ACS
Chemistry for Life™

2017
Management's Statement of Responsibility
and
Audited Financial Statements

Management’s Statement of Responsibility
March 8, 2018

The management of the American Chemical Society (ACS or the Society) is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with accounting principles generally accepted in the United States and, as such, the statements include amounts based on estimates and judgments by management.

The consolidated financial statements have been audited by the independent accounting firm KPMG LLP, which was given unrestricted access to all financial records and related data, including minutes of all meetings of the Board of Directors and its committees. Their report, which follows, expresses their opinion as to whether the consolidated financial statements, considered in their entirety, fairly present the Society’s financial position, operating results, and cash flows in conformity with accounting principles generally accepted in the United States. Management believes that all representations made to the independent auditors during their audit were true and accurate.

The Society maintains a system of internal controls which is designed to provide reasonable assurance that assets are safeguarded, transactions are executed in accordance with management’s authorization, and accounting records are reliable for preparing financial statements. The Society’s internal controls are maintained through the establishment and communication of accounting and financial policies and procedures and by the selection and training of qualified personnel. There are, however, inherent limitations in the effectiveness of any system of internal controls, including the possibility of human error and the circumvention of controls. Accordingly, even an effective internal control system can provide only reasonable assurance with respect to financial statement preparation. Furthermore, the effectiveness of an internal control system can change with circumstances. Management believes that as of December 31, 2017 and 2016, the Society’s system of internal controls was adequate to accomplish the objectives discussed herein.

The ACS Board of Directors fulfills its oversight responsibility for the consolidated financial statements through its Audit Committee, which is composed of Committee members who are independent of Society management. The Audit Committee has a charter in place that outlines its responsibilities, which include engaging the independent auditors and internal auditors, reviewing accounting, auditing, internal control, and financial reporting matters, and meeting with management and the independent auditors to ensure that each is carrying out their responsibilities. Recommendations made by the independent auditors are considered and appropriate action is taken with respect to these recommendations. The independent auditors and internal auditors have free and full access to the Audit Committee.

Thomas M. Connelly, Jr.
Executive Director & CEO

Brian A. Bernstein
Treasurer & CFO

AMERICAN CHEMICAL SOCIETY

Consolidated Financial Statements

December 31, 2017 and 2016

(With Independent Auditors’ Report Thereon)

KPMG LLP
Suite 12000
1801 K Street, NW
Washington, DC 20006

Independent Auditors' Report

The Board of Directors
American Chemical Society:

Report on the Financial Statements

We have audited the accompanying consolidated financial statements of the American Chemical Society and its subsidiaries, which comprise the consolidated statements of financial position as of December 31, 2017 and 2016, and the related consolidated statements of activities and cash flows for the years then ended, and the related notes to the consolidated financial statements.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these consolidated financial statements in accordance with U.S. generally accepted accounting principles; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We conducted our audits 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 consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the American Chemical Society and its subsidiaries as of December 31, 2017 and 2016, and the changes in their net assets and their cash flows for the years then ended, in accordance with U.S. generally accepted accounting principles.

Other Matters – Additional Consolidating Information

Our audits were conducted for the purpose of forming an opinion on the consolidated financial statements as a whole. The consolidating information is presented for purposes of additional analysis and is not a required part of the consolidated financial statements. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the consolidated financial statements. The information has been subjected to the auditing procedures applied in the audit of the consolidated financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the consolidated financial statements or to the consolidated financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the consolidating information is fairly stated, in all material respects, in relation to the consolidated financial statements as a whole.

/s/ KPMG LLP

Washington, District of Columbia
March 8, 2018

American Chemical Society
Consolidated Statements of Financial Position
As of December 31

(in thousands)

	2017			2016
	Additional Consolidating Information			
	ACS Programs	Petroleum Research Fund	Total	Total
ASSETS				
Current Assets				
Cash and Cash Equivalents	$ 71,574	$ 18,730	$ 90,304	$ 83,418
Accounts Receivable, Net	118,122	-	118,122	146,274
Interfund (Payable) Receivable	(17,115)	17,115	-	-
Other	14,276	37	14,313	13,037
Total Current Assets	186,857	35,882	222,739	242,729
Non-Current Assets				
Investments	539,629	560,048	1,099,677	987,753
Buildings, Land and Other Property, Net	123,439	68	123,507	117,178
Postretirement Benefits and Other	11,616	-	11,616	9,863
Total Non-Current Assets	674,684	560,116	1,234,800	1,114,794
Total Assets	$ 861,541	$ 595,998	$ 1,457,539	$ 1,357,523
LIABILITIES AND NET ASSETS				
Current Liabilities				
Accounts Payable	$ 37,107	$ -	$ 37,107	$ 33,792
Accrued Expenses	34,823	-	34,823	35,341
Deferred Revenue	199,586	-	199,586	217,695
Grants Payable	100	12,980	13,080	14,637
Postretirement Benefits and Other	3,237	-	3,237	3,087
Total Current Liabilities	274,853	12,980	287,833	304,552
Non-Current Liabilities				
Deferred Revenue	649	-	649	1,322
Grants Payable	-	4,416	4,416	4,718
Postretirement Benefits and Other	141,395	-	141,395	168,823
Total Non-Current Liabilities	142,044	4,416	146,460	174,863
Total Liabilities	416,897	17,396	434,293	479,415
Net Assets				
Unrestricted	325,290	-	325,290	247,316
Temporarily Restricted	49,324	506,102	555,426	491,238
Permanently Restricted	70,030	72,500	142,530	139,554
Total Net Assets	444,644	578,602	1,023,246	878,108
Total Liabilities and Net Assets	$ 861,541	$ 595,998	$ 1,457,539	$ 1,357,523

See accompanying notes to consolidated financial statements.

American Chemical Society
Consolidated Statements of Activities
For the Years Ended December 31
(in thousands)

	2017			2016
	Additional Consolidating Information			
	ACS Programs	Petroleum Research Fund	Total	Total
Change in Unrestricted Net Assets - Operations				
Revenue				
Electronic Services	$ 485,879	$ -	$ 485,879	$ 461,498
Registration Fees and Booth Sales	12,713	-	12,713	11,390
Dues	11,573	-	11,573	11,757
Investment Income	8,452	45	8,497	8,202
Member Insurance Premiums, Refunds, and Fees	8,420	-	8,420	13,761
Advertising	6,206	-	6,206	5,894
Printed Materials	2,801	-	2,801	3,184
Net Assets Released from Restriction	6,386	21,830	28,216	31,671
Other	4,742	-	4,742	5,325
Total Unrestricted Revenue	547,172	21,875	569,047	552,682
Expenses				
Program Expenses				
Information Services	399,655	-	399,655	384,853
Membership and Society Services	26,664	-	26,664	26,005
Member Insurance Program	13,911	-	13,911	14,806
Education	13,044	-	13,044	11,657
External Affairs and Communications	5,636	-	5,636	5,909
Scientific Advancement	2,740	20,116	22,856	25,646
Supporting Expenses				
Administrative	53,355	1,759	55,114	50,238
Member Promotion and Retention	2,167	-	2,167	3,059
Other	8,120	-	8,120	7,650
Total Expenses	525,292	21,875	547,167	529,823
Change in Unrestricted Net Assets from Operations	21,880	-	21,880	22,859
Change in Unrestricted Net Assets - Non-Operating				
Net Investment Gains	41,939	-	41,939	16,703
Change in Postretirement Benefit Obligations	14,155	-	14,155	5,433
Change in Unrestricted Net Assets - Non-Operating	56,094	-	56,094	22,136
Change in Unrestricted Net Assets	77,974	-	77,974	44,995
Change in Temporarily Restricted Net Assets				
Contributions	3,416	-	3,416	2,555
Net Investment Gains	8,822	67,303	76,125	11,692
Investment Income	2,419	10,444	12,863	11,430
Net Assets Released from Restriction	(6,386)	(21,830)	(28,216)	(31,671)
Change in Temporarily Restricted Net Assets	8,271	55,917	64,188	(5,994)
Change in Permanently Restricted Net Assets				
Contributions	920	-	920	383
Net Investment Gains	2,056	-	2,056	1,137
Change in Permanently Restricted Net Assets	2,976	-	2,976	1,520
Change in Net Assets	89,221	55,917	145,138	40,521
Beginning Net Assets	355,423	522,685	878,108	837,587
Ending Net Assets	$ 444,644	$ 578,602	$ 1,023,246	$ 878,108

See accompanying notes to consolidated financial statements.

