

UPMC Quarterly Disclosure & Audited Consolidated Financial Statements

FOR THE PERIOD ENDED DECEMBER 31, 2019



UPMC
LIFE CHANGING MEDICINE

UPMC Year End Disclosure & Audited Consolidated Financial Statements

FOR THE PERIOD ENDED DECEMBER 31, 2019

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The following financial data is as of and for the years ended December 31, 2019 and 2018. Operating and financial results reported herein are not necessarily indicative of the results that may be expected for any future periods.

The information contained herein is being filed by UPMC for the purpose of complying with its obligations under Continuing Disclosure Agreements entered into in connection with the issuance of the series of bonds listed herein and disclosure and compliance obligations in connection with various banking arrangements. Digital Assurance Certification, L.L.C., as Dissemination Agent, has not participated in the preparation of this Year End Disclosure & Audited Consolidated Financial Statements, has not examined its contents and makes no representations concerning the accuracy and completeness of the information contained herein.



INTRODUCTION TO MANAGEMENT'S DISCUSSION AND ANALYSIS

PERIOD ENDED DECEMBER 31, 2019

UPMC, doing business as the University of Pittsburgh Medical Center, is one of the world's leading Integrated Delivery and Financing Systems ("IDFS"). UPMC is based in Pittsburgh, Pennsylvania and primarily serves residents across the Commonwealth of Pennsylvania. We also draw patients for highly specialized services from across the nation and around the world. UPMC's 40 hospitals and more than 700 clinical locations comprise one of the largest nonprofit health systems in the United States. UPMC has three major divisions: Health Services, Insurance Services, and UPMC Enterprises.

We are committed to providing the communities that our hospitals, outpatient centers and other health care facilities serve, as well as our insurance members, with high quality, cost-effective health care while continuing to grow our business and execute on our mission to provide Life Changing Medicine. As the stewards of UPMC's community assets, we are guided by our core values of integrity, excellence, respect and teamwork. These values govern the manner in which we serve our communities and are embedded in the execution and delivery of Life Changing Medicine.

UPMC continues to make significant investments in equipment, technology, education and operational strategies designed to improve clinical quality at our hospitals and outpatient centers. As a result of our efforts, UPMC Presbyterian Shadyside is consistently ranked on the *U.S. News & World Report* Honor Roll of America's Best Hospitals while UPMC Children's Hospital of Pittsburgh is currently ranked 8th on the Honor Roll. Investments in our operations and continued capital improvements are expected to become increasingly important as the competitive environment of the market and changes to health care nationally continue to progress and change the landscape of patient care and reimbursement. We build new facilities, make strategic acquisitions, and enter into joint venture arrangements or affiliations with health care businesses — in each case in communities where we believe our mission can be effectively utilized to improve the overall health of those communities.

By continually evolving and refining UPMC's world-class financial processes, we focus on achieving optimal financial results that support the continued development of our organization, as well as ongoing investment in the future of the communities we serve. We are committed to achieving these objectives with unyielding commitments to transparency in reporting and disclosure, enterprise-wide integration, and ongoing process improvement.

The purpose of this section, Management's Discussion and Analysis ("MD&A"), is to provide a narrative explanation of our financial statements that enhances our overall financial disclosures, to provide the context within which our financial information may be analyzed, and to provide information about the quality of, and potential variability of, our financial condition, results of operations and cash flows.

Unless otherwise indicated, all financial and statistical information included herein relates to our continuing operations, with dollar amounts expressed in millions (except for statistical information). MD&A should be read in conjunction with the accompanying audited consolidated financial statements.

MANAGEMENT'S DISCUSSION & ANALYSIS

PERIOD ENDED DECEMBER 31, 2019

CONSOLIDATED FINANCIAL HIGHLIGHTS

(Dollars in millions)

Financial Results for the Years Ended December 31	2019	2018*
Operating revenues	\$ 20,609	\$ 18,777
Operating income	\$ 27	\$ 94
Operating margin %	0.1%	0.5%
Operating margin (including income tax and interest expense)	(0.6)%	(0.5)%
Gain (loss) from investing and financing activities	\$ 374	\$ (367)
Excess of revenues over expenses (expenses over revenues)	\$ 420	\$ (290)
Operating EBIDA	\$ 665	\$ 718
Capital expenditures	\$ 971	\$ 891
Reinvestment ratio	1.52	1.43

Selected Other Information as of	December 31, 2019	December 31, 2018
Total cash and investments	\$ 6,600	\$ 6,856
Unrestricted cash and investments	\$ 5,057	\$ 5,098
Unrestricted cash and investments over long-term debt	\$ 912	\$ 1,059
Days of cash on hand	92	101
Days in net accounts receivable	44	39
Average age of plant	9.0	8.7

*Prior year balances have been adjusted to reflect the retrospective adoption of ASU 2017-07.

Operating revenues for the year ended December 31, 2019 increased \$1.8 billion, or 9.8%, as compared to the year ended December 31, 2018. The operating results continue to be influenced by broad market dynamics including an increasingly competitive healthcare marketplace, government reimbursement and premium increases that are below the growth in healthcare expenses, continuing development of new and expensive medical treatments, as well as ongoing UPMC investments in new programs and innovative care models to shape the future of healthcare delivery. Operating income for the year ended December 31, 2019 decreased \$67 million compared to the same period in the prior year. Excess of revenues over expenses was \$420 million and operating earnings before interest, depreciation and amortization totaled \$665 million for the year ended December 31, 2019. As of December 31, 2019, UPMC had \$6.6 billion of cash and investments, approximately \$2.1 billion of which is held by UPMC's regulated health and captive insurance companies. Net assets without donor restrictions required to meet statutory requirements of the Health Plans are outlined in Note 8 in UPMC's audited consolidated financial statements.

For the year ended December 31, 2019:

- Hospital medical-surgical admissions and observation cases decreased 1% compared to the prior year.
- Hospital outpatient revenue per workday increased 6% compared to the prior year.
- Physician service revenue per weekday increased 7% from the comparable period in the prior year, and
- Enrollment in UPMC's Insurance Services grew to nearly 3.6 million members as of December 31, 2019.

UPMC's gain from investing and financing activities, excluding UPMC Enterprises activity, for the year ended December 31, 2019 was \$510 million. UPMC continues to have a long-term perspective with regard to its investment activities.

MANAGEMENT'S DISCUSSION & ANALYSIS

PERIOD ENDED DECEMBER 31, 2019

BUSINESS HIGHLIGHTS

In March 2019, the Western Maryland Health System (“WMHS”) Board of Directors signed a non-binding letter of intent with UPMC to pursue an affiliation agreement to integrate WMHS into the UPMC system. Following a nearly one-year period of due diligence by both parties and regulatory review and approval, on February 1, 2020, WMHS became UPMC Western Maryland. The full affiliation offers Allegany County, Maryland and the surrounding areas access to enhanced health care services, leverages UPMC’s clinical expertise, and gives Western Maryland improved ability to recruit more top doctors to the area. UPMC has committed to invest \$90 million over five years in capital expenditures and clinical program enhancements. Since February 2018, WMHS and UPMC had been working together successfully under a clinical affiliation.

As part of its continued expansion of trusted, high-quality health care services in Ireland, UPMC in November 2019 announced its acquisition of Clane General Hospital in County Kildare, in partnership with the Institute of Eye Surgery (“IOES”). The facility was renamed UPMC Kildare Hospital. UPMC also is working with IOES to create a national Ophthalmology Network of Excellence, while it also adds and expands a wide range of other needed medical specialties for patients in the region. Located about 20 miles west of Dublin, the 39-bed UPMC Kildare will be connected to cutting-edge vision research and clinical trials in Pittsburgh and Paris, under the leadership of José-Alain Sahel, M.D., chair of the Department of Ophthalmology at the University of Pittsburgh, director of the UPMC Eye Center, and a world-renowned expert in efforts to prevent and cure blindness. Dr. Sahel also is a leader in the development of a new UPMC Vision and Rehabilitation Tower in Pittsburgh that will serve patients from around the world with eye diseases and vision impairment. The IOES, now a minority partner in UPMC Kildare, is the largest ophthalmology service in Ireland and is the only ophthalmology clinic in Ireland with an embedded clinical trials team. The group also practices at UPMC Whitfield.

In June 2019, Wanda Group, one of the largest conglomerates in China, and UPMC signed an agreement to jointly build and operate the first of what is expected to be at least five world-class hospitals in China that meet the highest international quality standards. In October 2019, UPMC broke ground for the first hospital in Chengdu, one of China’s largest cities. As manager of the new hospital in Chengdu, funded by Wanda, UPMC is providing its expertise in hospital design, operation and management to ensure a patient and family-centric experience, while creating a model to be used for Wanda’s expansion into health care across the country. Under the agreement for Chengdu Wanda-UPMC International Hospital, expected to open in 2022, UPMC will hire key hospital leaders and physicians leading clinical departments. UPMC will also train staff in China and Pittsburgh while certain qualified Chengdu Wanda physicians will be appointed as adjunct faculty at the University of Pittsburgh School of Medicine.

UPMC Health Plan was the only Medicare Advantage plan in Pennsylvania included in the *U.S. News and World Report 2020 Best Insurance Companies for Medicare and Prescription Drug Plans*, released in October 2019. The ratings highlight insurance companies that consistently offer highly rated health coverage to Medicare beneficiaries, and is a resource for Medicare beneficiaries and their families searching for the best coverage options. In June 2019, UPMC Children’s Hospital of Pittsburgh was recognized as one of the top pediatric hospitals in the country, earning 8th position on the annual *U.S. News & World Report Honor Roll of America’s Best Children’s Hospitals*. Nationally, UPMC Children’s Hospital is ranked for excellence in all 10 clinical specialty areas and is among the top 10 hospitals in five specialties. In July 2019, UPMC Presbyterian Shadyside was one of only 21 hospitals in the nation included on the *U.S. News & World Report Honor Roll of America’s Best Hospitals*. UPMC was ranked #15 nationally, and #1 in Pennsylvania. This year marks UPMC’s 20th year for inclusion on the Honor Roll, improving its ranking in six clinical specialties compared to last year.

MANAGEMENT'S DISCUSSION & ANALYSIS

PERIOD ENDED DECEMBER 31, 2019

CONDENSED CONSOLIDATING STATEMENTS OF OPERATIONS

Year Ended December 31, 2019

(in millions)

	Health Services	Insurance Services	Eliminations	Consolidated
Revenues:				
Net patient service revenue	\$ 11,250	\$ -	\$ (2,149)	\$ 9,101
Insurance enrollment revenue	-	9,863	-	9,863
Other revenue	1,196	660	(211)	1,645
Total operating revenues	\$ 12,446	\$ 10,523	\$ (2,360)	\$ 20,609
Expenses:				
Salaries, professional fees and benefits	\$ 6,868	\$ 462	\$ (31)	\$ 7,299
Insurance claims expense	-	9,073	(2,149)	6,924
Supplies, purchased services and general	4,941	960	(180)	5,721
Depreciation and amortization	623	15	-	638
Total operating expenses	12,432	10,510	(2,360)	20,582
Operating income	\$ 14	\$ 13	\$ -	\$ 27
Operating margin %	0.1%	0.1%	-	0.1%
Operating margin % (including income tax and interest expense)	(1.0)%	(0.1)%	-	(0.6)%
Operating EBIDA	\$ 637	\$ 28	\$ -	\$ 665
Operating EBIDA %	5.1%	0.3%	-	3.2%

Year Ended December 31, 2018*

(in millions)

	Health Services	Insurance Services	Eliminations	Consolidated
Revenues:				
Net patient service revenue	\$ 10,828	\$ -	\$ (2,005)	\$ 8,823
Insurance enrollment revenue	-	8,492	-	8,492
Other revenue	1,053	513	(104)	1,462
Total operating revenues	\$ 11,881	\$ 9,005	\$ (2,109)	\$ 18,777
Expenses:				
Salaries, professional fees and benefits	\$ 6,505	\$ 388	\$ (27)	\$ 6,866
Insurance claims expense	-	7,717	(2,005)	5,712
Supplies, purchased services and general	4,827	731	(77)	5,481
Depreciation and amortization	595	29	-	624
Total operating expenses	11,927	8,865	(2,109)	18,683
Operating (loss) income	\$ (46)	\$ 140	\$ -	\$ 94
Operating margin %	(0.4)%	1.6%	-	0.5%
Operating margin % (including income tax and interest expense)	(2.3)%	1.9%	-	(0.5)%
Operating EBIDA	\$ 549	\$ 169	\$ -	\$ 718
Operating EBIDA %	4.6%	1.9%	-	3.8%

*Prior year balances have been adjusted to reflect the retrospective adoption of ASU 2017-07.

MANAGEMENT'S DISCUSSION & ANALYSIS

PERIOD ENDED DECEMBER 31, 2019

Health Services

UPMC Health Services division ("Health Services") includes a comprehensive array of clinical capabilities consisting of hospitals, specialty service lines (e.g., transplantation services, woman care, behavioral health, pediatrics, cancer care and rehabilitation services), contract services (emergency medicine, pharmacy and laboratory) and 4,900 employed physicians with associated practices. Also included within Health Services are supporting foundations and UPMC's captive insurance programs. Hospital activity is monitored in four distinct groups: (i) academic hospitals that provide a comprehensive array of clinical services that include the specialty service lines listed above and serve as the primary academic and teaching centers for UPMC and are located in Pittsburgh; (ii) community hospitals that provide core clinical services mainly to the suburban Pittsburgh, greater Erie, and the greater Altoona populations of Pennsylvania; (iii) regional hospitals that provide core clinical services to certain other areas of western and central Pennsylvania; and (iv) pre- and post-acute care capabilities that include: UPMC HomeCare, a network of home health services, and UPMC Senior Communities, the facilities of which provide a complete network of senior living capabilities in greater Pittsburgh and surrounding counties. Health Services also includes international ventures which aim to bring new revenue streams into UPMC's domestic operations. International ventures currently include ISMETT, a transplant and specialty surgery hospital in Palermo, Italy, that has performed more than 2,200 transplants since its founding in 1999, a hospital system located in Ireland, a contract to provide remote second-opinion pathology consultations for patients in China and Singapore, a national oncology treatment and research center in Kazakhstan, as well as the Advanced Radiosurgery Center of Excellence at San Pietro FBF Hospital in Rome.

Health Services operating revenues of \$12.4 billion for the year ended December 31, 2019 increased \$565 million versus the same period in the prior year. Operating income for the year ended December 31, 2019 increased by \$60 million versus the same period in the prior year as increased value-based payments and higher outpatient activity more than offset higher inflationary expense increases, increased regional physician investments and lower inpatient volumes.

