gross Revenue (%) [5]					
Total Medicare	45.0%	42.2%	46.1%	45.7%	46.5%
Total Medicaid	14.2%	16.7%	14.0%	14.4%	15.7%
Total Commercial	32.9%	35.1%	31.0%	34.3%	31.1%
Total Self-Pay & Other	5.9%	6.1%	6.0%	5.1%	4.1%

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Source: Moody's Investors Service

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- » [2017 Outlook - Volume and Revenue Growth Drive Stability, But Operating Pressures Persist](#)
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