American Chemical Society
Consolidated Statements of Cash Flows
For the Years Ended December 31
(in thousands)

	2017			2016
	Additional Consolidating Information			
	ACS Programs	Petroleum Research Fund	Total	Total
Cash Flows From Operating Activities				
Change in Net Assets	$ 89,221	$ 55,917	$ 145,138	$ 40,521
Adjustments to Reconcile Change in Net Assets to Net Cash Provided By (Used in) Operating Activities:				
Net Investment Gains	(52,692)	(67,303)	(119,995)	(29,532)
Change in Postretirement Benefit Obligations	(14,155)	-	(14,155)	(5,433)
Depreciation and Amortization	30,082	10	30,092	27,747
Contributions Restricted for Long-Term Investment	(920)	-	(920)	(383)
Net Loss on Property Dispositions	-	-	-	219
Changes in Operating Assets and Liabilities:				
Decreases (Increases) in Assets:				
Accounts Receivable, Net	24,650	-	24,650	(20,312)
Interfund Receivable (Payable)	614	(614)	-	-
Other Assets	(1,415)	20	(1,395)	3,855
Increases (Decreases) in Liabilities:				
Accounts Payable	3,321	(6)	3,315	3,753
Accrued Expenses	(518)	-	(518)	643
Deferred Revenue	(18,782)	-	(18,782)	21,898
Grants Payable	(255)	(1,604)	(1,859)	964
Postretirement and Other Liabilities	(14,975)	-	(14,975)	(13,080)
Net Cash Provided by (Used in) Operating Activities	44,176	(13,580)	30,596	30,860
Cash Flows From Investing Activities				
Purchases of Investments	(71,244)	(2,349,969)	(2,421,213)	(1,191,908)
Sales and Maturities of Investments	71,730	2,361,063	2,432,793	1,216,599
Acquisitions of Buildings and Other Property	(36,210)	-	(36,210)	(35,099)
Net Cash (Used in) Provided by Investing Activities	(35,724)	11,094	(24,630)	(10,408)
Cash Flows From Financing Activities				
Contributions Restricted for Long-Term Investment	920	-	920	383
Net Cash Provided by Financing Activities	920	-	920	383
Net Increase (Decrease) in Cash and Cash Equivalents	9,372	(2,486)	6,886	20,835
Beginning Cash and Cash Equivalents	62,202	21,216	83,418	62,583
Ending Cash and Cash Equivalents	$ 71,574	$ 18,730	$ 90,304	$ 83,418

See accompanying notes to consolidated financial statements.

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AMERICAN CHEMICAL SOCIETY
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
FOR THE YEARS ENDED DECEMBER 31, 2017 and 2016

1. ORGANIZATION AND PURPOSE

The American Chemical Society (the Society) was founded in 1876. It is a U.S. not-for-profit corporation whose national charter was approved by the U.S. Congress on August 25, 1937. The Society's consolidated financial statements include the operations of two wholly owned for-profit subsidiaries and an insurance trust. The Society was organized for the purposes of encouraging the advancement of chemistry, promoting research in chemical science, increasing and diffusing chemical knowledge, and promoting scientific interests and inquiry through its meetings, reports, papers, and publications. The Society has more than 150,000 members.

The Society is generally exempt from federal income tax under Section 501(c)(3) of the Internal Revenue Code and accomplishes its exempt purpose through a number of educational and membership programs. These include continuing education programs, national and regional meetings that provide forums for sharing scientific information, employment services, and public outreach. In addition, the Society provides expert testimony at the federal, state, and local government levels on topics relevant to the chemistry enterprise. The Society also provides a significant service to its members and the chemistry enterprise in the form of print and electronic scientific journals and databases pertaining to chemical and related scientific information.

The principal sources of funding for the Society's activities include net revenue generated by the Publications Division and the Chemical Abstracts Service (CAS) Division. The Publications Division publishes a wide range of peer-reviewed scientific journals, periodicals, and books. CAS analyzes, organizes, and shares scientific information that drives discovery, providing innovative solutions that empower scientists, patent information professionals, and business leaders worldwide. Other sources of the Society's revenue include member dues, insurance premiums, registration fees, investment income, and contributions from individuals and institutions to support Society programs. Products and services are sold domestically and in overseas markets, principally in Europe and Asia. The Society's diverse clientele is composed of its members and other chemistry-related practitioners, corporations, academic institutions, and government agencies.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Principles of Presentation and Consolidation

The accompanying consolidated financial statements include the accounts of the American Chemical Society and its related entities, which consist of ACS International, Ltd., a wholly owned international marketing services subsidiary, and Hampden Data Services, Ltd., a wholly owned chemical information software company. The consolidated financial statements also include the accounts of the American Chemical Society Petroleum Research Fund, an endowment fund established to advance scientific education and research in the petroleum field, and the American Chemical Society Insurance Trust, a grantor trust established to enable members of the Society to purchase insurance coverage through group insurance policies. All significant interorganizational transactions have been eliminated. The accounts of the Society's chapters, referred to as local sections and divisions, are not included in the Society's consolidated financial statements because the Society does not have a financial controlling interest in its chapters.

Realignment

In 2017, to better serve members and the global chemistry enterprise, Society Programs were realigned. In 2016, Society Programs included Membership and Scientific Advancement, Education, and Office of Public Affairs. Following the 2017 realignment, Society Programs includes Membership and Society Services, Education, External Affairs and Communications, and Scientific Advancement. As a result, functional expenses presented on the statement of activities for 2016 has been conformed with the 2017 presentation. In addition, the presentation of grants payable has been separated from accrued expenses on the statements of financial position.

Use of Estimates

The preparation of the consolidated financial statements, in conformity with U.S. generally accepted accounting principles, requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities at the date of the consolidated financial statements, and the reported amounts of revenues and expenses during the reporting period. The Society's most significant estimates include valuation of investments and derivatives, actuarial assumptions for postretirement benefit obligations, and useful lives of buildings and other property. Actual results could differ from these estimates.

Cash Equivalents

Cash equivalents include money market funds which can be liquidated on a daily basis. These money market funds invest primarily in short-term U.S. Treasury securities, other short-term highly liquid investments, and certain fixed income securities. Cash and cash equivalents that are managed as part of investments are reported within investments, as these funds are not used for daily operating needs.

Accounts Receivable

Accounts receivable are recorded at the invoiced amount and do not bear interest. The Society maintains an allowance for doubtful accounts for estimated losses. In establishing the allowance, management considers historical losses and past-due balances. The Society records receivables from subscribers related to the next calendar year journal subscriptions billed before December 31 based on written commitments from customers and historically high renewal rates.