Insurance Services

UPMC Insurance Services division ("Insurance Services") holds various interests in health care financing initiatives and network care delivery operations that have nearly 3.6 million members as of December 31, 2019. UPMC Health Plan is a health maintenance organization ("HMO") offering coverage for commercial and Medicare members. UPMC for You is also an HMO, which is engaged in providing coverage to Medical Assistance & Medicare Special Needs Plan beneficiaries. UPMC Health Network offers preferred provider organization ("PPO") plan designs to serve Medicare beneficiaries. UPMC Health Options offers PPO plan designs to serve commercial beneficiaries. UPMC for Life is a Medicare product line offered by various companies within the Insurance Services division. UPMC Work Partners provides fully insured workers' compensation, and integrated workers' compensation and disability services to employers. Community Care Behavioral Health Organization ("Community Care") is a state-licensed HMO that manages the behavioral health services for Medical Assistance through mandatory managed care programs in Pennsylvania. Community HealthChoices ("CHC") is Pennsylvania's managed care program for individuals who are dual eligible for Medicaid and Medicare or qualify for Medicaid LTSS and is designed to increase opportunities for older Pennsylvanians and individuals with physical disabilities to remain in their homes and communities rather than in facilities.

Insurance Services operating revenues of \$10.5 billion for the year ended December 31, 2019 increased \$1.5 billion versus the same period in the prior year, driven by membership growth of 179,028 members in the current year. Operating income for the year ended December 31, 2019 decreased by \$127 million versus the same period in the prior year as start-up losses on the new CHC Southeast Zone contract, increased medical claims expenses and higher value-based payments more than offset higher premium revenue resulting from increased enrollment.

MANAGEMENT'S DISCUSSION & ANALYSIS

PERIOD ENDED DECEMBER 31, 2019

UPMC Enterprises

UPMC Enterprises leverages UPMC's integrated delivery and financing system capabilities to generate new revenue streams. This is accomplished by fostering new ideas for improvement in the delivery of health care, pursuing commercialization opportunities of smart technologies and developing strategic partnerships with industry leaders. Leveraging UPMC's long-standing reputation for academic and research excellence, UPMC Enterprises also sponsors the translation of basic science conducted in a research setting to its commercial use in bedside clinical practice, application in medical laboratories, or use across emerging venues where medicine is delivered. These ventures both support UPMC's core mission and help to stimulate the economy of western Pennsylvania.

UPMC Enterprises manages a portfolio that includes various product development initiatives and numerous operating companies with commercially-available products and services directed toward the improvement of the delivery of health care. Unlike the Health Services and Insurance Services divisions, UPMC Enterprises' results are classified as investing and financing activity in the consolidated statements of operations and changes in net assets, consistent with the long-term nature of developing and commercializing technology-enabled initiatives.

MANAGEMENT'S DISCUSSION & ANALYSIS

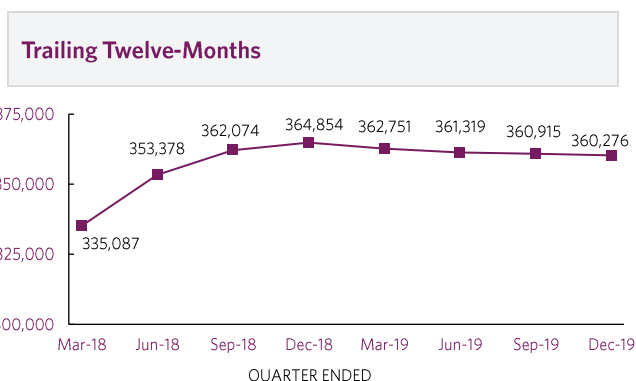
PERIOD ENDED DECEMBER 31, 2019

REVENUE METRICS – HEALTH SERVICES

Medical-Surgical Admissions and Observation Visits

Inpatient activity as measured by medical-surgical admissions and observation visits at UPMC's hospitals for the year ended December 31, 2019 decreased 1% compared to the same period in 2018.

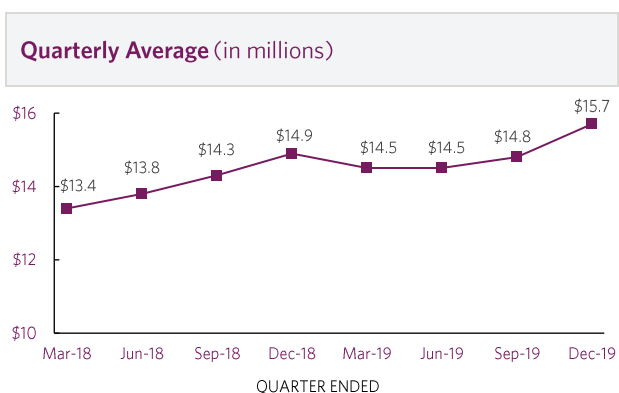
For the Years Ended December 31			
(in thousands)	2019	2018	Change
Academic	126.3	127.7	(1)%
Community	86.2	88.0	(2)%
Regional	147.8	149.2	(1)%
Total	360.3	364.9	(1)%



Outpatient Revenue per Workday

UPMC's outpatient activity for the year ended December 31, 2019 as measured by average revenue per workday increased 6% compared to the same period in 2018. Hospital outpatient activity is measured on an equivalent workday ("EWD") basis to adjust for weekend and holiday hours.

For the Years Ended December 31			
(in thousands)	2019	2018*	Change
Academic	\$ 5,940	\$ 5,580	6%
Community	2,245	2,117	6%
Regional	6,676	6,387	5%
Total	\$ 14,861	\$ 14,084	6%



*Adjustments to prior year methodology to conform to current year.

MANAGEMENT'S DISCUSSION & ANALYSIS

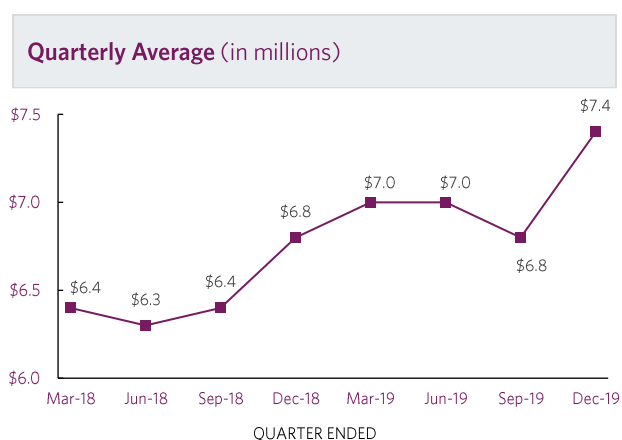
PERIOD ENDED DECEMBER 31, 2019

REVENUE METRICS – HEALTH SERVICES (CONTINUED)

Physician Service Revenue per Weekday

UPMC's physician activity for the year ended December 31, 2019 as measured by average revenue per weekday increased 7% from the comparable period in 2018. Physician services activity is measured on a weekday basis.

For the Years Ended December 31			
(in thousands)	2019	2018	Change
Academic	\$ 3,624	\$ 3,553	2%
Community	1,670	1,710	(2)%
Regional	1,779	1,366	30%
Total	\$ 7,073	\$ 6,629	7%



Sources of Patient Service Revenue

The gross patient service revenues, before explicit and implicit price concessions, of UPMC are derived from payers which reimburse or pay UPMC for the services it provides to patients covered by such payers. The following table is a summary of the percentage of the subsidiary hospitals' gross patient service revenue by payer.

	Years Ended December 31	
	2019	2018
Medicare	47%	47%
Medical Assistance	17%	17%
UPMC Insurance Services Commercial	14%	14%
National Insurers Commercial	7%	7%
Highmark Commercial	6%	7%
Self-pay/Other	9%	8%
Total	100%	100%

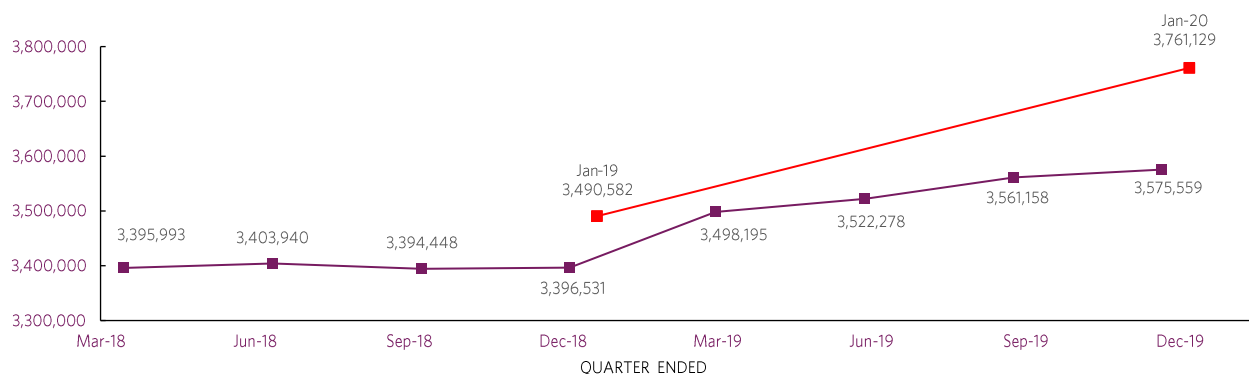
MANAGEMENT'S DISCUSSION & ANALYSIS

PERIOD ENDED DECEMBER 31, 2019

OPERATING METRICS - INSURANCE SERVICES

Membership

Membership in the UPMC Insurance Services division increased to 3,575,559 as of December 31, 2019, a 5% increase versus December 31, 2018.

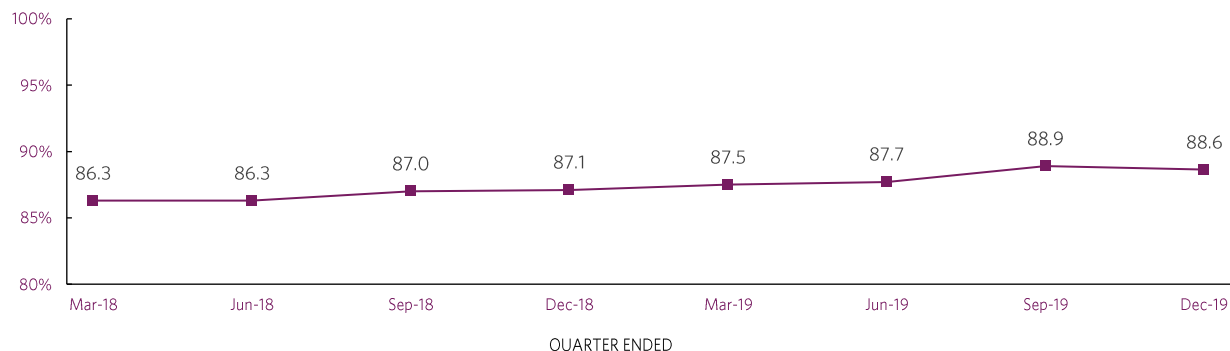


As of	Jan 1, 2020	Jan 1, 2019	Dec 31, 2019	Dec 31, 2018
Commercial Health	789,234	777,345	782,837	715,704
Medicare	189,865	190,512	192,788	182,337
Medical Assistance	419,546	420,242	419,540	419,324
Sub-Total Physical Health Products	1,398,645	1,388,099	1,395,165	1,317,365
Community HealthChoices	123,043	74,547	70,870	43,260
Behavioral Health	1,019,284	981,461	995,203	981,691
Sub-Total Health Products	2,540,972	2,444,107	2,461,238	2,342,316
Work Partners and Life Solutions	691,816	570,314	628,095	570,129
Ancillary Products	444,779	390,588	405,331	385,921
Evolent	83,562	85,573	80,895	98,165
Total Membership	3,761,129	3,490,582	3,575,559	3,396,531

Healthcare Spending Ratio

UPMC Insurance Services division's healthcare spending ratio has increased to 88.6% as of December 31, 2019 from 87.1% as of December 31, 2018 primarily due to the higher start-up costs associated with the new CHC program.

Trailing Twelve-Months



MANAGEMENT'S DISCUSSION & ANALYSIS

PERIOD ENDED DECEMBER 31, 2019

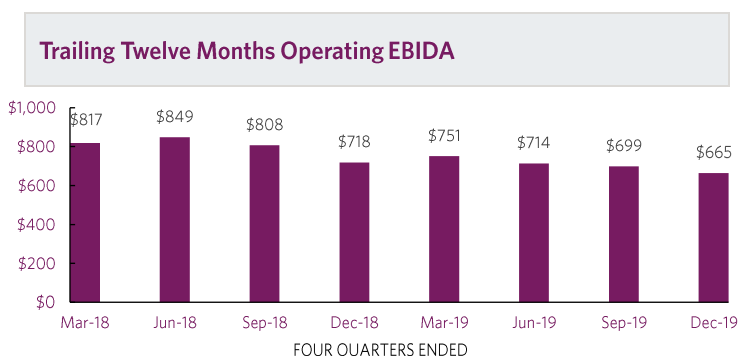
KEY FINANCIAL INDICATORS

(Dollars in millions)

Operating Earnings before Interest, Depreciation and Amortization

Operating EBIDA for the year ended December 31, 2019 decreased 7% as compared to the year ended December 31, 2018, primarily due to the decrease in operating income.

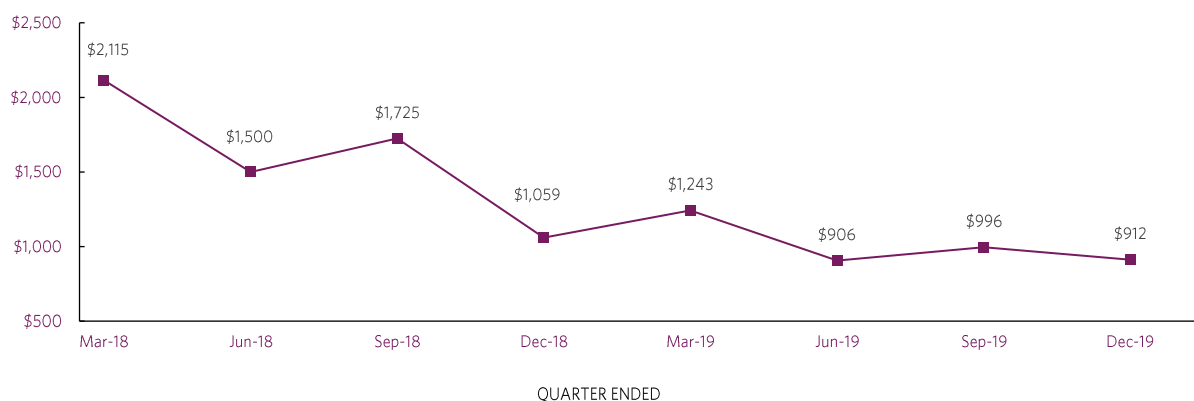
For the Years Ended December 31			
(in thousands)	2019	2018*	Change
Operating Income	\$ 27	\$ 94	(71)%
Depreciation and Amortization	638	624	2%
Operating EBIDA	\$ 665	\$ 718	(7)%



*Prior year balances have been adjusted to reflect the retrospective adoption of ASU 2017-07.

