

Annual Report | October 31, 2013

Ticker Symbols:

Class A LCEMX*
Class C LCECX*
Class Y LCYEX*



^{*} Class A, C, and Y shares were first publicly offered on February 5, 2013.



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President's Letter

Dear Shareowner,

When we look at the U.S. economy heading into the final quarter of 2013, we continue to see slow, but steady, growth. Employment has also been rising steadily, but only modestly. Consumer incomes, savings, wealth, and debt-servicing capacity have been solid buttresses for the recovering housing and auto industries. Industrial activity is growing only modestly, but current corporate profits are generally solid and balance sheets appear able to support needed capital spending and dividend* payouts. The scaled-back "fiscal cliff" tax increases and spending cuts have meaningfully cut the budget deficit without driving the economy into recession. In addition, we feel that continuing slack in labor markets and capacity utilization offers the potential for continuing growth without bottlenecks and rising inflation.

After observing the strengthening economic trends, the Federal Reserve (the Fed) hinted that it might begin scaling back its "QE" quantitative easing program later in 2013 and could terminate its bond purchases altogether sometime in 2014. In September, however, the Fed surprised many market participants by deciding not to start scaling back QE yet. The Fed has also said that short-term interest rates are likely to remain near zero for some time to come, given that inflation remains subdued and unemployment remains too high.

As September ended, Congress had not yet passed a continuing resolution to prevent a government shutdown, nor had it raised the debt ceiling, and a quick resolution to the impasse appeared unlikely. The U.S. government's partial shutdown in October rattled the markets to a degree, but did not immediately have a significant negative impact on the economy or capital markets.

There are certainly risks and uncertainties that continue to plague the global economy as we head into the final months of the year. The European economy remains weak, though it is beginning to show signs of stabilization, and a number of countries in the emerging markets have experienced difficulties. Still, a potential ending of the European recession, continuing economic improvement in Japan in response to the new government's easing policies, and a "soft landing" of 7% growth in China could very well result in an improving global outlook over the remainder of 2013 and in 2014.

There are also geopolitical worries abroad and the aforementioned political fights at home, and while most of the widely recognized risks we've outlined may already be "priced into" the market, we believe investors should continue to expect market volatility.

Dividends are not guaranteed.

The Fed's aggressive monetary policies and fears about economic growth had helped drive long-term Treasury yields to unsustainably low levels; the return to more normal levels has resulted in disappointing returns for bond investors during the first nine months of 2013, but the stock market has delivered double-digit returns to equity investors who were willing to brave the "wall of worry".

At Pioneer, we have long advocated the benefits of staying diversified and investing for the long term. And while diversification does not assure a profit or protect against loss in a declining market, we believe there are still opportunities for prudent investors to earn attractive returns. Our advice, as always, is to work closely with a trusted financial advisor to discuss your goals and work together to develop an investment strategy that meets your individual needs, keeping in mind that there is no single best strategy that works for every investor.

Pioneer's investment teams have, since 1928, sought out attractive opportunities in global equity and bond markets, using in-depth research in an effort to identify undervalued individual securities, and using thoughtful risk management to construct portfolios which seek to balance potential risks and reward in an everchanging world.

We encourage you to learn more about Pioneer and our time-tested approach to investing by consulting with your financial advisor or visiting us online at us.pioneerinvestments.com. We greatly appreciate your trust in us, and we thank you for investing with Pioneer.

Sincerely,

Daniel K. Kingsbury

Red / Henpy

President and CEO

Pioneer Investment Management USA, Inc.

Any information in this shareowner report regarding market or economic trends or the factors influencing the Fund's historical or future performance are statements of opinion as of the date of this report. These statements should not be relied upon for any other purposes. Past performance is no guarantee of future results, and there is no guarantee that market forecasts discussed will be realized.

Portfolio Management Discussion | 10/31/13

In the following discussion, portfolio managers Hakan Aksoy and Esther Law review recent market events and describe the factors that affected the Fund's performance during the abbreviated annual reporting period between February 5, 2013, and October 31, 2013. Mr. Asksoy and Ms. Law are responsible for the day-to-day management of the Fund. Ms. Law became a portfolio manager on the Fund in September 2013, replacing Greg Saichin, who co-managed the Fund with Mr. Asksoy from its inception through July 19, 2013.

Q How did emerging market bonds and currencies perform during the period between February 5, 2013, and October 31, 2013?

A Emerging markets bonds suffered poor performance during the reporting period, as a confluence of adverse events weighed on the asset class. The primary factor pressuring returns was the fixed-income market's reaction to the possibility that the U.S. Federal Reserve (the Fed) would begin to "taper" its bond-buying program known as quantitative easing (QE). Concerns that the Fed would begin tapering QE caused U.S. Treasury yields to spike higher in May and June as prices fell. This fueled substantial outflows from asset classes such as emerging markets bonds, where investors had gravitated in 2012 and early 2013 in search of higher yields. The Fed subsequently surprised the markets with its September announcement that it would not in fact taper QE in the immediate future. While this development contributed to a rally in emerging markets debt late in the reporting period, the recovery wasn't enough to make up for the substantial ground lost during May and June.

The emerging markets were also negatively affected by slowing economic growth. While the emerging markets are expected to continue growing in 2014, it appears that the 5% growth estimates of analysts back in early 2013 will be difficult to achieve. The reduced expectation also indicates that the emerging markets' growth advantage over the developed markets is tightening, a trend that has dampened investor enthusiasm for the region.

The outflows from emerging markets financial assets during the period contributed to a decline in the value of local currencies relative to the U.S. dollar (USD). When investors buy or sell financial assets in an emerging market, they must also buy or sell the currency, meaning that the rapid asset

outflows during the spring and summer also led to selling pressure on the local currencies. Local currency bonds were therefore hit hard in two ways: first, by the declining value of the bonds themselves, and then by the declining value of the currencies.