Investments

Investments are reported at fair value in the consolidated statements of financial position except for certain commingled trust funds and hedge funds, which are reported at net asset value (NAV) as a practical expedient for fair value, unless it is probable that all or a portion of the investment will be sold for an amount different than NAV. Fair values of certain commingled funds, similar to mutual funds, that are deemed to have a readily determinable fair value are measured at published NAV. The net asset values are provided by external investment managers and involve assumptions and estimation methods; therefore, the estimates could differ materially from actual results. The Society reviews and evaluates the values provided by the investment managers and agrees with the valuation methods and assumptions used in determining the net asset values. Certain investments reported at NAV are subject to withdrawal restrictions and are less liquid than the Society's other investments. As of December 31, 2017 and 2016, the Society had no plans or intentions to sell investments at amounts different from NAV.

Changes in fair value are recognized as net investment gains or losses in the consolidated statements of activities. Investment income, consisting of interest and dividends, is recognized when earned. Purchases and sales of investments are recorded on the trade date. Unsettled transactions that are managed as part of investments are reported within investments as the funds related to the settlements of such transactions stay within the investment pools and are not used for operating purposes. Unsettled transactions include forward purchase and sales contracts for debt securities and foreign currency contracts.

The Society invests in various instruments including domestic and foreign equities, fixed income securities, and financial derivatives. Investments, in general, carry various risks such as interest rate, credit, liquidity, and overall market risk. Due to the level of risk associated with certain investments, it is reasonably possible that changes in the values of investments may occur in the near term, and such changes could materially affect the amounts reported in investments.

The Society has authorized its investment managers to utilize various derivative instruments, including financial futures, options, interest rate swaps, and credit default swaps, to either hedge risk or alter the exposure to certain asset classes. The Society has established procedures to monitor and manage the use of these derivative instruments and the related market, interest, and counterparty credit risks. These derivative instruments are recognized at fair value, using quoted market prices for similar instruments, and are reported within investments in the consolidated statements of financial position.

Foreign Currency Forward Contracts

The Society recognizes foreign currency contracts (not related to its investment portfolios) as either accounts receivable, accounts payable, or deferred revenue in the consolidated statements of financial position at their respective fair values. The fair values of foreign currency forward contracts are based on quoted market prices for similar contracts at December 31. Changes in fair value are recognized as net investment gains or losses in the consolidated statements of activities.

Fair Value Measurements

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.

The fair value measurement standard establishes a three-tier fair value hierarchy that prioritizes the inputs used in measuring fair value. The standard requires that assets and liabilities carried at fair value be classified and disclosed in one of the following three categories:

- Level 1 – Observable inputs such as quoted prices in active markets for identical assets or liabilities (e.g., U.S. Treasury issues, equities, and mutual funds traded on major exchanges)
- Level 2 – Inputs other than quoted prices in active markets for identical assets or liabilities that are observable either directly or indirectly, such as interest rates, yield curves, and quoted prices in active markets for similar assets or liabilities (e.g., U.S. government and agency issues, corporate bonds, money market funds, and foreign exchange forward contracts)
- Level 3 – Unobservable inputs in which there is little or no market data, requiring the reporting entity to develop its own assumptions

The Society utilizes the best information available in measuring fair value, and financial assets and liabilities are classified based on the lowest level of input that is significant to the fair value measurement.

See Note 4 for the disclosure of the fair value of applicable financial assets and liabilities measured on a recurring basis.

Buildings and Other Property

Buildings and other property are carried at cost less accumulated depreciation and amortization. Improvements that extend the estimated useful life of an asset are capitalized. Internally developed software is capitalized in accordance with the Financial Accounting Standards Board's (FASB) Accounting Standards Codification (ASC) Subtopic 350-40, *Internal-Use Software* and ASC Subtopic 350-50, *Website Development Costs*. Software that will be included in a product or service or developed for resale purposes is recorded in accordance with ASC Subtopic 985-20, *Costs of Software to Be Sold, Leased, or Marketed*.

Assets are amortized on a straight-line basis over the useful life of the asset. One-half year's depreciation or amortization is taken in the year an asset is placed in service. Useful lives range from 3 to 15 years for software; 3 to 45 years for buildings and improvements; and 3 to 10 years for hardware, furniture, and equipment. Repairs and maintenance costs are charged to expense as incurred.

Long-Lived Assets

Long-lived assets are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable.

Member Insurance Program

The Society maintains a separate Member Insurance Program, the American Chemical Society Insurance Trust (the Insurance Trust), which provides members with insurance coverage through several group insurance policies. The Insurance Trust currently maintains group insurance policies that provide term life, accidental death and dismemberment, hospital indemnity, long-term disability, long-term care, excess major medical, short-term medical, supplemental Medicare, auto, homeowners, and professional liability insurance coverage. Insurance carriers underwrite these policies while third-party administrators handle the processing and administration of claims.

The Insurance Trust generates revenue from premiums received from program participants, refunds from the insurance carrier based on favorable claims experience, endorsement fees, interest and dividends earned on investments, and interest income earned on reserves held by the insurance carrier to ensure the stability of the program. The Insurance Trust's expenses include the cost of purchasing group insurance policies, as well as the cost of administering the program.

The Insurance Trust accounted for a $101,000 increase and $1,787,000 increase in the Society's unrestricted net assets for the years ended December 31, 2017 and 2016, respectively. The Insurance Trust accounts for $40,921,000 and $40,820,000 of the Society's total unrestricted net assets in the consolidated statements of financial position as of December 31, 2017 and 2016, respectively. The activities of the Insurance Trust are included in ACS Programs in the consolidated statements of activities.

Contributions and Net Assets

Contributions are considered to be available for unrestricted use unless specifically restricted by the donor. Amounts received that are designated for future periods, or are restricted by the donor for specific purposes, are reported as temporarily restricted or permanently restricted.

A donor restriction expires when a stipulated time restriction ends or when a purpose restriction is accomplished. Upon expiration, temporarily restricted net assets are reclassified to unrestricted net assets and are reported in the consolidated statements of activities as net assets released from restriction. Restricted contributions received in the same year in which the restrictions are met are recorded as an increase to restricted net assets at the time of receipt and as net assets released from restriction.

Donor restrictions that permanently limit the use of contributed assets are classified as permanently restricted support. Income earned on permanently restricted assets is recorded in accordance with the donor's designation. Income that is permanently restricted by the donor is reported as permanently restricted. Income designated as restricted for a future period or for a specific purpose is reported as temporarily restricted and released when the restriction is met, as approved by the Board of Directors.

Revenue Recognition

<u>Electronic Services and Printed Materials</u> – Revenue from the sale of electronic services and printed materials is recognized when the electronic service is provided to the customer or when the printed product is shipped. Subscription revenue from the sale of electronic and printed subscriptions is recognized ratably over the term of the subscription. Subscription revenue billed in advance or cash collected in advance is deferred.

<u>Registration Fees and Booth Sales</u> – Advance payments for registration fees and booth sales are included in deferred revenue. Revenue is recognized when the events occur.

<u>Dues and Subscriptions for Future Periods</u> – The Society renews dues and subscription agreements each year for services to be rendered and publications to be delivered in future periods. These amounts are included in deferred revenue in the accompanying consolidated statements of financial position and are recognized ratably over the membership period or the term of the service.

<u>Advertising Revenue</u> – The Society recognizes advertising revenue over the period the advertisement is run. For print advertising, this is based on release of the journal or publication; for Internet advertising, it is based on the time period of the campaign.