Unrestricted Cash and Investments Over Long Term Debt

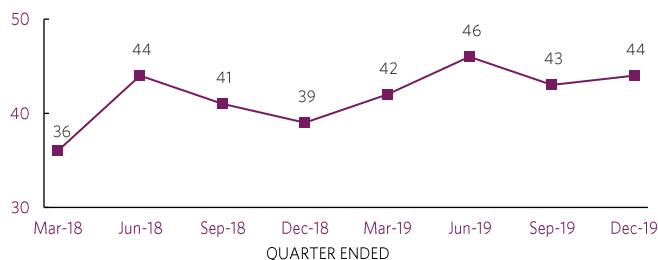
Unrestricted cash and investments over long term debt as of December 31, 2019 decreased by \$147 million as compared to December 31, 2018 primarily as a result of UPMC funding \$163 million into its fully funded defined benefit pension plan in 2019.



Days in Net Accounts Receivable

Consolidated Days in Accounts Receivable continue to be lower than industry averages due to UPMC's rigorous procedures in this area.

By Receivable	2019 Balance	Days	
		Dec 31, 2019	Dec 31, 2018
Patient AR	\$ 1,165	45	42
Other AR	1,349	43	39
Consolidated	\$ 2,514	44	39



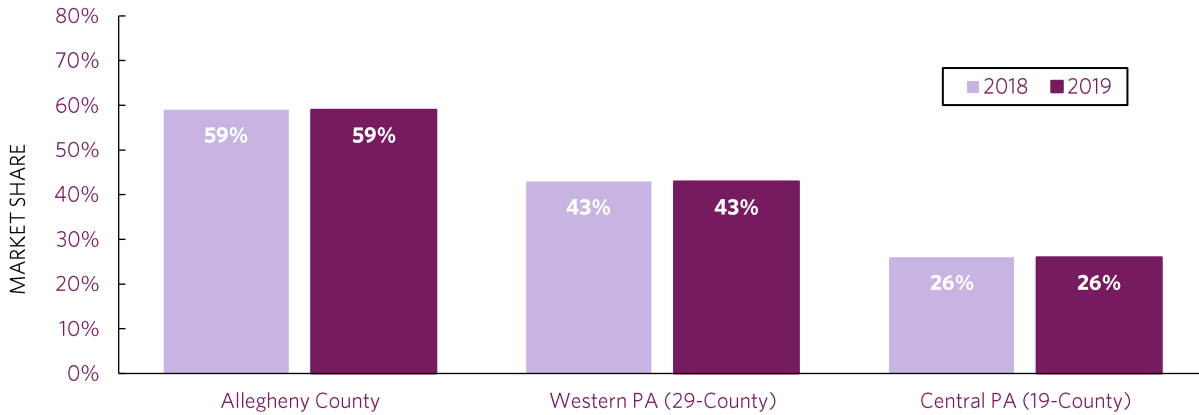
MANAGEMENT'S DISCUSSION & ANALYSIS

PERIOD ENDED DECEMBER 31, 2019

MARKET SHARE

The chart below shows the change in UPMC's estimated inpatient market share for the first two quarters of calendar years 2018 and 2019 by service area⁽¹⁾. This is the most recent market share data currently available.

UPMC INPATIENT MEDICAL-SURGICAL MARKET SHARE AS OF JUNE 30⁽²⁾



⁽¹⁾ UPMC's three service areas are (1) Allegheny County, (2) a 29-county region including Allegheny, Armstrong, Beaver, Bedford, Blair, Butler, Cambria, Cameron, Centre, Clarion, Clearfield, Crawford, Elk, Erie, Fayette, Forest, Greene, Huntingdon, Indiana, Jefferson, Lawrence, McKean, Mercer, Potter, Somerset, Venango, Warren, Washington and Westmoreland counties, and (3) a 19-county region including Adams, Clinton, Columbia, Cumberland, Dauphin, Franklin, Fulton, Juniata, Lancaster, Lebanon, Lycoming, Mifflin, Montour, Northumberland, Perry, Snyder, Tioga, Union, and York counties.

⁽²⁾ Excludes psychiatry and substance abuse discharges.

MANAGEMENT'S DISCUSSION & ANALYSIS

PERIOD ENDED DECEMBER 31, 2019

ASSET AND LIABILITY MANAGEMENT

During the three months ended December 31, 2019, UPMC's investment portfolio returned 4.1%. As of December 31, 2019, UPMC utilized 142 ongoing external investment managers including 45 traditional managers, 12 hedge fund managers and 85 private capital managers. UPMC is also invested with an additional 45 legacy private capital and hedge fund managers. UPMC's investment portfolio has a long-term perspective and has generated annualized returns of 13.0%, 8.0%, and 6.2% for the trailing one-, three- and five-year periods. As of December 31, 2019, 70% of UPMC's investment portfolio could be liquidated within three days.

UPMC's annualized cost of capital during the period was 3.30%. This cost of capital includes the accrual of interest payments, the amortization of financing costs and original issue discount or premium, the ongoing costs of variable rate debt and the cash flow impact of derivative contracts. As of December 31, 2019, the interest rates on UPMC's long-term debt were approximately 77% fixed and 23% variable after giving effect to derivative contracts. Annualized interest cost for the variable rate debt for the period averaged 2.31%. The annualized interest cost for the fixed rate debt was 3.57%. UPMC's primary credit facility, which expires in January 2024, has a borrowing limit of \$600 million. As of December 31, 2019, UPMC had approximately \$85 million of letters of credit outstanding under the credit facility leaving \$515 million available to fund operating and capital needs, of which none was drawn.

UPMC has other credit facilities of \$19 million (increases to \$150 million from May 15 to August 14 on an annual basis) and \$50 million with expiration dates in April 2022. Both of these credit facilities support the Insurance Services division. As of December 31, 2019, there were no draws on either credit facility. The table below compares reported Investing and Financing Activity for the years ended December 31, 2019 and 2018 by type.

Investing and Financing Activity by Type

Years Ended December 31	2019	2018
<i>(in thousands)</i>		
Realized gains	\$ 232,814	\$ 268,561
Interest and dividends, net of fees	91,767	90,645
Realized investment revenue	\$ 324,581	\$ 359,206
Unrealized gains on derivative contracts	1,444	207
Other unrealized gains (losses)	342,555	(430,293)
Investment revenue (expense)	\$ 668,580	\$ (70,880)
Loss on extinguishment of debt	(6,471)	-
Interest expense	(151,536)	(162,782)
UPMC Enterprises activity	(136,443)	(133,167)
Gain (loss) from investing and financing activities	\$ 374,130	\$ (366,829)

MANAGEMENT'S DISCUSSION & ANALYSIS

PERIOD ENDED DECEMBER 31, 2019

Sources and Uses of Cash

UPMC's primary source of operating cash is the collection of revenues and related accounts receivable. As of December 31, 2019, UPMC had approximately \$351 million of cash and cash equivalents on hand and borrowing availability under the primary credit facility was \$515 million.

Net cash provided by operating activities was \$959 million in the year ended December 31, 2019 compared to \$750 million in the year ended December 31, 2018. Operating EBIDA was \$665 million for the year ended December 31, 2019 compared to \$718 million for the year ended December 31, 2018. Included in net cash provided by operating activities were contributions of \$163 million into UPMC's fully funded defined benefit pension plan.

Key uses of cash from investing activities for the year ended December 31, 2019 include capital expenditures of \$936 million, as well as \$21 million to acquire ownership interests in and fund businesses. Major capital projects included construction and improvements at UPMC Pinnacle, UPMC Susquehanna, and UPMC Mercy as well as ongoing expansion and improvement across the entirety of UPMC. Major information services projects included enhancements that are advancing UPMC's leading clinician centric computing environment, technology infrastructure that supports UPMC's diversified digital environment, investments in enterprise data analytics and other technologies that are transforming the consumer experience across the spectrum of health care.

UTILIZATION STATISTICS

PERIOD ENDED DECEMBER 31, 2019

The following table presents selected consolidated statistical indicators of medical-surgical, psychiatric, rehabilitation and skilled nursing patient activity for the years ended December 31, 2019 and 2018.

	Years Ended December 31	
	2019	2018
Licensed Beds	8,365	8,677
BEDS IN SERVICE		
Medical-Surgical	4,776	4,850
Psychiatric	414	430
Rehabilitation	241	258
Skilled Nursing	1,443	1,425
Total Beds in Service	6,874	6,963
PATIENT DAYS		
Medical-Surgical	1,302,044	1,309,333
Psychiatric	126,606	135,456
Rehabilitation	74,161	79,342
Skilled Nursing	446,645	455,447
Total Patient Days	1,949,456	1,979,578
Average Daily Census	5,341	5,424
Observation Days	165,269	138,740
Obs Average Daily Census	453	380
ADMISSIONS AND OBSERVATION CASES		
Medical-Surgical	258,585	267,545
Observation Cases	102,878	97,324
Subtotal	361,463	364,869
Psychiatric	11,328	12,257
Rehabilitation	4,789	5,331
Skilled Nursing	4,851	5,124
Total Admissions and Observation Cases	382,431	387,581
Overall Occupancy	84%	83%
AVERAGE LENGTH OF STAY		
Medical-Surgical	5.0	4.9
Psychiatric	11.2	11.1
Rehabilitation	15.5	14.9
Skilled Nursing	92.1	88.9
Overall Average Length of Stay	7.0	6.8
Emergency Room Visits	1,111,573	1,136,776
TRANSPLANTS (DOMESTIC)		
Liver	153	135
Kidney	287	247
All Other	332	360
Total	772	742
OTHER POST-ACUTE METRICS		
Home Health Visits	818,063	762,457
Hospice Care Days	265,328	224,886
Outpatient Rehab Visits (CRS)	686,935	655,565

OUTSTANDING DEBT

PERIOD ENDED DECEMBER 31, 2019

(IN THOUSANDS)

Issuer	Original Borrower	Series	Amount Outstanding
Allegheny County Hospital Development Authority	UPMC Health System	1997B	\$ 43,573
	UPMC	2007A	60,391
	UPMC	2010A	45,483
	UPMC	2010B	98,961
	UPMC	2010C	50,000
	UPMC	2010F	95,000
	UPMC	2011A	73,281
	UPMC	2017D	499,619
	UPMC	2019A	832,667
Monroeville Finance Authority	UPMC	2012	320,579
	UPMC	2013B	56,527
	UPMC	2014B	47,437
Pennsylvania Economic Development Financing Authority	UPMC	2013A	112,294
	UPMC	2014A	293,868
	UPMC	2015B	122,199
	UPMC	2016	250,045
	UPMC	2017A	444,585
	UPMC	2017C	134,581
Erie County Hospital Authority	Hamot Health Foundation	2010A	8,472
Pennsylvania Higher Educational Facilities Authority	UPMC	2010E	193,776
Lycoming County Authority	The Williamsport Hospital	2011	13,056
Tioga County Industrial Development Authority	Laurel Health System	2010	7,002
	Laurel Health System	2011	5,355
Dauphin County General Authority	Pinnacle Health System	2012A	136,763
	Pinnacle Health System	2016A	104,410
	Pinnacle Health System	2016B	87,270
General Authority of Southcentral Pennsylvania	Hanover Hospital	2013	8,424
	Hanover Hospital	2015	23,353
Potter County Hospital Authority	UPMC	2018A	20,440
Somerset County Hospital Authority	Somerset Hospital	2009A	1,246
	Somerset Hospital	2015A	17,000
None	UPMC	2011B	99,752
	UPMC	2017B	95,170
	UPMC	2018B	322
	Susquehanna Health Innovation Center	New Market Tax Credit	17,267
	Somerset Hospital	2013	1,690
	UPMC	Swap Liabilities	6,230
	Various - Finance Leases and Loans		119,151
Total			\$ 4,547,239

Includes original issue discount and premium, deferred financing costs, and other.

Source: UPMC Records

DEBT COVENANT CALCULATIONS

PERIOD ENDED DECEMBER 31, 2019

DEBT SERVICE COVERAGE RATIO

(Dollars in thousands)

	Trailing Twelve-Month Period Ended December 31, 2019
Excess of revenues over expenses	\$ 420,324
ADJUSTED BY:	
Net Unrealized Gains during Period ¹	(342,958)
Depreciation and Amortization ¹	638,199
Loss on Defeasance of Debt ¹	(6,471)
Inherent Contribution ¹	2,885
Other Non-Operating Gain - Pension	(27,354)
Realized Investment Impairments ²	(38,999)
Interest Expense	148,782
Revenues Available for Debt Service	\$ 794,408
Historical Debt Service Requirements - 2007 MTI	\$ 306,151
Debt Service Coverage Ratio - 2007 MTI	2.59X
Historical Debt Service Requirements - All Debt and Finance Leases	\$ 346,608
Debt Service Coverage Ratio - All Debt and Finance Leases	2.29X

LIQUIDITY RATIO AS OF DECEMBER 31, 2019

Unrestricted Cash and Investments	\$ 5,057,124
Master Trust Indenture Debt	\$ 4,183,840
Unrestricted Cash to MTI Debt	1.21

⁽¹⁾ Non-Cash.

⁽²⁾ Reflects ultimate realization of previously impaired cost-based investments.

I hereby certify to the best of my knowledge that, as of December 31, 2019, UPMC is in compliance with the applicable covenants contained in the financing documents for the bonds listed on the cover hereof and all applicable bank lines of credit and no Event of Default (as defined in any related financing document) has occurred and is continuing.



C. Talbot Heppenstall, Jr.

Treasurer

UPMC

Audited Consolidated Financial Statements

FOR THE PERIOD ENDED DECEMBER 31, 2019

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors of UPMC

Opinion on the Financial Statements

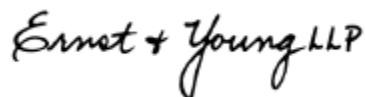
We have audited the accompanying consolidated balance sheets of UPMC and subsidiaries (the Company) as of December 31, 2019 and 2018, the related consolidated statements of operations and changes in net assets, and cash flows for the years then ended, and the related notes (collectively referred to as the “consolidated financial statements”). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2019 and 2018, and the results of its operations and its cash flows for the years then ended in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the auditing standards of the Public Company Accounting Oversight Board (United States) (PCAOB) and in accordance with auditing standards generally accepted in the United States of America, the Company's internal control over financial reporting as of December 31, 2019, based on criteria established in Internal Control – Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) and our report dated February 25, 2020 (not presented herein), expressed an unqualified opinion thereon.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are required to be independent with respect to the Company in accordance with the relevant ethical requirements relating to our audit.

We conducted our audits in accordance with the auditing standards of the PCAOB and in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

The logo for Ernst & Young LLP, featuring the company name in a stylized, handwritten-style font.

We have served as the Company's auditor since 1994.

Pittsburgh, Pennsylvania
February 25, 2020

CONSOLIDATED BALANCE SHEETS

(IN THOUSANDS)

	As of	
	December 31, 2019	December 31, 2018
CURRENT ASSETS		
Cash and cash equivalents	\$ 351,216	\$ 277,324
Patient accounts receivable	1,164,840	1,060,365
Other receivables	1,348,964	1,076,317
Securities lending collateral	73,140	171,657
Other current assets	382,943	358,100
Total current assets	3,321,103	2,943,763
Board-designated, restricted, trustee and other investments	6,248,658	6,578,930
Beneficial interests in foundations and trusts	624,691	499,957
Property, buildings and equipment:		
Land and land improvements	505,793	507,432
Buildings and fixed equipment	7,504,731	6,973,405
Movable equipment	2,972,799	2,639,369
Finance leases	168,935	145,267
Construction in progress	378,541	513,947
	11,530,799	10,779,420
Less allowance for depreciation	(5,841,014)	(5,445,369)
	5,689,785	5,334,051
Operating lease right-of-use assets	1,080,715	-
Other assets	529,546	482,246
Total assets	\$ 17,494,498	\$ 15,838,947
CURRENT LIABILITIES		
Accounts payable and accrued expenses	\$ 669,672	\$ 604,186
Accrued salaries and related benefits	793,243	720,756
Current portion of insurance reserves	759,520	636,566
Payable under securities lending agreement	73,140	171,657
Current portion of long-term obligations	316,162	462,147
Other current liabilities	536,405	472,059
Total current liabilities	3,148,142	3,067,371
Long-term obligations	4,231,077	4,245,409
Pension liability	-	114,178
Long-term insurance reserves	366,100	335,527
Operating lease noncurrent liabilities	1,010,207	-
Other noncurrent liabilities	430,863	341,407
Total liabilities	9,186,389	8,103,892
Net assets without donor restrictions	7,141,410	6,678,826
Net assets with donor restrictions	1,166,699	1,056,229
Total net assets	8,308,109	7,735,055
Total liabilities and net assets	\$ 17,494,498	\$ 15,838,947

See accompanying notes

CONSOLIDATED STATEMENTS OF OPERATIONS AND CHANGES IN NET ASSETS

(IN THOUSANDS)

	Years Ended December 31	
	2019	2018
NET ASSETS WITHOUT DONOR RESTRICTIONS		
Net patient service revenue	\$ 9,100,868	\$ 8,822,997
Insurance enrollment revenue	9,862,977	8,491,686
Other revenue	1,645,431	1,462,661
Total operating revenues	20,609,276	18,777,344
Expenses:		
Salaries, professional fees and employee benefits	7,299,574	6,865,611
Insurance claims expense	6,923,552	5,712,025
Supplies, purchased services and general	5,721,326	5,481,377
Depreciation and amortization	638,199	624,388
Total operating expenses	20,582,651	18,683,401
Operating income	26,625	93,943
Inherent contribution	(2,885)	(72,354)
Other non-operating gains	27,354	71,575
Income tax expense	(4,900)	(16,603)
After-tax income	\$ 46,194	\$ 76,561
Investing and financing activities:		
Investment revenue (expense)	668,580	(70,880)
Interest expense	(151,536)	(162,782)
Loss on extinguishment of debt	(6,471)	-
UPMC Enterprises activity:		
Portfolio company revenue	75,414	53,955
Portfolio company and development expense	(211,857)	(187,122)
Gain (loss) from investing and financing activities	374,130	(366,829)
Excess of revenues over expenses (expenses over revenues)	420,324	(290,268)
Other changes in net assets without donor restrictions	42,260	(121,510)
Change in net assets without donor restrictions	462,584	(411,778)
NET ASSETS WITH DONOR RESTRICTIONS		
Net contributions and other changes	(4,643)	33,295
Net realized and unrealized gains on restricted investments	14,476	21,340
Restricted net assets acquired	1,525	-
Assets released from restriction for operations and capital purchases	(25,622)	(21,936)
Change in beneficial interests in foundations and trusts	124,734	(29,782)
Change in net assets with donor restrictions	110,470	2,917
Change in total net assets	573,054	(408,861)
Cumulative effect of change in accounting principle	-	218,800
Net assets, beginning of period	7,735,055	7,925,116
Net assets, end of period	\$ 8,308,109	\$ 7,735,055

See accompanying notes

CONSOLIDATED STATEMENTS OF CASH FLOWS

(IN THOUSANDS)

	Years Ended December 31	
	2019	2018
OPERATING ACTIVITIES		
Change in total net assets	\$ 573,054	\$ (408,861)
Adjustments to reconcile change in total net assets to net cash provided by operating activities:		
Depreciation and amortization	638,199	624,388
Change in beneficial interest in foundations and trusts	(124,734)	29,782
Restricted contributions and investment revenue	(9,833)	(54,635)
Unrealized (gains) losses on investments	(342,555)	430,293
Realized gains on investments	(232,814)	(359,206)
Purchases of non-alternative investments	(5,990,155)	(4,424,269)
Sales of non-alternative investments	6,657,768	4,881,053
Inherent contribution	2,885	72,354
Other non-cash activity	39,305	201,197
Changes in operating assets and liabilities:		
Accounts receivable	(369,122)	(256,563)
Other current assets	77,513	(204,140)
Accounts payable and accrued liabilities	100,136	24,422
Insurance reserves	153,527	82,388
Other current liabilities	(157,497)	193,019
Other noncurrent assets and liabilities	(20,438)	28,411
Other operating changes	(36,550)	(109,744)
Net cash provided by operating activities	958,689	749,889
INVESTING ACTIVITIES		
Purchase of property and equipment (net of disposals)	(935,814)	(867,345)
UPMC Enterprises investments in joint ventures	(21,300)	(14,000)
Cash acquired through affiliations	21,272	-
Net change in investments designated as nontrading	4,885	(8,611)
Purchases of alternative investments	(233,794)	(242,672)
Sales of alternative investments	484,281	348,818
Net change in other assets	(17,506)	(14,811)
Net cash used in investing activities	(697,976)	(798,621)
FINANCING ACTIVITIES		
Repayments of long-term obligations	(1,361,575)	(508,011)
Borrowings of long-term obligations	1,164,921	249,801
Restricted contributions and investment income	9,833	54,635
Net cash used in financing activities	(186,821)	(203,575)
Net change in cash and cash equivalents	73,892	(252,307)
Cash and cash equivalents, beginning of period	277,324	529,631
Cash and cash equivalents, end of period	\$ 351,216	\$ 277,324
SUPPLEMENTAL INFORMATION		
Finance lease obligations incurred to acquire assets	\$ 34,700	\$ 23,908
<i>See accompanying notes</i>		

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(IN THOUSANDS)

1. ORGANIZATIONAL OVERVIEW AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

UPMC is a Pennsylvania nonprofit corporation and is exempt from federal income tax pursuant to Section 501(a) of the Internal Revenue Code (the "Code") as an organization described in Section 501(c)(3) of the Code. Headquartered in Pittsburgh, Pennsylvania, UPMC is one of the world's leading integrated delivery and financing systems. UPMC comprises nonprofit and for-profit entities offering medical and health care-related services, including health insurance products. Closely affiliated with the University of Pittsburgh (the "University") and with shared academic and research objectives, UPMC partners with the University's Schools of the Health Sciences to deliver outstanding patient care, train tomorrow's health care specialists and biomedical scientists, and conduct groundbreaking research on the causes and course of disease.

The accompanying audited consolidated financial statements have been prepared in accordance with generally accepted accounting principles in the United States ("GAAP") and include the accounts of UPMC and its subsidiaries. Intercompany accounts and transactions are eliminated in consolidation.

New Accounting Pronouncements

Recent accounting pronouncements pending adoption are either not applicable or are not expected to have a material impact on UPMC's consolidated balance sheets, statements of operations and changes in net assets or cash flows.

In 2019, UPMC adopted Accounting Standards Update ("ASU") 2017-07, *Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost*, as well as ASU 2016-02, codified as Accounting Standards Codification ("ASC") 842, *Leases* (refer to Notes 7 and 11, respectively, for additional details). In applying the provisions of ASU 2017-07, UPMC adjusted its 2018 consolidated statement of operations and changes in net assets for comparability purposes by increasing salaries, professional fees and employee benefits by \$71,575 with a corresponding decrease to operating income and increase to other non-operating gains.

Cash and Cash Equivalents

Cash and cash equivalents consist primarily of cash and investments, which are so near to maturity (maturity of three days or less when purchased) that they present insignificant risk of changes in value. Fixed income instruments with original, short-term maturities of less than 90 days that are held in Master Trust Funds ("MTF") are excluded from cash equivalents as they are commingled with longer-term investments.

Net Patient Service Revenue

UPMC's net patient service revenue is reported at the amount that reflects the consideration to which UPMC expects to be entitled in exchange for providing patient care. These amounts are due from patients, third-party payers (including health insurers and government programs), and others and include an estimate of variable consideration for retroactive revenue adjustments due to settlement of audits, reviews, and investigations. Generally, UPMC bills the patients and third-party payers several days after the services are performed and/or the patient is discharged from the facility. Revenue is recognized as performance obligations are satisfied. Performance obligations are determined based on the nature of the services provided by UPMC. Revenue for performance obligations satisfied over time is recognized based on actual charges incurred in relation to total expected (or actual) charges. UPMC believes that this method provides a reasonable representation of the transfer of services over the term of the performance obligation based on the inputs needed to satisfy the obligation. Generally, performance obligations satisfied over time relate to inpatient services. UPMC measures the performance obligation from admission into the hospital to the point when it is no longer required to provide services to that patient, which is generally at the time of discharge. Revenue for performance obligations satisfied at a point in time is recognized when goods or services are provided and UPMC does not believe it is required to provide additional goods or services to the patient.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(IN THOUSANDS)

The majority of UPMC's services are rendered to patients with third party coverage. Reimbursement under these programs for all payers is based on a combination of prospectively determined rates, discounted charges and historical costs. Amounts received under Medicare and Medical Assistance programs are subject to review and final determination by program intermediaries or their agents and the contracts UPMC has with commercial payers also provide for retroactive audit and review of claims. Agreements with third-party payers typically provide for payments at amounts less than established charges. Generally, patients who are covered by third-party payers are responsible for related deductibles and coinsurance, which vary in amount. UPMC also provides services to uninsured patients, and offers those uninsured patients a discount, either by policy or law, from standard charges. UPMC estimates the transaction price for patients with deductibles and coinsurance and from those who are uninsured based on historical experience and current market conditions. The initial estimate of the transaction price is determined by reducing the standard charge by any contractual adjustments, discounts, and implicit price concessions. Subsequent changes to the estimate of the transaction price are generally recorded as adjustments to net patient service revenue in the period of the change and are accrued on an estimated basis in the period the related services are rendered and adjusted in future periods if final settlements differ from estimates. Adjustments arising from a change to previously estimated transaction prices were not significant in the years ended December 31, 2019 or 2018.

Consistent with UPMC's mission, care is provided to patients regardless of their ability to pay. UPMC has determined it has provided implicit price concessions to uninsured patients and patients with other uninsured balances (for example, copays and deductibles). The implicit price concessions included in estimating the transaction price represent the difference between amounts billed to patients and the amounts UPMC expects to collect based on its collection history with those patients. Patients who meet UPMC's criteria for charity care are provided care without charge or at amounts less than established rates and UPMC has determined it has provided an implicit price concession. Price concessions, including charity care, are not reported as net patient service revenue.

The composition of net patient service revenue for the years ended December 31, 2019 and 2018, primarily resulting from patients in the western Pennsylvania region, are as follows:

Years Ended December 31	2019	2018
Medicare	39%	39%
Commercial	38%	38%
Medical Assistance	15%	15%
Self-pay/other	8%	8%
	100%	100%

Laws and regulations governing the Medicare and Medical Assistance programs are complex and subject to interpretation. UPMC believes that it is in compliance with all applicable laws and regulations and is not aware of any pending or threatened investigations involving allegations of potential wrongdoing. Compliance with such laws and regulations is subject to government review and interpretation as well as significant regulatory action including fines, penalties, and exclusion from Medicare and Medical Assistance programs. As a result, there is at least a reasonable possibility that the recorded estimates may change.

Insurance Enrollment Revenue

UPMC's insurance subsidiaries (collectively, the "Health Plans") provide health care services on a prepaid basis under various contracts. Insurance enrollment revenues are recognized as income in the period in which enrollees are entitled to receive health care services, which represents the performance obligation. Health care premium payments received from UPMC's members in advance of the service period are recorded as unearned revenues.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(IN THOUSANDS)

Insurance enrollment revenues include commercial, Medicare, Medical Assistance and behavioral health contracts. Laws and regulations governing the Medicare and Medical Assistance programs are complex and subject to interpretation. UPMC believes that it is in compliance with all applicable laws and regulations and is not aware of any pending or threatened investigations involving allegations of potential wrongdoing. Compliance with such laws and regulations can be subject to government review and interpretation as well as significant regulatory action, including fines, penalties, and exclusion from the programs. As a result, there is at least a reasonable possibility that recorded estimates may change.

Other Revenue

UPMC's other revenue consists of various contracts related to its Health Services and Insurance Services divisions. These contracts vary in duration and in performance obligations. Revenues are recognized when the performance obligations identified within the individual contracts are satisfied and collectability is probable.

Receivables

Concentrations of net patient accounts receivable at December 31, 2019 and 2018 include:

Years Ended December 31	2019	2018
Commercial	42%	47%
Medicare	29%	25%
Medical Assistance	12%	9%
Self-pay/other	17%	19%
	100%	100%

Other receivables are primarily comprised of payments due to Insurance Services and include the uncollected amounts from fully-insured groups, individuals and government programs and are reported net of an allowance for estimated terminations and uncollectible accounts.

Board-Designated, Restricted, Trusteed, and Other Investments

Substantially all of UPMC's investments in debt and equity securities are classified as trading. This classification requires UPMC to recognize unrealized gains and losses on substantially all of its investments in debt and equity securities as investment revenue (expense) in the consolidated statements of operations and changes in net assets. This classification also includes UPMC Enterprises' cost basis investments in early stage entities, which are categorized as alternative investments. Gains and losses on the sales of securities are determined by the average cost method. Realized and unrealized gains and losses are included in investment revenue (expense) in the consolidated statements of operations and changes in net assets. Realized and unrealized gains and losses on donor-restricted assets are recorded as changes in net assets with donor restrictions in the consolidated statements of operations and changes in net assets.

Investments in equity securities with readily determinable fair values and all investments in debt securities are measured at fair value using quoted market prices or model-driven valuations. These investments predominantly include those maintained in Master Trust Funds and are summarized as nonalternative investments in Note 3.

Investments in limited partnerships that invest in marketable securities (hedge funds) are reported using the equity method of accounting based on information provided by the respective partnership, generally received on a one month lag. The values provided by the respective partnerships are based on historical cost, appraisals, or other estimates that require varying degrees of judgment. Generally, UPMC's holdings reflect net contributions to the partnership and an allocated share of realized and unrealized investment income and expenses. The investments may individually expose UPMC to securities lending, short sales, and trading in futures and forward contract options and other derivative products. UPMC's risk is limited to its carrying value

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(IN THOUSANDS)

for these lending and derivatives transactions. Amounts can be divested only at specified times. The financial statements of the limited partnerships are audited annually, generally as of December 31.

The value of UPMC's private equity investments are based upon financial statements received from the general partners, which are generally received on a quarter lag. As a result, the market values and earnings recorded at December 31, 2019 reflect the partnership activity experienced during the year ending September 30, 2019. These investments are summarized as alternative investments in Note 3.