<u>Government Grants and Contracts</u> – Revenue from government contracts is derived from fixed-price arrangements and is recognized based on labor hours expended times a fixed price rate per hour. Revenue from government grants is recognized as allowable costs are incurred. Both government grants and contracts are subject to audit by federal agencies. Grant and contract revenue is included in other revenue in the accompanying consolidated statements of activities.

Expenses

The cost of programs and supporting activities is summarized by functional classification in the consolidated statements of activities. Accordingly, certain costs have been allocated among program activities and supporting services based on specific identification or appropriate allocation methodologies.

Supporting expenses identified as other in the consolidated statements of activities include expenses associated with the Society's web strategy and operations, the investment program, and fundraising activities. The Society incurred direct fundraising expenses of $1,398,000 in 2017 and $1,231,000 in 2016.

Income Taxes

The Society is generally exempt from federal income taxes under Internal Revenue Code Section 501(c)(3). However, the Society is subject to taxation on any net unrelated business income. At December 31, 2017, the Society had a net operating loss carryforward for income tax purposes of approximately $21,600,000, which expires over the years 2018 through 2037**.** A deferred tax asset has not been recorded for the net operating loss because the Society has determined, as of December 31, 2017, it is not recoverable.

Management annually reviews its tax positions and has determined that there are no material uncertain tax positions that require recognition in the consolidated financial statements.

Public law no. 115-97, the Tax Cuts and Jobs Act (the Act), was enacted December 22, 2017, with most provisions effective January 1, 2018. The Act amends the Internal Revenue Code and includes several changes relevant to tax exempt organizations, primarily related to unrelated business income, net operating losses, certain new excise taxes, and changes affecting the deductibility of certain expenses. Management is currently in the process of evaluating the new law and the impact it may have on the Society.

Petroleum Research Fund

The American Chemical Society Petroleum Research Fund is an endowment fund established on October 25, 2000 as a result of The Agreement of Transfer of Trust (the Agreement) between the Society and Morgan Guaranty Trust Company of New York, approved by the Attorney General for the State of New York, and ordered by the Supreme Court of New York. The Agreement dissolved the Petroleum Research Fund Trust (the Trust) and transferred the assets to the Society to create the American Chemical Society Petroleum Research Fund (the Fund), the purpose of which is the same as the Trust. The Agreement made the Society responsible for the management and administration of the Fund in an account separate and apart from any other accounts of the Society. As a result of the transfer, the historic dollar value for the Fund was established at $72,500,000, the value of the securities originally donated in 1944 to create the Trust. This amount must be held inviolate as permanently restricted assets.

The assets of the Fund consist primarily of domestic equities, foreign equities, fixed income securities and hedge funds. Under the terms of the Agreement, annual payouts from the Fund are capped at a maximum spending rate of 5% of the net asset value of the Fund over a rolling three-year average. The Society uses distributions from the Fund to make grants for advanced scientific education and fundamental research in the petroleum field. Grants are expensed when awarded by the Society's Board of Directors and accepted by the recipient. Amounts for grants awarded and accepted but not paid at December 31 are recorded as grants payable. The Fund awarded $16,982,000 in 2017 and $20,183,000 in 2016.

Risks and Uncertainties

<u>Concentration of Credit Risk</u> – The Society is subject to potential concentrations of credit risk in its cash and cash equivalents and investments. Noninterest-bearing deposits in financial institutions insured by the Federal Deposit Insurance Corporation (FDIC) were insured up to a maximum of $250,000 at December 31, 2017 and 2016. Investments at other financial institutions were insured by the Securities Investor Protection Corporation (SIPC) up to $500,000, which includes a $250,000 limit for cash. At December 31, 2017 and 2016, the aggregate balances were in excess of the insurance and, therefore, pose some risk since they are not collateralized. The Society has historically not experienced any losses on its cash and cash equivalents and investments in relation to FDIC and SIPC insurance limits.

<u>Capital Market Risk</u> – The Society invests in domestic equities, foreign equities, and fixed income securities, which are subject to market risk and may result in gains or losses due to changes in market value. In addition, the Society utilizes futures and options to hedge changes in the market value of underlying investments, and forward contracts to hedge changes in the value of revenue denominated in foreign currencies. These financial instruments are also subject to market risk and may result in gains or losses; however, they are not used to leverage market exposure, and any such gains or losses would be largely offset by changes in the market value of the underlying investments or foreign currencies.

<u>Foreign Currency Risk</u> – Portions of the Society's revenue and expenditures are in foreign currencies. The Society enters into foreign currency forward contracts to reduce the risk that exchange rate fluctuations will adversely impact the U.S. dollar value of future net revenue denominated in foreign currency.

Counterparty Risk – The Society enters into derivative instruments with counterparties. While there is risk that the counterparties may fail to meet their obligations, the Society does not have significant positions with any one counterparty.

Insurance Risk – Given the uncertainty of claims experience in any given year and the resulting impact on the level of experience refunds or charges from the insurance carrier, the Insurance Trust can have either a positive or a negative impact on the Society's consolidated statements of activities.

Recent Accounting Pronouncements

In May 2014, the FASB issued Accounting Standards Update (ASU) No. 2014-09, *Revenue from Contracts with Customers* (Topic 606) which requires an entity to recognize revenue when the entity transfers promised goods and services to the customer. Revenue is recognized in an amount that reflects the consideration an entity expects to receive in exchange for those goods or services. Entities are required to disclose sufficient quantitative and qualitative information to enable users of financial statements to understand the nature, amount, timing, and uncertainty of revenue and cash flows arising from contracts with customers. The FASB has also issued several amendments to the standard, which are intended to promote a more consistent interpretation and application of the principles outlined in the standard. This standard is effective for the Society as of January 1, 2019, and management is in the process of evaluating the impact on the Society's consolidated financial statements.

In August 2016, the FASB issued ASU No. 2016-14, *Not-for-Profit Entities* (Topic 958)*: Presentation of Financial Statements of Not-for-Profit Entities*. The ASU makes significant changes to the requirements for reporting net asset classes, disclosing liquidity and availability of resources, expense reporting to include both natural and functional classifications, disclosure of underwater endowment funds, and reporting of investment returns. This standard is effective for the Society as of January 1, 2018, and management is in the process of evaluating the impact on the Society's consolidated financial statements.

3. ACCOUNTS RECEIVABLE

Accounts receivable consisted of the following as of December 31 (in thousands):

	2017	2016
Accounts Receivable	$ 120,414	$ 148,380
Less Allowance for Doubtful Receivables	2,292	2,106
Accounts Receivable, Net	$ 118,122	$ 146,274

Accounts receivable from subscribers related to the next calendar year journal subscriptions billed before December 31, 2017 and 2016 were $57,592,000 and $88,240,000, respectively.