Fair Value Elections

Pursuant to accounting guidance provided by ASC 825-10, *Financial Instruments*, UPMC makes elections, on an investment-by-investment basis, as to whether it measures certain equity method investments that are traded in active markets at fair value. Fair value elections are generally irrevocable. The initial unrealized gains recognized upon election of the fair value option are recorded as operating revenue in the consolidated statements of operations and changes in net assets consistent with accounting for other equity method investments where UPMC has the ability to exercise significant influence but not control. Any subsequent changes in the fair value of the investment are recorded as investment revenue (expense) in the consolidated statements of operations and changes in net assets consistent with UPMC's reporting of gains and losses on other marketable securities included in board-designated, restricted, trustee, and other investments. Management believes this reporting increases the transparency of UPMC's financial condition.

Financial Instruments

Cash and cash equivalents and investments recorded at fair value aggregate to \$5,926,923 and \$6,193,204 at December 31, 2019 and 2018, respectively. The fair value of these instruments is based on market prices as estimated by financial institutions. The fair value of amounts owed to counterparties under derivative contracts at December 31, 2019 and 2018, is \$6,230 and \$7,550, respectively, and due from counterparties is \$532 and \$408, respectively, based on pricing models that take into account the present value of estimated future cash flows.

UPMC participates in securities lending transactions whereby a portion of its investments are loaned, through its agent, to various parties in return for cash and securities from the parties as collateral for the securities loaned. The amount of cash collateral received under securities lending is reported as an asset with a corresponding payable in the consolidated balance sheets. The total collateral is required to have a market value between 102% and 105% of the market value of securities loaned. As of December 31, 2019 and 2018, securities loaned to various parties, of which UPMC maintains ownership, were \$218,933 and \$247,777, respectively, and total collateral (cash and noncash) received related to the securities loaned was \$226,910 and \$258,677, respectively.

Beneficial Interests in Foundations and Trusts

Several of UPMC's subsidiary hospitals have foundations that, according to their bylaws, were formed for the exclusive purpose of supporting and furthering the mission of the respective hospital. The foundations are separate corporations and are not liable for the obligations of UPMC, including any claims of creditors of any UPMC entities. The net assets of certain foundations are included in the consolidated balance sheets as beneficial interests in foundations and net assets with donor restrictions because the hospitals' use of these assets is at the discretion of the foundations' independent boards of directors.

Beneficial interests in foundations and trusts of \$624,691 and \$499,957, respectively, and the net assets of consolidated foundations of \$246,702 and \$205,238 as of December 31, 2019 and 2018, respectively, are not pledged as collateral for UPMC's debt.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(IN THOUSANDS)

Property, Buildings and Equipment

Property, buildings and equipment are recorded at cost or, if donated or impaired, at fair market value at the date of receipt or impairment. Interest cost incurred on borrowed funds (net of interest earned on such funds) during the period of construction of capital assets is capitalized as a component of the cost of acquiring those assets.

Costs associated with the development and installation of internal-use software are expensed or capitalized depending on whether they are incurred in the preliminary project stage, application development stage, or post-implementation stage.

Depreciation is computed using the straight-line method at rates designed to depreciate the assets over their estimated useful lives (predominantly ranging from 3 to 40 years) and includes depreciation related to finance leases. Certain newly constructed buildings have estimated useful lives up to 60 years. Depreciation expense on property, buildings and equipment for the years ended December 31, 2019 and 2018 was \$637,832 and \$623,783, respectively.

Leases

In February 2016, ASU 2016-02 was issued to codify ASC 842, *Leases*. Under the new standard, assets and liabilities arising from most leases are recognized on the balance sheet, and enhanced disclosures on key quantitative and qualitative information about leasing arrangements are required. Leases are classified as either operating or financing, and the lease classification determines whether expense is recognized on a straight-line basis (operating leases) or based on an effective interest method (finance leases). The new standard was effective for interim and annual periods on January 1, 2019, and UPMC has applied the transitional package of practical expedients allowed by the standard relating to the identification, classification and initial direct costs of leases commencing before the effective date; however, UPMC did not elect the hindsight transitional practical expedient. UPMC has made accounting policy elections to not apply recognition requirements of the guidance to short-term leases and to use the risk-free discount rate for operating leases. In July 2018, ASU No. 2018-11, *Leases: Targeted Improvements*, was issued which provided an optional transition method that allows entities to initially apply the new lease standard at the adoption date. UPMC utilized the optional transition method to apply the lease standard as of January 1, 2019. After adoption, UPMC recognized assets and liabilities of approximately \$1,200,000 as of the transition date. Refer to Note 11 for additional disclosures.

Asset Impairment

UPMC evaluates the recoverability of the carrying value of long-lived assets by reviewing long-lived assets for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable and adjusts the asset cost to fair value if undiscounted cash flows are less than the carrying amount of the asset. There have been no significant impairments in the years ended December 31, 2019 and 2018.

Other Assets

Investments in individual entities in which UPMC has the ability to exercise significant influence but does not control, generally 20% to 50% ownership, are reported using the equity method of accounting unless the fair value option is elected. All other noncontrolled investments, generally less than 20% ownership, are carried at cost. Other assets include approximately \$140,722 and \$142,775 at December 31, 2019 and 2018, respectively, relating to investments in partnerships/joint ventures that provide health care, management, and other goods and services to UPMC, its affiliates, and the community at large.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(IN THOUSANDS)

Goodwill

Goodwill represents the excess of the cost of an acquired entity over the net of the amounts assigned to the fair value of assets acquired and liabilities assumed. As of December 31, 2019 and 2018, goodwill of \$235,753 and \$247,047, respectively, is recorded in UPMC's consolidated balance sheets as other assets. The overall decrease in goodwill compared to prior year is related to the sale of minor businesses in the Health Services division and UPMC Enterprises offset by several minor acquisitions in Health Services.

Goodwill is reviewed annually for impairment, or more frequently if events or circumstances indicate that the carrying value of an asset may not be recoverable. In connection with changes in accounting standards, which were adopted by UPMC in 2012, UPMC has the option to qualitatively assess goodwill for impairment before completing a quantitative assessment. Under the qualitative approach, if, after assessing the totality of events or circumstances, including both macroeconomic, industry and market factors, and entity-specific factors, UPMC determines it is likely (more likely than not) that the fair value is greater than its carrying amount, then the quantitative impairment analysis is not required. As of December 31, 2019 and 2018, after application of the qualitative approach, there were no indicators of impairment.

Derivatives

UPMC uses derivative financial instruments ("derivatives") to modify the interest rates and manage risks associated with its asset allocation and outstanding debt. UPMC records derivatives as assets or liabilities in the consolidated balance sheets at fair value. The accounting for changes in the fair value (i.e., gains or losses) of a derivative depends on whether it has been designated and qualifies as part of a hedging relationship and, further, on the type of hedging relationship. UPMC has entered into interest rate swap agreements that convert a portion of its variable rate debt to a fixed interest rate. UPMC has also entered into equity-related derivatives to manage the asset allocation in its investment portfolio. Under the equity index swap agreements, UPMC pays a fixed income-like return in order to receive an equity-like return. The notional amount of these swaps is based upon UPMC's target asset allocation. None of UPMC's swaps outstanding as of December 31, 2019 and 2018, are designated as hedging instruments and, as such, changes in fair value are recognized in investing and financing activities as investment revenue (expense) in the consolidated statements of operations and changes in net assets.

By using derivatives to manage these risks, UPMC exposes itself to credit risk and market risk. Credit risk is the failure of the counterparty to perform under the terms of the derivatives. When the fair value of a derivative is positive, the counterparty owes UPMC, which creates credit risk for UPMC. When the fair value of a derivative is negative, UPMC owes the counterparty, and therefore, it does not incur credit risk. UPMC minimizes the credit risk in derivatives by entering into transactions that require the counterparty to post collateral for the benefit of UPMC based on the credit rating of the counterparty and the fair value of the derivative. If UPMC has a derivative in a liability position, UPMC's credit is a risk and fair market values could be adjusted downward. Market risk is the effect on the value of a financial instrument that results from a change in interest rates. The market risk associated with interest rate changes is managed by establishing and monitoring parameters that limit the types and degree of market risk that may be undertaken. Management also mitigates risk through periodic reviews of derivative positions in the context of UPMC's total blended cost of capital.

Net Assets

Resources are classified for reporting purposes as net assets without donor restrictions and net assets with donor restrictions, according to the absence or existence of donor-imposed restrictions. Board-designated net assets are net assets without donor restrictions that have been set aside by the Board for specific purposes. Net assets with donor restrictions are those assets, including contributions and accumulated investment returns, whose use has been limited by donors for a specific purpose or time period or are those for which donors require the principal of the gifts to be maintained in perpetuity to provide a permanent source of income.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(IN THOUSANDS)

Net assets with donor restrictions include \$365,099 and \$338,154 of net assets held in perpetuity at December 31, 2019 and 2018, respectively. Additionally, net assets with donor restrictions include beneficial interests in foundations that support research and other health care programs. Some net assets with donor restrictions are limited by donors and the foundations to a specific time period or purpose and are reclassified to net assets without donor restrictions and included in the consolidated statements of operations and changes in net assets as other revenue or assets released from restriction for capital purchases when the restriction is met.

Inherent Contribution

UPMC applies the guidance set forth in ASC 958-805; *Not-for-Profit Business Combinations*, for affiliations and acquisitions. The guidance primarily characterizes business combinations between not-for-profit entities as nonreciprocal transfers of assets resulting in the contribution of the acquiree's net assets to the acquirer. The guidance prescribes that the acquirer recognizes an excess of the acquisition date fair value of unrestricted net assets acquired over the fair value of the consideration transferred as a separate credit in its statement of operations as of the acquisition date or conversely, recognize the excess of the fair value of the consideration transferred over the fair value of the unrestricted net assets acquired as goodwill. Adjustments to these fair value assessments and other related charges are recorded in the statement of operations and changes in net assets in the period incurred or identified.

Excess of Revenues Over Expenses

The consolidated statements of operations and changes in net assets include excess of revenues over expenses as a performance indicator. Excess of revenues over expenses includes all changes in net assets without donor restrictions except for contributions and distributions from foundations for the purchase of property and equipment, adjustments for pension liability, other than net periodic pension cost, discontinued operations, if any, and the cumulative effect of changes in accounting principles, if any.

Use of Estimates

The preparation of financial statements, in conformity with accounting principles generally accepted in the United States, requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

2. CHARITY CARE

UPMC's patient acceptance policy is based on its mission and its community service responsibilities. Accordingly, UPMC accepts patients in immediate need of care, regardless of their ability to pay. UPMC does not pursue collection of amounts determined to qualify as charity care based on established policies of UPMC. These policies define charity care as those services for which no payment is due for all or a portion of the patient's bill. For financial reporting purposes, charity care is excluded from net patient service revenue. The amount of charity care provided, determined on the basis of cost, was \$107,520 and \$88,847 for the years ended December 31, 2019 and 2018, respectively. UPMC estimates the cost of providing charity care using the ratio of average patient care cost to gross charges and then applying that ratio to the gross uncompensated charges associated with providing charity care.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(IN THOUSANDS)

3. CASH AND INVESTMENTS

Following is a summary of cash and investments included in the consolidated balance sheets:

	December 31	
	2019	2018
Internally designated:		
Funded depreciation	\$ 35,718	\$ 6,652
Employee benefit and workers' compensation self-insurance programs	126,730	103,785
Professional and general liability insurance program	587,249	555,021
Health insurance programs	1,313,425	1,426,274
	2,063,122	2,091,732
Externally designated:		
Trusteed assets for capital and debt service payments	236,159	498,963
Donor-restricted assets	546,619	551,505
	782,778	1,050,468
Other long-term investments	3,402,758	3,436,730
Board-designated, restricted, trustee, and other investments	6,248,658	6,578,930
Cash and cash equivalents	351,216	277,324
	\$ 6,599,874	\$ 6,856,254

Investments are primarily maintained in MTF and administered using a bank as trustee. As of December 31, 2019, UPMC utilized 142 ongoing external investment managers including 45 traditional managers, 12 hedge fund managers and 85 private capital managers. UPMC is also invested with an additional 45 legacy private capital and hedge fund managers. The largest allocation to any alternative investment fund is \$73,831 as of December 31, 2019. Certain managers use various equity and interest rate derivatives. These instruments are subject to various risks similar to nonderivative financial instruments, including market, credit, liquidity, operational, and foreign exchange risk. UPMC's unfunded commitments to investments in MTF are \$321,670 and \$456,891 as of December 31, 2019 and 2018, respectively.

As of December 31, 2019 and 2018, respectively, UPMC had investments not measured at fair value of \$672,951 and \$663,050. Investment return from cash and investments is comprised of the following for the years ended December 31, 2019 and 2018:

	2019	2018
Interest income	\$ 89,844	\$ 91,345
Dividend income	34,963	34,962
Net realized gains on sales of securities	232,814	268,561
	357,621	394,868
Unrealized investment gains (losses)	342,555	(430,293)
Derivative contracts mark to market	1,444	207
	343,999	(430,086)
Total investment gain (loss)	701,620	(35,218)
Traditional investment manager and trustee fees	(33,040)	(35,662)
Investment revenue (expense)	\$ 668,580	\$ (70,880)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(IN THOUSANDS)

In managing the UPMC investment strategy, an important consideration is to ensure sufficient liquidity. While UPMC's relationships with its external investment managers vary in terms of exit provisions, a percentage of the agreements allow ready access to underlying assets which are generally liquid and marketable. Liquidity as of December 31, 2019, is shown below:

Liquidity Availability	Cash and Cash Equivalents	Nonalternative Investments	Alternative Investments	Total
Within three days	\$ 351,216	\$ 4,296,419	\$ -	\$ 4,647,635
Within 30 days	-	153,050	54,595	207,645
Within 60 days	-	-	70,620	70,620
Within 90 days	-	-	271,871	271,871
More than 90 days	-	145,488	1,256,615	1,402,103
Total	\$ 351,216	\$ 4,594,957	\$ 1,653,701	\$ 6,599,874

4. CREDIT ARRANGEMENTS

UPMC has a revolving line and letter of credit facility (the "Revolving Facility") with an available line of \$600,000. The Revolving Facility expires on January 24, 2024. The Revolving Facility is used to manage cash flow during the year and to provide for a consolidated method of issuing various letters of credit for certain business units. A note to secure UPMC's repayment obligation with respect to the Revolving Facility was issued under the 2007 Master Trust Indenture ("2007 UPMC MTI") and is secured by a pledge of and security interest in the gross revenues of UPMC's parent corporation, UPMC Presbyterian Shadyside, Magee-Women's Hospital of UPMC, UPMC Passavant and UPMC St. Margaret as members of the obligated group under the 2007 UPMC MTI. Advances may be variable rate based on the prime rate or the Federal Funds effective rates or fixed on the date of the advance based on the LIBOR Rate and the reserve requirement on Eurocurrency liabilities.

As of December 31, 2019 and 2018, UPMC had issued \$85,353 and \$75,901, respectively, of letters of credit under the Revolving Facility. These letters of credit predominantly support the capital requirements of certain insurance subsidiaries. As of December 31, 2019 and 2018, there was \$514,647 and \$424,099, respectively, available to borrow under the Revolving Facility. No amounts were outstanding under the Revolving Facility as of December 31, 2019 and 2018.

In April 2017, additional credit facilities of \$19,000 (increased to \$150,000 from May 15 to August 14 on an annual basis) and \$50,000 were opened, both with expiration dates in April 2022. Both of these credit facilities support the Insurance Services division. As of December 31, 2019 and 2018, there were no draws on these credit facilities.

During the year ended December 31, 2019, UPMC issued Series 2019A fixed rate bonds in the par amount of \$726,650, with an original issue premium of \$115,986, in order to refund existing debt.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(IN THOUSANDS)

5. LONG-TERM OBLIGATIONS AND DERIVATIVE INSTRUMENTS

Long-term obligations consist of the following:

	December 31	
	2019	2018
Fixed rate revenue bonds	\$ 3,103,451	\$ 3,001,836
Variable rate revenue bonds	1,086,618	1,463,870
Finance leases and other	136,773	120,165
Par value of long-term obligations	4,326,842	4,585,871
Net premium and other	220,397	121,685
	4,547,239	4,707,556
Less current portion	(316,162)	(462,147)
Total long-term obligations	\$ 4,231,077	\$ 4,245,409

Revenue instruments outstanding represent funds borrowed by the UPMC parent corporation and various subsidiaries pursuant to loan agreements and lease and sublease financing arrangements with governmental authorities. The bond proceeds were used for the purchase, construction, and renovation of hospital facilities, certain buildings and equipment, as well as the extinguishment of debt.

The fixed rate revenue instruments bear interest at fixed coupon rates ranging from 2.00% to 6.00% at December 31, 2019 and from 1.90% to 6.00% at December 31, 2018. The average interest costs for the variable rate instruments were 2.31% and 2.25% during the years ended December 31, 2019 and 2018, respectively. Revenue instruments have varying principal payments and final maturities from 2021 through 2047. Certain revenue bonds (\$43,573 and \$43,562 for 2019 and 2018, respectively) are secured by bond insurance. The revenue bonds contain redemption provisions whereby, at the direction of UPMC, the bonds may be redeemed on various dates as presented within the bond agreements.

Revenue instruments in the aggregate amount of debt outstanding of \$4,183,840 and \$4,437,191 as of December 31, 2019 and 2018, respectively, are issued under the UPMC MTI. The instruments are secured by a pledge of and security interest in gross revenues. Certain amounts borrowed under the MTI are loaned to certain subsidiary corporations pursuant to loan and contribution agreements and require the transfer of subsidiary funds to the parent corporation in the event of failure to satisfy the UPMC parent corporation liquidity covenant.

The various indebtedness agreements contain restrictive covenants, the most significant of which are the maintenance of minimum debt service coverage and liquidity ratios, and restrictions as to the incurrence of additional indebtedness and transfers of assets. UPMC was in compliance with such covenants as of December 31, 2019 and 2018.

Aggregate maturities of long-term obligations for the next five years, assuming no remarketing of UPMC's variable rate debt, indicating the maximum potential payment obligations in these years, are as follows:

2020	\$ 316,162
2021	260,834
2022	148,838
2023	167,934
2024	156,754

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(IN THOUSANDS)

Interest paid, net of amounts capitalized, on all obligations was \$164,066 and \$180,012 during the years ended December 31, 2019 and 2018, respectively.

UPMC maintains interest rate swap programs on certain of its revenue bonds in order to manage its interest rate risk. To meet this objective and to take advantage of low interest rates, UPMC entered into various interest rate swap agreements to manage interest rate risk. The notional amount under each interest rate swap agreement is reduced over the term of the respective agreement to correspond with reductions in various outstanding bond series.

During the term of these agreements, the floating to fixed rate swaps convert variable rate debt to a fixed rate and the basis swaps convert the interest rate on underlying LIBOR-based bonds to the Securities Industry and Financial Markets Association Municipal Swap Index ("SIFMA Index").

Under the basis swaps, UPMC pays a rate equal to the SIFMA Index, an index of seven-day, high-grade, tax-exempt variable rate demand obligations. The SIFMA Index rates ranged from 1.06% to 2.30% (weighted average rate of 1.46%) and from 0.94% to 1.81% (weighted average rate of 1.41%) as of December 31, 2019 and 2018, respectively.

The following table summarizes UPMC's interest rate swap agreements:

Swap	Maturity Date	UPMC Pays	UPMC Receives	Notional Amount at	
				Dec 31, 2019	Dec 31, 2018
Floating to fixed	2025	3.60%	68% one-month LIBOR	\$ 70,220	\$ 79,875
Basis	2021	SIFMA Index ¹	67% three-month LIBOR plus .2077%	14,485	21,340
Basis	2037	SIFMA Index ¹	67% three-month LIBOR plus .3217%	46,095	46,095
Floating to fixed	2024	1.413%	67% one-month LIBOR	8,500	-
				\$ 139,300	\$ 147,310

¹The SIFMA Index is a 7-day high-grade market index comprised of tax-exempt variable rate demand obligations.

The following table summarizes UPMC's equity swap agreements:

Maturity Date	UPMC Pays	UPMC Receives	Notional Amount at	
			Dec 31, 2019	Dec 31, 2018
2019	One-month LIBOR plus .385%	S&P 500 Total Return Index	\$ -	\$ 100,000
			\$ -	\$ 100,000

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(IN THOUSANDS)

Pursuant to master netting arrangements, UPMC has the right to offset the fair value of amounts recognized for derivatives, including the right to reclaim or obligation to return cash collateral from/to counterparties. The fair values of UPMC's derivative financial instruments are presented below, representing the gross amounts recognized as of December 31, 2019 and December 31, 2018 which are not offset by counterparty or type of item hedged:

	Dec 31, 2019	Dec 31, 2018
Other assets	\$ 532	\$ 408
Long-term obligations	(6,230)	(7,550)
	\$ (5,698)	\$ (7,142)

UPMC's derivatives contain provisions that require UPMC's debt to maintain an investment grade credit rating from certain major credit rating agencies. If UPMC's debt were to fall below investment grade, it would be in violation of these provisions, and the counterparties to the derivatives could request payment or demand immediate and ongoing full overnight collateralization on derivatives in net liability positions. The aggregate fair value of all derivatives with credit-risk-related contingent features that are in a liability position at December 31, 2019 and 2018, is \$6,139 and \$6,003, respectively, for which UPMC has posted collateral of \$0 in the normal course of business. If the credit-risk-related contingent features underlying these derivatives were triggered to the fullest extent on December 31, 2019 and 2018, UPMC would be required to post an additional \$6,277 and \$6,125, respectively, of collateral to its counterparties.

6. FAIR VALUE MEASUREMENTS

As of December 31, 2019 and 2018, UPMC held certain assets that are required to be measured at fair value on a recurring basis. These include cash and cash equivalents and certain board-designated, restricted, trustee, and other investments and derivative instruments. Certain of UPMC's alternative investments are measured using either the cost or equity method of accounting and are therefore excluded from the fair value hierarchy tables presented herein. The valuation techniques used to measure fair value are based upon observable and unobservable inputs. Observable inputs reflect market data obtained from independent sources, while unobservable inputs are generally unsupported by market activity. The three-tier fair value hierarchy, which prioritizes the inputs used in measuring fair value, includes:

- Level 1: Quoted prices for identical assets or liabilities in active markets.
- Level 2: Quoted prices for similar instruments in active markets; quoted prices for identical or similar instruments in markets that are not active; and model-driven valuations whose inputs are observable or whose significant value drivers are observable.
- Level 3: Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities.

The following tables represent UPMC's fair value hierarchy for its financial assets and liabilities measured at fair value on a recurring basis as of December 31, 2019 and 2018. The interest rate swaps are valued using internal models, which are primarily based on market observable inputs including interest rate curves. When quoted market prices are unobservable for fixed income securities, quotes from independent pricing vendors based on recent trading activity and other relevant information including market interest rate curves, referenced credit spreads and estimated prepayment rates where applicable are used for valuation purposes. These investments are included in Level 2 and include corporate fixed income, government bonds, and mortgage and asset-backed securities.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(IN THOUSANDS)

Other investments measured at fair value represent funds included on the consolidated balance sheets that are reported using net asset value (“NAV”). These amounts are not required to be categorized in the fair value hierarchy. The fair value of these investments is based on the net asset value information provided by the general partner. Fair value is based on the proportionate share of the NAV based on the most recent partners’ capital statements received from the general partners, which is generally one quarter prior to the balance sheet date. Certain of UPMC’s alternative investments are utilizing NAV to calculate fair value and are included in other investments in the following tables.

FAIR VALUE MEASUREMENTS AS OF DECEMBER 31, 2019

	Level 1	Level 2	Level 3	NAV	Total Carrying Amount
ASSETS					
Fixed income	\$ 744,751	\$ 1,248,921	\$ -	\$ -	\$ 1,993,672
Domestic equity	792,501	17,915	-	-	810,416
International equity	723,059	118	-	-	723,177
Public real estate	69,746	-	-	-	69,746
Long/short equity	65,424	-	-	-	65,424
Absolute equity	24,077	-	-	-	24,077
Commodities	5,379	-	-	-	5,379
Derivative instruments	-	532	-	-	532
Securities on loan	218,933	-	-	-	218,933
Securities lending collateral	73,140	-	-	-	73,140
Other investments	-	-	-	1,664,883	1,664,883
Total assets measured at fair value on a recurring basis	\$ 2,717,010	\$ 1,267,486	\$ -	\$ 1,664,883	\$ 5,649,379
LIABILITIES					
Payable under securities lending agreement	\$ (73,140)	\$ -	\$ -	\$ -	\$ (73,140)
Derivative instruments	-	(6,230)	-	-	(6,230)
Total liabilities measured at fair value on a recurring basis	\$ (73,140)	\$ (6,230)	\$ -	\$ -	\$ (79,370)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(IN THOUSANDS)

FAIR VALUE MEASUREMENTS AS OF DECEMBER 31, 2018

	Level 1	Level 2	Level 3	NAV	Total Carrying Amount
ASSETS					
Fixed income	\$ 903,979	\$ 1,461,002	\$ -	\$ -	\$ 2,364,981
Domestic equity	318,851	15,543	-	-	334,394
International equity	408,392	-	-	-	408,392
Public real estate	54,423	-	-	-	54,423
Long/short equity	47,801	23,885	-	-	71,686
Absolute equity	21,087	-	-	-	21,087
Commodities	4,515	-	-	-	4,515
Derivative instruments	-	408	-	-	408
Securities on loan	247,777	-	-	-	247,777
Securities lending collateral	171,657	-	-	-	171,657
Other investments	-	-	-	2,408,625	2,408,625
Total assets measured at fair value on a recurring basis	\$ 2,178,482	\$ 1,500,838	\$ -	\$ 2,408,625	\$ 6,087,945
LIABILITIES					
Payable under securities lending agreement	\$ (171,657)	\$ -	\$ -	\$ -	\$ (171,657)
Derivative instruments	-	(7,550)	-	-	(7,550)
Total liabilities measured at fair value on a recurring basis	\$ (171,657)	\$ (7,550)	\$ -	\$ -	\$ (179,207)

7. PENSION PLANS

UPMC and its subsidiaries maintain defined benefit pension plans (the "Plans"), defined contribution plans, and nonqualified pension plans that cover substantially all of UPMC's employees. Under the defined contribution plans, employees may elect to contribute a percentage of their salary, which is matched in accordance with the provisions of the defined contribution plans. Contributions to the nonqualified pension plans are based on a percentage of salary or contractual arrangements. Total expense relating to the aforementioned pension plans was \$246,262 and \$184,357, respectively, for the years ended December 31, 2019 and 2018.

UPMC adopted ASU 2017-07, *Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost*, for the year ended December 31, 2019 and will adopt for interim periods in the subsequent year. UPMC elected to use the practical expedient that permits the use of the amounts disclosed in the pension plans footnote for the prior comparative periods as the estimation basis for applying the retrospective presentation requirements. The impact of adopting ASU 2017-07, when applied retrospectively to the years ended December 31, 2019 and 2018, increased salaries, professional fees and employee benefits on the consolidated statements of operations and changes in net assets by \$27,354 and \$71,575, respectively, with a corresponding decrease to operating income and increase to other non-operating gains. The adoption had no impact on excess of revenues over expenses or net assets.

Benefits under the Plans vary and are generally based upon the employee's earnings and years of participation. It is UPMC's policy to meet the requirements of the Employee Retirement Income Security Act of 1974 ("ERISA") and the Pension Protection Act of 2006. UPMC's policy is to contribute amounts sufficient to, among other things, avoid Pension Benefit Guaranty Corporation variable premiums. Contributions made to the Plans were \$162,712 and \$0 for the years ended December 31, 2019 and 2018, respectively.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(IN THOUSANDS)

To develop the expected long-term rate of return on plan assets assumption, UPMC considers the current level of expected returns on risk-free investments, the historical level of risk premium associated with the other asset classes in which the pension portfolio is invested and the expectations for future returns on each asset class. The expected return for each asset class is then weighted based on the target asset allocation to develop the expected long-term rate of return on assets assumption for the pension portfolio.

The table below sets forth the accumulated benefit obligation, the change in the projected benefit obligation, and the change in the assets of the Plans. The table also reflects the funded status of the Plans as well as recognized and unrecognized amounts in the consolidated balance sheets. As of December 31, 2019, the accrued pension asset is included in other assets on the consolidated balance sheet.