4. INVESTMENTS AND FAIR VALUE OF FINANCIAL INSTRUMENTS

The following tables summarize the Society's investments and other financial instruments measured at fair value on a recurring basis according to the classification hierarchy as of December 31, 2017 and 2016 (in thousands):

December 31, 2017	Investments Measured at NAV (1)	Level 1	Level 2	Level 3	Total
Cash Equivalents	$ -	$ 31,783	$ -	$ -	$ 31,783
Deferred Compensation Plan Assets	-	10,180	-	-	10,180
Foreign Currency Forward Contracts	-	-	630	-	630
Investments:					
Cash Equivalents	-	12,789	25,439	-	38,228
Fixed Income:					
U.S. government and agencies	-	138,800	27,907	-	166,707
Foreign	913	8	40,760	-	41,681
Corporate and Other	-	23,233	211,373	-	234,606
Equity:					
Domestic	-	103,544	250,313	-	353,857
Foreign	148,099	12,757	53,712	-	214,568
Hedge Funds	107,134	-	-	-	107,134
Unsettled Transactions, Net	-	(57,104)	-	-	(57,104)
Total Investments	256,146	234,027	609,504	-	1,099,677
Total Financial Assets	$ 256,146	$ 275,990	$ 610,134	$ -	$ 1,142,270

December 31, 2016	Investments Measured at NAV (1)	Level 1	Level 2	Level 3	Total
Cash Equivalents	$ -	$ 34,008	$ -	$ -	$ 34,008
Deferred Compensation Plan Assets	-	7,751	796	-	8,547
Foreign Currency Forward Contracts	-	-	5,348	-	5,348
Investments:					
Cash Equivalents	-	14,245	13,081	-	27,326
Fixed Income:					
U.S. government and agencies	-	83,847	54,820	-	138,667
Foreign	-	-	25,802	-	25,802
Corporate and Other	903	21,418	172,046	-	194,367
Equity:					
Domestic	-	83,609	246,729	-	330,338
Foreign	107,695	10,178	48,927	-	166,800
Hedge Funds	144,298	-	-	-	144,298
Unsettled Transactions, Net	-	(39,845)	-	-	(39,845)
Total Investments	252,896	173,452	561,405	-	987,753
Total Financial Assets	$ 252,896	$ 215,211	$ 567,549	$ -	$ 1,035,656

(1) Certain investments are measured at fair value using NAV as a practical expedient and have not been classified in the fair value hierarchy. The NAV amounts have been presented to permit reconciliation of the fair value hierarchy to the amounts presented in the statements of financial position.

The following estimates and assumptions were used to determine the fair value of financial instruments within the fair value hierarchy:

- Cash equivalents – Cash equivalents consist of money market funds, commercial paper, and cash collateral held by custodians. Money market funds and commercial paper are classified as Level 2 given that they are valued at amortized cost, which approximates fair value. Cash collateral held by custodians is classified as Level 2 based on prices for similar assets.

- Deferred compensation plan assets – The Society offers a non-qualified tax-advantaged deferred-compensation retirement plan to certain employees per Section 457 of the Internal Revenue Code. Assets of the plan comprise 25 mutual funds that are actively traded on major exchanges, 24 of which are classified as Level 1. The remaining fund is a money market fund that values securities at amortized cost, which approximates fair value, and is classified as Level 2.

- Foreign currency forward contracts – Foreign currency forward contracts are derivative instruments and recognized at fair value based on quoted prices, in active markets, for similar contracts and are classified as Level 2.

- Fixed income securities – Fixed income securities primarily include U.S. Treasury issues, U.S. government and agency issues, corporate securities, mortgage-backed securities, asset-backed securities, municipal bonds, fixed income mutual funds, and credit default swaps. U.S. Treasury issues and certain fixed income mutual funds are valued using quoted prices in active markets for identical assets and are classified as Level 1. The remainder of this investment class is valued using quoted prices in active markets for similar securities and is classified as Level 2. Fair values of investments in commingled funds, similar to mutual funds, that are deemed to have a readily determinable fair value are measured at published NAV and are classified as Level 2.

- Equity investments – Equity investments consist primarily of common stock held in mutual funds, separate accounts, and commingled trust funds. Securities traded on active exchanges are priced using unadjusted market quotes for identical assets and are classified as Level 1. Securities that are traded infrequently or that have comparable traded assets are priced using available quotes and other market data that are observable and are classified as Level 2. Fair values of investments in commingled funds, similar to mutual funds, that are deemed to have a readily determinable fair value are measured at published NAV and are classified as Level 2.

- Unsettled transactions, net – Unsettled transactions consist primarily of investment purchases or sales transactions, including foreign currency forward contracts and forward purchase and sales contracts for securities that have not settled as of December 31. Fair value is based on the underlying security in an active market and is classified as Level 1. Unsettled transactions were $184,690,000 and $127,585,000 respectively, as of December 31, 2017, and $126,230,000 and $86,385,000, respectively, as of December 31, 2016.

As of December 31, 2017 and 2016, there were no financial instruments measured on a non-recurring basis.

The Society maintains balanced investment portfolios structured to generate current income and long-term appreciation. Investment management fees are netted against investment income, and these amounts totaled $1,212,000 and $1,075,000 for the years ended December 31, 2017 and 2016, respectively.

Liquidity and Certain Strategies

Investment liquidity of investments measured at NAV is aggregated below based on redemption or sale periods (in thousands):

December 31, 2017	Less Than 30 Days	Quarterly	> 1 Year	Total
Fixed Income:				
Foreign	$ 913	$ -	$ -	$ 913
Equity:				
Foreign	148,099	-	-	148,099
Hedge Funds		92,902	14,232	107,134
Total Investments	$ 149,012	$ 92,902	$ 14,232	$ 256,146

December 31, 2016	Less Than 30 Days	Quarterly	> 1 Year	Total
Fixed Income:				
Corporate and Other	$ 903	$ -	$ -	$ 903
Equity:				
Foreign	107,695	-	-	107,695
Hedge Funds	-	95,895	48,403	144,298
Total Investments	$ 108,598	$ 95,895	$ 48,403	$ 252,896

The Society's investments, carried at NAV as a practical expedient, include commingled funds (both fixed income and equity) and hedge funds. The commingled funds have redemption notice periods of 1-5 days and the hedge funds have 65-day and 100-day redemption notice periods. The Society does not have any unfunded commitments as of December 31, 2017 or 2016. The significant strategies of the commingled funds and hedge funds are as follows:

- Fixed income and equity commingled funds – are similar to mutual funds except that of an institutional investor class and for which NAV is not priced daily or published. Fixed income funds invest in securities to generate a total return, consisting of income and capital appreciation, while preserving capital. Equity investment funds invest in securities to achieve long-term growth primarily in a diversified portfolio of global equity securities that possess fundamental investment value.

- Hedge funds – includes two investments in fund of hedge funds that each contain 15 to 30 underlying hedge funds. The underlying hedge funds employ a variety of different strategies including long/short equity, fixed income arbitrage, distressed debt, credit and capital structure arbitrage, merger arbitrage, volatility arbitrage, and global asset allocation.

Investment Derivatives

The Society's investment managers may employ derivatives in order to manage market risks, arbitrage mispricing of securities, or replicate long or short positions in a cost effective manner. In no instance are derivatives used to speculate or leverage positions.

All derivative instruments are carried at fair value and are reported net in investments on the consolidated statements of financial position. The derivatives are held with 14 different counterparties and are subject to master netting agreements. The master netting agreements allow the Society to offset net positions by counterparty and available collateral held.

The following tables provide the fair value of investment derivatives as of December 31, 2017 and 2016 and gains and losses for the years ended December 31, 2017 and 2016 (in thousands):

	2017		
	Assets	Liabilities	Gains (Losses)
Derivatives:			
Foreign Currency Contracts	$ 18,232	$ (18,467)	$ (234)
Credit Default Swaps	1,009	(262)	250
Interest Rate Swaps	827	(297)	149
Financial Futures and other	239	(130)	59
Total Derivatives	$ 20,307	$ (19,156)	$ 224

	2016		
	Assets	Liabilities	Gains (Losses)
Derivatives:			
Foreign Currency Contracts	$ 23,061	$ (22,944)	$ 118
Credit Default Swaps	484	(19)	149
Interest Rate Swaps	831	(188)	534
Financial Futures and other	41	(84)	(4)
Total Derivatives	$ 24,417	$ (23,235)	$ 797

As of December 31, 2017 and 2016, the foreign currency contracts had a notional value of $18,299,000 and $22,982,000, respectively.

As of December 31, 2017 and 2016, the total notional amount of credit default swap contracts for sell protection amounted to $600,000 and $28,840,000, respectively. There were $45,364,000 buy protection credit default swaps as of December 31, 2017. There were no buy protection credit default swaps as of December 31, 2016.

The notional amounts related to interest rate swap contracts that pay based on fixed rates at December 31, 2017 and 2016 were $220,125,000 and $213,300,000, respectively. There were no notional amounts related to interest rate swap contracts that pay based on floating rates at December 31, 2017 or 2016.

Financial futures contracts had a notional value of $75,448,000 and $15,742,000 at December 31, 2017 and 2016, respectively.

Other Derivative Instruments

Foreign Currency Forward Contracts - The Society had an unrealized loss of $3,509,000 and an unrealized gain of $775,000 for the years ended December 31, 2017 and 2016, respectively. The unrealized losses/gains are included in net investment losses/gains from non-operating activity in the consolidated statements of activities.

The Society's foreign currency forward contracts are held with one counterparty and are subject to a master netting agreement, which allows for net settlement of positions with the counterparty. The foreign currency forward contracts are presented net in the consolidated statements of financial position within accounts receivable, accounts payable, and deferred revenue. The fair value of the foreign currency forward contracts as of December 31, 2017 and 2016 was as follows (in thousands):

	2017		
	Assets	Liabilities	Net
Foreign Currency Forwards	$ 2,325	$ (1,695)	$ 630

	2016		
	Assets	Liabilities	Net
Foreign Currency Forwards	$ 5,724	$ (376)	$ 5,348

The following table summarizes the notional amounts relating to unsettled foreign currency forward contracts maturing at various times through 2020 (in thousands):

	2017	2016
Contracts maturing in 2017	$ -	$ 56,411
Contracts maturing in 2018	66,408	35,106
Contracts maturing in 2019	37,593	6,141
Contracts maturing in 2020	3,474	-
Total Notional Amount of Unsettled Forward Contracts	$ 107,475	$ 97,658

In addition to unrealized gains and losses on foreign currency forward contracts, the Society incurred realized gains and losses throughout the year. To the extent that actual remittances in foreign currencies differ from contracted amounts and the exchange rates at time of settlement are different from contracted exchange rates, the Society realizes gains or losses on settlement. The Society recorded realized loss of $304,000 and gains of $773,000 in 2017 and 2016, respectively, from foreign exchange transactions. The realized gains and losses are included in information services expenses in the consolidated statements of activities.

5. BUILDINGS AND OTHER PROPERTY

At December 31, buildings and other property consisted of the following (in thousands):

	2017	2016
Software	$ 173,719	$ 156,950
Buildings and Improvements	111,113	106,783
Hardware, Furniture and Equipment	66,764	60,231
Land	2,930	2,930
Total Cost of Buildings and Other Property	354,526	326,894
Less Accumulated Depreciation and Amortization	231,019	209,716
Buildings and Other Property, Net	$ 123,507	$ 117,178

6. POSTRETIREMENT BENEFITS

Defined-Benefit Pension Plan - The Society has a funded noncontributory defined-benefit pension plan (the Plan), which is qualified under Section 401(a) of the Internal Revenue Code and covers employees hired prior to September 1, 2007. The Society makes actuarially determined contributions to satisfy all funding requirements. Effective September 1, 2007, the Plan was closed to new employees. Effective October 31, 2009, the Society froze benefit accruals associated with the Plan, and all participants were transitioned to a defined-contribution retirement plan.

Defined-Contribution Retirement Plan (DCRP) and ACS ERISA 403(b) Plans – The Society's 401(a) DCRP and the ACS ERISA 403(b) Plans are available to substantially all employees. The DCRP provides an employer contribution equal to 6% of base pay, plus an employer match equal to 50% of the first 6% a participant contributes to the DCRP and/or the ACS ERISA 403(b) Plan, a tax-deferred investment program. Employer contributions to the DCRP totaled $15,162,000 and $14,981,000 in 2017 and 2016, respectively.

Postretirement Medical Plan – The Society provides postretirement medical benefits to all benefit-eligible employees who were employed as of October 31, 2001, have at least five years of service, reach retirement age while employed by the Society, and are collecting retirement benefits from the defined-benefit pension plan. The postretirement medical plan is contributory with participants' contributions adjusted annually. The Plan's prescription benefit is actuarially equivalent to Medicare Part D and eligible for the federal subsidy. The Society's contributions toward the overall cost of postretirement medical insurance for both current and future eligible retirees were capped at the 2009 level.

Effective January 1, 2016, the Society adopted a Medicare Advantage Plan for eligible retirees and spouses who are at least 65 years old. The Medicare Advantage Plan continues to provide eligible retirees with an option for medical coverage.

The following tables present the change in benefit obligations, change in plan assets, and the composition of accrued benefit costs and amounts recognized in the accompanying consolidated statements of financial position and consolidated statements of activities for the years ended December 31, 2017 and 2016 (in thousands).

Defined-Benefit Pension and Postretirement Medical Plans

	Defined-Benefit Pension Plan		Postretirement Medical Plan	
	2017	2016	2017	2016
Change in Benefit Obligation				
Benefit Obligation at January 1	$ 699,288	$ 693,287	$ 46,839	$ 46,529
Service Cost	-	-	608	662
Interest Cost	28,195	29,727	1,843	1,941
Plan Participants' Contributions	-	-	1,755	1,673
Actuarial Loss	37,060	11,495	1,185	135
Benefits and Administrative Fees Paid	(36,942)	(35,221)	(4,573)	(4,101)
Benefit Obligation at December 31	727,601	699,288	47,657	46,839
Change in Fair Value of Plan Assets				
Plan Assets at January 1	588,840	565,011	-	-
Actual Return on Plan Assets	82,702	47,050	-	-
Employer Contributions	12,000	12,000	2,817	2,428
Plan Participants' Contributions	-	-	1,756	1,673
Benefits and Administrative Fees Paid	(36,942)	(35,221)	(4,573)	(4,101)
Plan Assets at December 31	646,600	588,840	-	-
Funded Status	$ (81,001)	$ (110,448)	$ (47,657)	$ (46,839)
Amounts Recognized in the Consolidated Statements of Financial Position				
Current Liabilities	$ -	$ -	$ (3,119)	$ (3,137)
Noncurrent Liabilities	(81,001)	(110,448)	(44,538)	(43,702)
Net Liability at December 31	$ (81,001)	$ (110,448)	$ (47,657)	$ (46,839)

	Defined-Benefit Pension Plan		Postretirement Medical Plan	
	2017	2016	2017	2016
Amounts Recognized in Unrestricted Net Assets not yet in Net Periodic Costs				
Unrecognized Loss	$ 227,219	$ 246,467	$ 29,362	$ 30,945
Unrecognized Prior Service Credit	-	-	(8,937)	(15,613)
Net Recognized in Unrestricted Net Assets	$ 227,219	$ 246,467	$ 20,425	$ 15,332

The estimated net actuarial loss for the defined-benefit pension plan that will be amortized from non-operating income for 2018 is $6,312,000.