	Year Ended December 31	
	2019	2018
Accumulated benefit obligation	\$ 2,379,377	\$ 2,173,087
CHANGE IN PROJECTED BENEFIT OBLIGATION		
Projected benefit obligation at beginning of year	\$ 2,246,134	\$ 2,222,020
Pension plans acquired	32,537	21,614
Service cost	121,072	119,250
Interest cost	93,767	78,395
Actuarial loss (gain)	149,932	(53,321)
Benefits paid	(158,336)	(141,824)
Projected benefit obligation at end of year	2,485,106	2,246,134
CHANGE IN PLAN ASSETS		
Fair value of plan assets at beginning of year	2,131,956	2,289,039
Pension plans acquired	28,461	21,697
Actual return on plan assets	342,568	(36,956)
Employer contributions	162,712	-
Benefits paid	(158,336)	(141,824)
Fair value of plan assets at end of year	2,507,361	2,131,956
Accrued pension (asset) liability at end of year	\$ (22,255)	\$ 114,178

Included in net assets without donor restrictions at December 31, 2019 and 2018 are the following amounts that have not yet been recognized in net periodic pension cost:

	As of December 31	
	2019	2018
Unrecognized prior service credit	\$ 44,575	\$ 49,831
Unrecognized net actuarial loss	(471,656)	(548,427)
	\$ (427,081)	\$ (498,596)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(IN THOUSANDS)

Changes in plan assets and benefit obligations recognized in net assets without donor restrictions during 2019 and 2018 include the following:

	Year Ended December 31	
	2019	2018
Current year net actuarial gain (loss)	\$ 37,755	\$ (150,143)
Amortization of actuarial loss	39,016	21,878
Amortization of prior service credit	(5,256)	(5,257)
	\$ 71,515	\$ (133,522)

No plan assets are expected to be returned to UPMC during the year ending December 31, 2020. The components of net periodic pension cost for the Plans were as follows:

	Year Ended December 31	
	2019	2018
Service cost	\$ 121,072	\$ 119,250
Interest cost	93,767	78,395
Expected return on plan assets	(154,881)	(166,591)
Recognized net actuarial loss	39,016	21,878
Amortization of prior service credit	(5,256)	(5,257)
Net periodic pension cost	\$ 93,718	\$ 47,675

The weighted average actuarial assumptions used to determine the benefit obligations and net periodic pension cost for the Plans are as follows:

	December 31	
	2019	2018
Discount rates:		
Used for benefit obligations	3.17%	4.31%
Used for net periodic pension cost	4.31%	3.63%
Expected rate of compensation increase:		
Used for benefit obligations	Age-graded	Age-graded
Used for net periodic pension cost	Age-graded	Age-graded
Expected long-term rate of return on plan assets	7.00%	7.50%
Interest crediting rate	2.40%	3.31%

The assumptions for long-term rate of return are developed using the expected returns of the various asset classes in which the pension invests and the allocations of each asset class with respect to the investment as a whole. The change in discount rate from 4.31% to 3.17%, and the change in interest crediting rate from 3.31% to 2.40% had the net effect of increasing the projected benefit obligation by \$129,383 in the year ended December 31, 2019.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(IN THOUSANDS)

The following pension benefit payments are expected to be paid in the periods ending December 31:

2020	\$ 204,055
2021	208,168
2022	204,615
2023	204,282
2024	202,059
2025-2029	943,401

UPMC employs a total return investment approach whereby a mix of equities and fixed income investments are used to maximize the long-term return on plan assets subject to accepting a prudent level of risk. Risk tolerance is established through consideration of plan liabilities, plan funded status, and corporate financial condition. The pension portfolio contains a diversified blend of equity, fixed-income, and alternative investments. Equity investments are diversified across United States and non-United States corporate stocks, as well as growth, value, and small and large capitalizations. Other assets such as real estate, private equity, and hedge funds are used to enhance long-term returns while improving portfolio diversification. Investment risk is measured and monitored on an ongoing basis through quarterly investment portfolio reviews, annual liability measurements, and periodic asset/liability studies.

As of December 31, 2019, UPMC employed 161 external investment managers to handle the investment of the assets in the pension portfolio. Of these, 23 managers manage equity investments, 11 manage fixed income investments, and 127 managers oversee alternative investment strategies. The largest allocation to any alternative investment manager is \$39,920 as of December 31, 2019. UPMC's unfunded commitments to the Plans' investments are \$348,810 and \$304,540 as of December 31, 2019 and 2018, respectively.

The following is a summary of the pension plan asset allocations at December 31, 2019 and 2018:

	2019	2018	2019 Target
Nonalternative investments:			
Fixed income	13.9%	16.0%	13.0%
Domestic equity	20.4%	20.7%	23.0%
International equity	21.9%	19.1%	22.0%
Total nonalternative investments	56.2%	55.8%	58.0%
Real assets:			
Real estate	2.7%	2.7%	4.0%
Income opportunities	2.2%	2.6%	2.0%
Natural resources	4.3%	5.0%	4.0%
Total real assets	9.2%	10.3%	10.0%
Alternative investments:			
Long/short equity	11.9%	10.3%	10.0%
Absolute return	6.2%	6.1%	7.0%
Private equity	16.5%	17.5%	15.0%
Total alternative investments	34.6%	33.9%	32.0%
Total	100.0%	100.0%	100.0%

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(IN THOUSANDS)

All of the Plans' assets are measured at fair value, including its alternative investments. The same levels of the fair value hierarchy as described in Note 6 are used to categorize the Plans' assets. Corporate debt instruments and fixed income/bonds are valued using pricing models, quoted prices of securities with similar characteristics, or discounted cash flows. The fair value of common/collective trust funds is determined by the issuer sponsoring such funds by dividing the fund's net assets at fair value by its units outstanding at the valuation dates. Partnership interests are valued using NAV, which is based on the unit values of the interests as determined by the issuer sponsoring such interests dividing the fund's net assets at fair value by its units outstanding at the valuation dates.

The fair values of the Plans' assets at December 31, 2019, by asset category and by the level of inputs used to determine fair value, were as follows:

	Level 1	Level 2	Level 3	NAV	Total
ASSETS					
Equity securities:					
Domestic equity	\$ 464,045	\$ 3,202	\$ -	\$ -	\$ 467,247
International equity	409,782	-	-	-	409,782
U.S. REITS	30,150	-	-	-	30,150
Fixed income:					
Government securities	-	27,607	-	-	27,607
Bond funds	190,768	-	-	-	190,768
Corporate debt instruments	-	30,130	-	-	30,130
Asset and mortgage-back securities	-	73,750	-	-	73,750
Long/short equity	48,788	-	-	-	48,788
Other investments	-	-	-	1,228,491	1,228,491
Net payables	648	-	-	-	648
Plans' assets at fair value	\$ 1,144,181	\$ 134,689	\$ -	\$ 1,228,491	\$ 2,507,361

The fair values of the Plans' assets at December 31, 2018, by asset category and by the level of inputs used to determine fair value, were as follows:

	Level 1	Level 2	Level 3	NAV	Total
ASSETS					
Equity securities:					
Domestic equity	\$ 72,515	\$ -	\$ -	\$ -	\$ 72,515
International equity	155,169	-	-	-	155,169
U.S. REITS	23,390	-	-	-	23,390
Fixed income:					
Government securities	32,091	-	-	-	32,091
Corporate debt instruments	2,295	43,770	-	-	46,065
Asset and mortgage-back securities	-	81,726	-	-	81,726
Long/short equity	38,960	-	-	-	38,960
Other investments	-	-	-	1,679,614	1,679,614
Net payables	2,426	-	-	-	2,426
Plans' assets at fair value	\$ 326,846	\$ 125,496	\$ -	\$ 1,679,614	\$ 2,131,956

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(IN THOUSANDS)

8. HEALTH INSURANCE REVENUE AND COSTS

Health care costs were \$9,072,826 and \$7,716,832, of which \$2,149,274 and \$2,004,807 were eliminated in consolidation representing medical services performed by other UPMC entities for the years ended December 31, 2019 and 2018, respectively. Such costs are included in insurance claims expense. These costs include estimates of payments to be made on claims reported as of the balance sheet date and estimates of health care services rendered but not reported to the Health Plans. Such estimates include the cost of services that will continue to be rendered after the balance sheet date when the Health Plans are obligated to remit payment for such services in accordance with contract provisions or regulatory requirements.

	2019	2018
Reserve for physical health care costs (beginning balance)	\$ 406,040	\$ 343,804
Add: Provisions for medical costs occurring in:		
Current year	8,232,994	6,817,032
Prior year	24,210	(27,802)
Net incurred medical costs	8,257,204	6,789,230
Deduct: Payments for claims occurring in:		
Current year	7,741,510	6,411,538
Prior year	428,003	315,456
Net paid medical costs	8,169,513	6,726,994
Reserve for physical health care costs (ending balance)	\$ 493,731	\$ 406,040

The foregoing rollforward shows unfavorable development of \$24,210 and favorable development of \$27,802 for the years ended December 31, 2019 and 2018, respectively. The reserve for health care costs and claims adjustment expenses was based on the best data available to UPMC; however, these estimates are subject to a degree of inherent variability. It is possible that UPMC's actual incurred costs and claim adjustment expenses will not conform to the assumptions inherent in the determination of the liability; accordingly, the ultimate settlement of health care costs and the related claims adjustment expenses may vary from the estimates included in the consolidated financial statements.

Incurred claims development, for the years ended December 31, 2019, 2018 and 2017 are as follows:

	(Unaudited) December 31, 2017	(Unaudited) December 31, 2018	December 31, 2019
December 31, 2017	\$ 5,680,992	\$ 5,653,190	\$ 5,653,190
December 31, 2018		6,817,032	6,841,242
December 31, 2019			8,232,994
			\$ 20,727,426

Paid claims development, for the years ended December 31, 2019, 2018 and 2017 are as follows:

	(Unaudited) December 31, 2017	(Unaudited) December 31, 2018	December 31, 2019
December 31, 2017	\$ 5,337,188	\$ 5,652,644	\$ 5,653,190
December 31, 2018		6,411,538	6,838,995
December 31, 2019			7,741,510
			\$ 20,233,695

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(IN THOUSANDS)

At December 31, 2019, the total of incurred but not reported (IBNR) liabilities plus expected development on reported claims and the cumulative number of reported claims for the years ended December 31, 2019, 2018 and 2017 are as follows:

	Total IBNR and Expected Development on Reported Claims	(Unaudited) Cumulative Number of Reported Claims*
December 31, 2017	\$ -	18,092
December 31, 2018	2,247	21,571
December 31, 2019	491,484	24,459
Total	\$ 493,731	64,122

* In thousands

The cumulative number of reported claims for each claim year have been developed using historical data captured by UPMC's claims payment system and data warehouse.

Net assets without donor restrictions required to meet statutory requirements of the Health Plans were \$1,088,955 and \$939,123 at December 31, 2019 and 2018, respectively.

9. PROFESSIONAL AND GENERAL LIABILITY INSURANCE

UPMC is insured for professional and general liability losses through wholly owned, multiprovider insurance companies (the "Captives"). The Captives provide primary and excess professional liability coverage to UPMC subsidiaries, employed physicians of UPMC, and other entities not included in the consolidated financial statements. For those self-insured risks, UPMC has established irrevocable trust funds to pay claims and related costs.

Certain insurance agreements have retrospective clauses that permit additional premiums or refunds to be made based on actual experience. The reserve for professional and general liability indemnity losses and loss adjustment expenses is determined using individual case-based evaluations and statistical analyses and represents an estimate of reported claims and claims incurred but not reported. Those estimates are subject to the effects of trends in loss severity and frequency. Although considerable variability is inherent in such estimates, management believes that the reserves for professional and general liability losses and loss adjustment expenses are reasonable. The estimates are reviewed and adjusted as necessary as experience develops or new information becomes known. Such adjustments are included in current operations. Reserves for professional and general liability losses and loss adjustment expenses of \$393,400 and \$372,767, discounted at 2.25% and 2.50%, were recorded as of December 31, 2019 and 2018, respectively. At December 31, 2019 and 2018, respectively, \$82,991 and \$83,018 of the loss reserves are included in current portion of insurance reserves and \$310,409 and \$289,749 are included in long-term insurance reserves.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(IN THOUSANDS)

The following table provides a rollforward of the reserve balances for professional and general liability costs for the years ended December 31, 2019 and 2018.

	2019	2018
Reserve for professional and general liability costs (beginning balance)	\$ 372,767	\$ 358,784
Add: Provisions for expenses occurring in:		
Current year	95,642	92,528
Prior year	(3,864)	(8,448)
Net incurred expenses	91,778	84,080
Deduct: Payments for expenses occurring in:		
Current year	(216)	(252)
Prior year	(85,526)	(69,845)
Net paid expenses	(85,742)	(70,097)
Other reserves	14,597	-
Reserve for professional and general liability costs (ending balance)	\$ 393,400	\$ 372,767

The foregoing rollforward shows favorable development of \$3,864 and \$8,448 for the years ended December 31, 2019 and 2018, respectively.

The following table provides undiscounted information for claims development for incurred losses and paid claim loss by accident year for the year ended December 31, 2019. The information about incurred and paid claims development for the years ended December 2010 to 2018, is presented as supplementary information. For the reported development, the adequacy of case reserves has been consistent and favorable over time, and there have been no significant changes in the rate at which claims have been reported. For the paid development, the rate of payment of claims has been relatively consistent over time.

DIRECT CLAIM LOSS INCURRED

Accident Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
	Unaudited									
2010	\$ 57,537	\$ 56,457	\$ 46,104	\$ 47,951	\$ 48,155	\$ 43,635	\$ 44,317	\$ 41,050	\$ 41,298	\$ 40,757
2011	-	68,131	72,215	67,932	62,133	63,747	61,841	63,529	64,870	66,032
2012	-	-	78,082	86,177	81,507	75,921	74,831	77,367	74,732	71,171
2013	-	-	-	77,146	79,850	72,831	68,055	72,144	68,116	68,529
2014	-	-	-	-	86,191	84,910	83,562	78,108	75,644	73,443
2015	-	-	-	-	-	96,593	102,111	89,569	88,801	83,033
2016	-	-	-	-	-	-	90,844	94,155	91,655	84,615
2017	-	-	-	-	-	-	-	100,732	99,428	104,403
2018	-	-	-	-	-	-	-	-	100,781	97,451
2019	-	-	-	-	-	-	-	-	-	103,995
	Total									\$ 793,429

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(IN THOUSANDS)

DIRECT CLAIM LOSS PAID

Accident Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
	Unaudited									
2010	\$ 965	\$ 2,784	\$ 8,006	\$ 19,672	\$ 26,302	\$ 29,939	\$ 32,638	\$ 35,279	\$ 38,560	\$ 38,929
2011	-	1,152	3,234	10,556	20,488	35,104	39,791	49,012	54,634	64,142
2012	-	-	1,029	6,777	16,334	27,212	47,768	57,588	62,641	66,886
2013	-	-	-	353	5,861	12,020	28,016	42,775	49,807	56,494
2014	-	-	-	-	467	7,771	16,949	40,736	48,191	57,372
2015	-	-	-	-	-	355	16,914	26,838	43,634	58,646
2016	-	-	-	-	-	-	446	6,375	14,220	27,736
2017	-	-	-	-	-	-	-	1,610	10,168	27,867
2018	-	-	-	-	-	-	-	-	251	3,555
2019	-	-	-	-	-	-	-	-	-	216
	Total									\$ 401,843

Net reserves **\$ 391,586**

Prior period reserves 8,647

Other reserves 14,597

Directors and officers reserves 1,339

Discount adjustment (22,769)

Total reserves **\$ 393,400**

AVERAGE ANNUAL PERCENTAGE PAYOUT OF INCURRED CLAIMS (UNAUDITED)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
1.0%	8.0%	11.5%	21.0%	19.5%	10.5%	9.4%	7.0%	11.2%	0.9%

In addition, the following table shows the total of IBNR plus expected development on reported claims by accident year and the cumulative number of reported claims by accident year. The cumulative number of reported claims are counted on a per occurrence and per coverage basis. Claim counts include open claims, claims that have been paid and closed, and asserted reported claims that have been closed without the need for any payment.