The estimated net actuarial loss and prior service credit for the postretirement medical plan that will be amortized from non-operating income for 2018 are $2,673,000 and $(3,028,000), respectively.

Components of Net Periodic Benefit Cost (Credits) for the Year Ended December 31 (in thousands):

	Defined-Benefit Pension Plan		Postretirement Medical Plan	
	2017	2016	2017	2016
Service Cost	$ -	$ -	$ 608	$ 662
Interest Cost	28,195	29,727	1,843	1,941
Expected Return on Plan Assets	(33,366)	(33,424)	-	-
Amortization of Prior Service Credits	-	-	(6,676)	(6,675)
Amortization of Net Actuarial Loss	6,972	7,038	2,769	3,073
Net Periodic Benefit Cost (Credits)	$ 1,801	$ 3,341	$ (1,456)	$ (999)

Other Changes in Plan Assets and Benefit Obligations Recognized in Non-Operating Activities:

The following table provides information for other changes in plan assets and benefit obligations recognized in unrestricted net assets for the years ended December 31 (in thousands):

	Defined-Benefit Pension Plan		Postretirement Medical Plan	
	2017	2016	2017	2016
Net Actuarial (Gain) Loss	$ (12,276)	$ (2,132)	$ 1,185	$ 135
Amortization of Prior Service Credit	-	-	6,676	6,675
Amortization of Net Actuarial Loss	(6,972)	(7,038)	(2,769)	(3,073)
Total Recognized in Unrestricted Net Assets	$ (19,248)	$ (9,170)	$ 5,092	$ 3,737

Assumptions

Assumptions used to determine benefit obligations at December 31 are as follows:

	Defined-Benefit Pension Plan		Postretirement Medical Plan	
	2017	2016	2017	2016
Discount Rate	3.62%	4.14%	3.59%	4.07%
Mortality Projection Scales	MP-2017	MP-2016	MP-2017	MP-2016

Assumptions used to determine net periodic benefit cost for the years ended December 31 are as follows:

	Defined-Benefit Pension Plan		Postretirement Medical Plan	
	2017	2016	2017	2016
Discount Rate	4.14%	4.40%	4.07%	4.31%
Expected Return on Plan Assets	5.75%	6.00%	N/A	N/A

The Society determines the long-term expected rate of return on plan assets by examining historic capital market returns, correlations between asset classes, and the Plan's normal asset allocation. Current and near-term market factors such as inflation and interest rates are then evaluated to arrive at the expected return on plan assets. Peer group and benchmarking data are also reviewed to ensure a reasonable return assumption.

Plan Assets

The Society's defined-benefit pension plan asset allocation as of December 31, by asset category, is as follows:

	Plan Assets	
	2017	2016
Domestic Equities	16%	21%
Foreign Equities	9%	10%
Fixed Income Securities	75%	69%
Total	100%	100%

The Society utilizes a total return on investment approach based on modern portfolio theory. Multiple asset classes are implemented in order to obtain the benefits of diversification and maximize long-term total return for a given level of risk. Risk tolerance is developed by reviewing the funded status of the Plan, the duration of the Plan liabilities, the income and liquidity requirements, legal constraints, and the financial condition of the Society.

The investment portfolio is comprised of a diversified combination of domestic equities, foreign equities, and fixed income securities. The investment policy incorporates a liability-driven investment approach that focuses on the funded status of the Plan and seeks to match the duration of the assets with that of the liabilities. As the Plan's funded status improves, asset allocation will be directed more toward long duration fixed income securities. The allocation among domestic equities, foreign equities, and fixed income securities is determined by the funded status of the Plan, prevailing market conditions, and relative valuations between asset classes. The Plan's financial condition is monitored on an ongoing basis by means of monthly funding reviews, quarterly investment portfolio reviews, an annual independent actuarial valuation, and periodic asset/liability studies.

The Society utilizes the best information available in measuring fair value of the Plan's assets and liabilities, and they are classified based on the lowest level of input that is significant to the fair value measurement. The fair value measurement principles for the Plan's assets are consistent with those disclosed in Note 2.

The following tables summarize valuations of the Society's defined-benefit pension plan assets according to the fair value hierarchy as of December 31, 2017 and 2016 (in thousands):

December 31, 2017	Investments Measured at NAV (1)	Level 1	Level 2	Level 3	Total
Cash Equivalents	$ 19,805	$ -	$ 4,461	$ -	$ 24,266
Fixed Income:					
U.S. government and agencies	-	148,770	6,969	-	155,739
Foreign	-	33	60,686	-	60,719
Corporate and Other	53,394	-	213,313	-	266,707
Equity:					
Domestic	-	35,482	66,277	-	101,759
Foreign	41,181	4,325	15,704	-	61,210
Unsettled Transactions, Net	-	(23,800)	-	-	(23,800)
Net Plan Assets	$ 114,380	$ 164,810	$ 367,410	$ -	$ 646,600

December 31, 2016	Investments Measured at NAV (1)	Level 1	Level 2	Level 3	Total
Cash Equivalents	$ 9,027	$ -	$ 5,531	$ -	$ 14,558
Fixed Income:					
U.S. government and agencies	-	143,768	3,975	-	147,743
Foreign	-	-	53,913	-	53,913
Corporate and Other	35,903	-	205,670	-	241,573
Equity:					
Domestic	-	42,795	77,039	-	119,834
Foreign	36,422	3,955	21,115	-	61,492
Unsettled Transactions, Net	-	(50,273)	-	-	(50,273)
Net Plan Assets	$ 81,352	$ 140,245	$ 367,243	$ -	$ 588,840

(1) Certain investments are measured at fair value using NAV as a practical expedient and have not been classified in the fair value hierarchy. The NAV amounts have been presented to permit reconciliation of the fair value hierarchy to the amounts reported as total plan assets.

Unsettled transactions consist primarily of purchases and sales of securities pending settlement of $59,204,000 and $35,404,000, respectively, as of December 31, 2017, and $79,823,000 and $29,550,000, respectively, as of December 31, 2016.

Liquidity and Certain Strategies

Plan assets, inclusive of investments stated at NAV as a practical expedient, have redemption liquidity of less than 30 days with no significant notice periods. The Plan has no investment funding commitments.

Derivatives

The Plan's fixed income investment manager may employ derivatives in order to manage market risks, arbitrage mispricing of securities, or replicate long or short positions in a cost-effective manner. In no instance are derivatives used to speculate or leverage positions.

The following tables provide the fair value of plan asset derivative agreements as of December 31, 2017 and 2016, and gains and losses for the years ended December 31, 2017 and 2016 (in thousands):

	2017		
	Assets	Liabilities	Gains/(Losses)
Derivatives:			
Foreign Currency Contracts	$ 26,118	$ (26,479)	$ (361)
Credit Default Swaps	1,850	(754)	1,059
Interest Rate Swaps	2,974	(219)	5,228
Financial Futures and other	3,323	(4,495)	(1,245)
Total Derivatives	$ 34,265	$ (31,947)	$ 4,681

	2016		
	Assets	Liabilities	Gains/(Losses)
Derivatives:			
Foreign Currency Contracts	$ 8,538	$ (8,463)	$ 75
Credit Default Swaps	993	(731)	316
Interest Rate Swaps	7,859	(199)	15,413
Financial Futures and other	5,924	(7,510)	(1,227)
Total Derivatives	$ 23,314	$ (16,903)	$ 14,577

As of December 31, 2017 and 2016, the foreign currency contracts had a notional value of $26,172,000 and $8,458,000, respectively.

The total notional amount of credit default swap contracts for buy protection as of December 31, 2017 amounted to $43,600,000. There were no buy protection credit default swaps as of December 31, 2016. The notional amount related to sell protection amounted to $48,326,000 and $79,148,000 as of December 31, 2017 and 2016, respectively.

The notional amount of interest rate swap contracts that pay based on fixed rates at December 31, 2017 and 2016 was $99,700,000 and $175,700,000, respectively. There were no notional amounts related to interest rate swaps that pay based on floating rates for 2017 or 2016. Financial futures had a notional value of $0 and $59,376,000 at December 31, 2017 and December 31, 2016, respectively.

The Plan does not have significant positions with any one counterparty.

<u>Cash Contribution</u> **-** The Society expects to contribute $12,000,000 to the Plan in 2018.

<u>Projected Benefit Payments</u> **-** The Society expects the Plans to make the following benefit payments in future years (in thousands):

	Defined-Benefit Pension Payments	Postretirement Medical Payments
Fiscal year 2018	$ 38,119	$ 3,122
Fiscal year 2019	39,220	3,144
Fiscal year 2020	40,413	3,149
Fiscal year 2021	41,098	3,125
Fiscal year 2022	41,945	3,093
Fiscal years 2023–2027	218,023	15,181

7. RESTRICTED NET ASSETS

Temporarily restricted net assets at December 31 were available for the following programs (in thousands):

	2017	2016
Petroleum Research Fund	$ 506,102	$ 450,185
ACS Programs	49,324	41,053
Total Temporarily Restricted Net Assets	$ 555,426	$ 491,238

Temporarily restricted net assets were released from restriction for the following programs by incurring expenses satisfying the purposes specified by the donors during the years ended December 31 (in thousands):

	2017	2016
Petroleum Research Fund	$ 21,830	$ 24,726
ACS Programs	6,386	6,945
Total Net Assets Released from Restriction	$ 28,216	$ 31,671

Permanently restricted net assets are invested in perpetuity. The income generated by these assets is used to support donor-specified programs or general activities of the Society. At December 31, the Society held the following permanently restricted net assets, the income from which supports the following programs (in thousands):

	2017	2016
Petroleum Research Fund	$ 72,500	$ 72,500
ACS Programs	70,030	67,054
Total Permanently Restricted Net Assets	$ 142,530	$ 139,554

8. ENDOWMENTS

The Society's Board of Directors has evaluated the Uniform Prudent Management of Institutional Funds Act (UPMIFA) and has decided to continue to require the preservation of the historical cost of the original gift, as of the gift date, of the donor-restricted endowment funds absent explicit donor stipulations to the contrary. As a result, the Society classifies as permanently restricted the original value of gifts donated to permanent endowments, the original value of subsequent gifts to permanent endowments, and accumulations to permanent endowments made in accordance with explicit donor instructions stipulated in the gift instruments. The remaining portions of the donor-restricted endowment funds that are not classified as permanently restricted are classified as temporarily restricted until those amounts are made available for expenditure in a manner consistent with the donor gift instrument, the program operating budgets, and the standard of prudence prescribed by UPMIFA. In accordance with UPMIFA, the Society considers the following factors in making a determination as to the preservation and use of the donor-restricted endowment funds: the donor gift instrument; the duration and preservation of the fund; the purposes of the Society and the fund; general economic conditions; the effect of inflation and deflation; expected total return from income and the appreciation of investments; other resources of the Society; and the Society's investment policies.

Donor-restricted endowment funds are invested in accordance with the Society's investment policies. The investment policies are intended to assure the Society's Board of Directors and the Board Committee on Pensions and Investments that the assets of the Society are being invested in accordance with the best long-term interests of the Society and its donors, given the following considerations: the Society's risk tolerance; the need to obtain real, or inflation-adjusted, growth in its investments; and the requirement for current income to support programs and activities.

The Society adopted investment policies for endowment assets that attempt to generate a sufficient level of funding for programs supported by endowments. Endowment assets include those assets of donor-restricted funds that the Society must hold in perpetuity or for a donor-specified period or purpose. Under the policies, as approved by the

Board Committee on Pensions and Investments, endowment assets are invested in a manner intended to provide sufficient inflation-adjusted returns to support annual spending policies and achieve real growth in the asset base while maintaining a moderate level of investment risk.

To satisfy its long-term rate-of-return objectives, the Society relies on a total return strategy in which investment returns are achieved through both capital appreciation (realized and unrealized) and current yield (interest and dividends). The Society targets a diversified asset allocation that places a greater emphasis on equity-based investments to achieve its long-term return objectives within prudent risk constraints.

Funds are appropriated from the endowment funds when expenses are approved by management. Expenditures of endowment assets are recorded in accordance with the explicit donor instructions stipulated in the gift instruments.

The Society has 32 donor-restricted endowment funds established for a variety of purposes. As required by U.S. generally accepted accounting principles, net assets associated with the donor-restricted endowment funds are classified and reported based on the existence or absence of donor-imposed restrictions. In accordance with these principles, the Society has permanently and temporarily restricted endowment funds.

The following table shows the beginning balance of the Society's endowment funds as of January 1, changes in endowment net assets for the year, and ending balances as of December 31, 2017 and 2016, respectively (in thousands):

	Permanently Restricted	Temporarily Restricted	Total
Endowment Net Assets as of January 1, 2017	$ 139,554	$ 485,420	$ 624,974
Investment Return			
Investment Income	-	12,814	12,814
Net Gains	2,056	76,007	78,063
Total Investment Return	2,056	88,821	90,877
Contributions	920	-	920
Net Assets Released from Restriction	-	(22,919)	(22,919)
Transfer of Net Assets	-	(3,750)	(3,750)
Endowment Net Assets as of December 31, 2017	$ 142,530	$ 547,572	$ 690,102
Endowment Net Assets as of January 1, 2016	$ 138,034	$ 491,898	$ 629,932
Investment Return			
Investment Income	-	11,382	11,382
Net Gains	1,137	11,618	12,755
Total Investment Return	1,137	23,000	24,137
Contributions	383	-	383
Net Assets Released from Restriction	-	(25,869)	(25,869)
Transfer of Net Assets	-	(3,609)	(3,609)
Endowment Net Assets as of December 31, 2016	$ 139,554	$ 485,420	$ 624,974

9. COMMITMENTS AND CONTINGENCIES

Lawsuits and legal claims:

The Society is involved in various claims and legal actions arising in the ordinary course of business. Based upon information currently available, management believes the ultimate disposition of these matters will not have a material adverse effect on the Society's consolidated financial position, change in net assets, or cash flows.

Uncertain tax provisions:

The Society is subject to taxation in several jurisdictions and is currently under audit for the 2014-2016 tax years in a foreign territory, as a matter of conducting ordinary business activities in the country. The foreign tax authority has challenged the Society's position on its tax filing. The Society has appealed the tax rulings. Due to the uncertainty associated with the tax appeals, the Society has not recorded a provision in the consolidated financial statements.

It is possible that at some future date, liabilities resulting from the audits could be incurred. Management intends to pursue all administrative and judicial remedies necessary to resolve the matter. Based on current legislation, and after consultation with outside tax advisors, management believes the ultimate resolution of the audits will not have a material adverse impact on its financial condition taken as a whole.

10. SUBSEQUENT EVENTS

The Society has performed an evaluation of subsequent events through March 8, 2018, which is the date the consolidated financial statements were available to be issued, noting no adjustments or disclosures were required to the consolidated financial statements.