Accident Year	Incurred Claim Loss and Adjustment Expenses for the Year Ended December 31, 2019	Total Incurred But Not Reported as of December 31, 2019	Cumulative Number of Claims Reported as of December 31, 2019
2010	40,757	-	273
2011	66,032	-	331
2012	71,171	694	316
2013	68,529	3,816	296
2014	73,443	4,767	279
2015	83,033	12,329	322
2016	84,615	36,285	285
2017	104,403	43,752	284
2018	97,451	77,234	191
2019	103,995	97,845	132

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(IN THOUSANDS)

The methodology for reserving and determining the reserve for loss and loss adjustment expenses, IBNR reserves, considers, among other things, the line of business, the number of years of experience and the age of the experience year being developed.

Loss development factors are also applied to the current evaluations of losses to project the ultimate incurred losses arising from each period of coverage. The selected loss development factors are based on the historical loss experience of UPMC. Therefore, it is assumed that the selected loss development factors coupled with UPMC's experience and actuarial support are appropriate to project the loss development that will be experienced.

The reserve for costs and claims adjustment expenses was based on the best data available to UPMC; however, these estimates are subject to a degree of inherent variability. It is possible that UPMC's actual incurred costs and claim adjustment expenses will not conform to the assumptions inherent in the determination of the liability; accordingly, the ultimate settlement of costs and the related claims adjustment expenses may vary from the estimates included in the consolidated financial statements.

The Medical Care Availability and Reduction of Error ("MCARE") Act was enacted by the legislature of the Commonwealth of Pennsylvania (the "Commonwealth") in 2002. This Act created the MCARE Fund, which replaced The Pennsylvania Medical Professional Liability Catastrophe Loss Fund (the "Medical CAT Fund"), as the agency for the Commonwealth to facilitate the payment of medical malpractice claims exceeding the primary layer of professional liability insurance carried by UPMC and other health care providers practicing in the Commonwealth.

The MCARE Fund is funded on a "pay as you go basis" and assesses health care providers based on a percentage of the rates established by the Joint Underwriting Association (also a Commonwealth agency) for basic coverage. The MCARE Act of 2002 provides for a further reduction to the current MCARE coverage of \$500 per occurrence to \$250 per occurrence and the eventual phaseout of the MCARE Fund, subject to the approval of the Pennsylvania Insurance Commissioner. To date, the Pennsylvania Insurance Commissioner has deferred the change in coverage and eventual phaseout of the MCARE Fund to future years.

10. RELATED-PARTY TRANSACTIONS

UPMC monitors its relationships with related or affiliated entities on an ongoing basis. The most significant of these relationships is with the University in which UPMC purchases and sells certain services from and to the University. The most significant payment to the University is for physician services in which the University, acting as a common paymaster, invoices UPMC for the clinical services rendered by certain faculty and medical residents. Payments to the University related to physician services amounted to \$221,321 and \$205,998 for the years ended December 31, 2019 and 2018, respectively. UPMC provides direct financial support to the University to sustain the research and academic medical enterprise of the University. Payments to the University related to research and academic support amounted to \$177,058 and \$144,707 for the years ended December 31, 2019 and 2018, respectively.

UPMC has various facility rental agreements with the University. UPMC received rent income of \$24,456 and \$23,640 and incurred rent expense of \$10,051 and \$10,061 related to rental arrangements with the University for the years ended December 31, 2019 and 2018, respectively. These rental agreements are also included in Note 11.

The University subcontracts with UPMC to perform research activity. Payments from the University related to research activity were \$32,620 and \$32,650 for the years ended December 31, 2019 and 2018, respectively.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(IN THOUSANDS)

11. LEASES

UPMC has operating and finance leases for corporate offices, physician offices and various equipment types, among others. These lease arrangements have remaining lease terms of 1 year to 25 years, some of which include options to extend the leases for several periods, and some of which include options to terminate the leases within one year. The components of lease expense were as follows:

	Year Ended December 31, 2019
Finance lease cost:	
Depreciation of right-of-use assets	\$ 23,666
Interest on lease liabilities	3,108
Total finance lease cost	26,774
Operating lease cost	150,571
Short-term/variable lease cost	41,216
Total	\$ 218,561

Supplemental balance sheet information related to leases was as follows:

	As of December 31 2019
OPERATING LEASES	
Operating lease right-of-use assets	\$ 1,080,715
Other current liabilities	123,326
Operating lease liabilities	1,010,207
Total operating lease liabilities	\$ 1,133,533

FINANCE LEASES

Property, buildings and equipment, net	\$ 84,591
Other current liabilities	22,051
Other noncurrent liabilities	61,816
Total finance lease liabilities	\$ 83,867

WEIGHTED AVERAGE REMAINING LEASE TERM

Operating leases	13.4 years
Finance leases	2.9 years

WEIGHTED AVERAGE DISCOUNT RATE

Operating leases	3.1%
Finance leases	2.7%

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(IN THOUSANDS)

Cash flows in 2019 were materially consistent with expenses. Undiscounted maturities of future lease liabilities were as follows:

For the Years Ended December 31	Operating Leases	Finance Leases
2020	\$ 148,594	\$ 23,442
2021	132,611	20,090
2022	122,046	12,611
2023	117,327	4,915
2024	107,912	2,436
Thereafter	810,545	21,470
Total undiscounted maturities of lease liabilities	\$ 1,439,035	\$ 84,964
Less: discount on lease liabilities	(305,502)	(1,097)
Total lease liabilities	\$ 1,133,533	\$ 83,867

12. INCOME TAXES

UPMC calculates income taxes using the balance sheet method for its taxable subsidiaries. Taxable income differs from pretax book income principally due to certain income and deductions for tax purposes being recorded in the financial statements in different periods. Deferred income tax assets and liabilities are recorded for the tax effect of these differences using enacted tax rates for the years in which the differences are expected to reverse. UPMC assesses the realization of deferred tax assets and the need for a valuation allowance to reduce those assets to their net realizable value based on future operations, reversal of existing temporary differences, carryforward and carryback periods for credits and net operating losses, and potential tax planning strategies that may exist.

As of December 31, 2019, the for-profit entities of UPMC had gross federal net operating loss ("NOL") carryforwards of \$657,149 (expiring in years 2020 through 2037) and gross state NOL carryforwards of \$1,505,473 (expiring in years 2020 through 2039) that are available to offset future taxable income. Utilization of the state NOL carryforwards in any one year is limited to 40% of taxable income on an annual basis per company. During the calendar year ended December 31, 2019, UPMC realized tax benefits of \$9,354 from the use of NOL carryforwards.

The following is a reconciliation of income taxes computed at the statutory U.S. federal income tax rate to the actual effective income tax expense:

Years Ended December 31	2019	2018
Taxes computed at the federal rate	\$ 8,322	\$ 6,790
State income taxes, net of federal tax benefit	3,905	5,416
Valuation allowance	(7,140)	(6,980)
Permanent differences	174	6,480
Other items, net	(361)	4,897
Income tax expense	\$ 4,900	\$ 16,603

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(IN THOUSANDS)

The following table presents deferred tax assets as of December 31, 2019 and 2018:

	2019	2018
Deferred tax assets:		
Net operating losses	\$ 250,459	\$ 258,183
Accrued benefits	13,611	13,590
Other	19,695	20,733
	283,765	292,506
Less valuation allowance	(283,765)	(292,506)
	\$ -	\$ -

Tax benefits are recognized when it is more likely than not that a tax position will be sustained upon examination by the tax authorities based on the technical merits of the position. Such tax positions are measured as the largest amount of tax benefit that is greater than 50% likely to be realized upon ultimate settlement with the tax authorities assuming full knowledge of the position and all relevant facts. As of December 31, 2019, there were no uncertain tax positions. Certain of UPMC's subsidiaries are subject to taxation in the United States and foreign jurisdictions. As of December 31, 2019, UPMC's returns for the fiscal years ended June 30, 2016 and 2017, the short period ended December 31, 2017, and the calendar year ended December 31, 2018 are open for examination by the various taxing authorities.

13. FUNCTIONAL EXPENSES

UPMC provides general health care services primarily to residents within its geographic locations and supports related research and education programs. For the years ended December 31, 2019 and 2018, expenses related to providing these services were as follows:

FOR THE YEAR ENDED DECEMBER 31, 2019

	Hospital & health care services	Insurance services	Academic & research activities	UPMC Enterprises activity	Admin support	Total
Salaries, professional fees and employee benefits	\$ 5,762,048	\$ 462,795	\$ 236,385	\$ -	\$ 838,346	\$ 7,299,574
Insurance claims expense	-	6,923,552	-	-	-	6,923,552
Supplies, purchased services and general	4,358,897	705,207	209,966	-	447,256	5,721,326
Depreciation and amortization	474,166	15,073	-	-	148,960	638,199
Income tax expense	-	-	-	-	4,900	4,900
Interest expense	151,536	-	-	-	-	151,536
Portfolio company and development expense	-	-	42,649	169,208	-	211,857
	\$ 10,746,647	\$ 8,076,627	\$ 489,000	\$ 169,208	\$ 1,439,462	\$ 20,920,944

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(IN THOUSANDS)

FOR THE YEAR ENDED DECEMBER 31, 2018

	Hospital & health care services	Insurance services	Academic & research activities	UPMC Enterprises activity	Admin support	Total
Salaries, professional fees and employee benefits	\$ 5,536,289	\$ 387,620	\$ 211,168	\$ -	\$ 730,534	\$ 6,865,611
Insurance claims expense	-	5,712,025	-	-	-	5,712,025
Supplies, purchased services and general	4,087,029	731,155	255,908	-	407,285	5,481,377
Depreciation and amortization	466,381	29,469	-	-	128,538	624,388
Income tax expense	-	-	-	-	16,603	16,603
Interest expense	162,782	-	-	-	-	162,782
Portfolio company and development expense	-	-	29,597	157,525	-	187,122
	\$ 10,252,481	\$ 6,860,269	\$ 496,673	\$ 157,525	\$ 1,282,960	\$ 19,049,908

14. UPMC ENTERPRISES ACTIVITY

UPMC Enterprises conducts research, development and innovation activities on behalf of UPMC primarily focused on technologies for use in the healthcare industry to lower costs and improve care; such activities are expensed as incurred. From time to time, UPMC invests in companies that are developing technologies that align with its strategic imperatives, including companies that are not yet at the commercialization stage. UPMC's level of investment is dependent on numerous strategic considerations and may provide either a controlling or a non-controlling ownership interest. UPMC Enterprises also seeks partnerships with external companies to accelerate commercial growth of innovation activities, which may include the sale of internally developed technology solutions. Leveraging UPMC's long-standing reputation for academic and research excellence, UPMC Enterprises also sponsors the translation of basic science conducted in a research setting to its commercial use in bedside clinical practice, application in medical laboratories, or use across emerging venues where medicine is delivered; such activities are expensed as incurred.

UPMC Enterprises activity is comprised of the following for the years ended December 31:

	2019	2018
Technology research and development costs	\$ (81,432)	\$ (76,709)
Investments in translational science	(46,430)	(34,067)
Revenue from portfolio companies with controlling interest	28,013	24,682
Expenses of portfolio companies with controlling interest	(80,723)	(46,239)
Net loss from non-controlling interest in portfolio companies	(3,272)	(30,107)
Net gains from sale of technology-related assets	47,401	29,273
UPMC Enterprises activity	\$ (136,443)	\$ (133,167)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(IN THOUSANDS)

15. CONTINGENCIES

On October 9, 2012, UPMC received a Civil Investigative Demand (“CID”) from the Department of Justice (“DOJ”) that sought records relating to 40 surgical procedures performed between January 25, 2008 and June 24, 2010. UPMC timely responded to that CID. In November 2013, the DOJ advised UPMC that the CID had been served as part of the DOJ’s investigation of allegations asserted by Relators in a federal qui tam lawsuit filed under seal. On July 27, 2016, the DOJ announced that it had reached an agreement with UPMC to settle certain allegations that UPMC had violated the False Claims Act for approximately \$2,500. UPMC admitted no liability in settling those claims. The DOJ declined to intervene in the remaining allegations of the Relators’ lawsuit, which was also unsealed on July 27, 2016. In their Second Amended Complaint against UPMC and UPP, Inc., Relators allege that UPMC violated the False Claims Act violations, by overpaying physicians and encouraging physicians to perform medically unnecessary procedures. On March 27, 2018, the Court granted UPMC’s motion to dismiss all claims with prejudice. On September 17, 2019, the Third Circuit Court of Appeals reversed the Court’s Order. On December 20, 2019, the Third Circuit vacated its September 17, 2019 Order and issued a new Order that also reversed the trial court’s dismissal Order. On January 28, 2020, UPMC answered the Second Amended Complaint. The outcome and ultimate effect on UPMC’s financial condition cannot be determined at this time.

In May 2015, PCS sued UPMC Health Network, UPMC Benefit Management Services, UPMC Health Benefits, and a PCS competitor in the United States District Court for the Western District of Pennsylvania, asserting four antitrust related claims. In August 2015, PCS filed an amended complaint, removing UPMC Health Network and adding UPMC, a Pennsylvania nonprofit nonstock corporation as a party. On March 27, 2019, the Court granted summary judgment for the UPMC defendants on all counts. PCS has appealed and the UPMC defendants have opposed that appeal. The outcome and ultimate effect on UPMC’s financial condition cannot be determined at this time.

On June 14, 2019, Homestead Strategic Holdings Inc. and certain of its subsidiaries filed a Complaint with the Pennsylvania Department of State challenging the Institution of Purely Public Charity Act status of UPMC, UPMC Health Coverage, Inc. and UPMC Susquehanna and is seeking arbitration of its claims. The UPMC Defendants are opposing the Complaint. An arbitration is scheduled for May 2020. The outcome and ultimate effect on UPMC’s financial condition cannot be determined at this time.

On July 29, 2019, UPMC received two grand jury subpoenas and an unexecuted search warrant from the DOJ seeking various records from one of UPMC’s clinical departments. UPMC is complying with the subpoenas and search warrant. The outcome and ultimate effect on UPMC’s financial condition cannot be determined at this time.

On January 24, 2020, a putative class action lawsuit was filed against UPMC in the Court of Common Pleas of Allegheny County, Pennsylvania. The state court action alleges unauthorized disclosures of provider-patient communications and violations of the Pennsylvania Wiretapping and Electronic Surveillance Control Act, the Pennsylvania Unfair Trade Practices and Consumer Protection Law, and common law. UPMC plans to zealously defend against the claims. The outcome and ultimate effect on UPMC’s financial condition cannot be determined at this time.

16. SUBSEQUENT EVENTS

Management evaluated events occurring subsequent to December 31, 2019 through February 25, 2020, the date the audited consolidated financial statements of UPMC were available to be issued. During this period, there were no subsequent events requiring recognition or disclosure in the consolidated financial statements except as noted below.

On February 1, 2020, UPMC completed its affiliation with the Western Maryland Health System (“WMHS”). As part of the affiliation arrangement, UPMC defeased certain debt held by WMHS and issued \$210,495 of taxable notes in February 2020. It is not practicable to disclose the preliminary purchase price allocation for this transaction given the timing between the completion of the affiliation and the issuance of the audited consolidated financial statements.