Taken together, these factors caused the Fund's benchmark, the JP Morgan Government Bond Index-Emerging Markets Global Diversified Index (the JP Morgan Index), to finish the reporting period with a return of -7.52%. The JP Morgan Index's return in local currency terms was even lower, reflecting the downturn in emerging markets currencies during the period.

While local currency bonds underperformed over the short term, we continue to have a positive long-term view on the asset class, as their yields tend to be higher than those of USD-denominated debt, which increases the total return potential of local currency debt over time. In addition, emerging markets currencies have the latitude for longer-term appreciation against developed market currencies due to the superior growth rates of the underlying emerging economies. Local currency bonds also provide an important source of diversification* for investors who have the majority of their assets in USD-denominated debt.

Q How did the Fund perform during the abbreviated annual reporting period ended October 31, 2013?

A From its inception date through the end of the annual reporting period on October 31, 2013, Pioneer Emerging Markets Local Currency Debt Fund's Class A shares returned –7.37% at net asset value, while the Fund's benchmark, the JP Morgan Index, returned –7.52% (from February 1, 2013, through October 31, 2013). In addition, during the six-month period ended October 31, 2013, the average return of the 95 mutual funds in Lipper's Emerging Markets Local Currency Debt Funds category was –8.26%, and the average return of the 298 mutual funds in Morningstar's Emerging Markets Bond Funds category was –6.61%.

Q Could you please review the Fund's investment strategy?

A In managing the Fund, we use a multifaceted approach to gain portfolio exposure to the local currency emerging debt markets via bonds issued by government, quasi-government, and corporate entities. We combine a top-down strategy that analyzes countries and sectors with a bottom-up approach highlighted by rigorous individual security analysis. We have the flexibility to invest the Fund across the full range of the local currency emerging bond markets, which gives us the ability to adjust the portfolio's allocations as market conditions and economic cycles change.

^{*} Diversification does not assure a profit nor protect against loss in a declining market.

- **Q** How did you position the Fund's portfolio during the reporting period ended October 31, 2013, and how did the positioning affect the Fund's performance?
- A In response to the challenging environment, we adopted a highly selective approach to managing the Fund during the abbreviated annual reporting period. While the Fund finished the period with a negative absolute return, our approach helped to cushion some of the potential downside.

The portfolio's geographic weightings provide an illustration of how we were able to add value through active management. During the past six months ended October 31, 2013, investors gravitated away from emerging economies where deteriorating trade balances have increased the countries' dependence on foreign capital. Foremost among these are the so-called "Fragile Five" nations of Brazil, Turkey, Indonesia, South Africa, and India, all of which underperformed during the downturn. Our approach has been to avoid or underweight the portfolio to such countries, while taking larger positions in those nations with healthier finances. The majority of the healthier economies are located in Eastern Europe and Asia, which has formed the basis for the Fund's overweight positions in Poland, the Philippines, and Korea. This approach has had a positive impact on benchmark-relative performance since the Fund's inception.

Another aspect of our selectivity was the decision to underweight the portfolio to countries in which a higher incidence of public protests could ultimately lead to more populist government policies (or, in other words, policies designed to win votes rather than to achieve longer-term fiscal improvements). Brazil and Turkey are prime examples. Instead, we tilted the portfolio toward countries, such as Mexico, where public policy is geared more toward productive, longer-term reforms. We believe this approach highlights the potential value of employing an active management approach to investing in the emerging markets.

Our conservative approach also extended to the Fund's duration positioning during the period. (Duration is a measure of a portfolio's price sensitivity to changes in interest rates.) We kept the portfolio's duration below that of the benchmark JP Morgan Index, and that turned out to be a positive factor during a period of generally poor market performance.

One way we achieved the portfolio's lower duration was by holding a substantial weighting in emerging markets corporate bonds, the higher yields of which translated into less interest-rate sensitivity. As of October 31, 2013, the portfolio had nearly 40% of its total net assets invested in emerging markets corporates. We favor this segment of the market because yields typically are higher than those available on government bonds; yet, in many cases, the underlying financial strength of the corporations issuing the bonds is as good, or better, than the governments issuing debt. Emerging companies generally are exhibiting strong profit margins and improving the quality of their balance sheets, which is contributing to a low incidence of defaults. Emerging corporates have outperformed in 2013, and so that aspect of the Fund's positioning was a positive for performance during the annual reporting period. In addition, we tilted that portion of the Fund's portfolio toward shorter-term issues, which helped performance during a period that saw shorter-dated bonds generally outperform.

Q What is your outlook for emerging markets debt?

A We believe emerging markets bonds in general — and local currency debt in particular — offer a large and growing opportunity set for fixed-income investors. In addition, the asset class represents one of the few remaining areas in the global bond markets where investors can still potentially earn a decent yield.

At the same time, however, we caution investors to be prepared for additional market volatility. The threat of tapering QE may have been taken off the table temporarily following the September Fed meeting, but it is sure to revive at some point in the coming year — an event that is likely to create short-term market disruptions. Still, we believe the initial shock of the tapering threat has worn off, meaning that the worst of the downside potential for both emerging markets bonds and currencies is likely behind us.

In this uncertain environment, we believe we can continue to add value for the Fund's shareholders through our diversified, actively managed, and long-term investment approach. Please refer to the Schedule of Investments on pages 16–20 for a full listing of Fund securities.

Investing in foreign and/or emerging markets securities involves risks relating to interest rates, currency exchange rates, economic, and political conditions.

The Fund is non-diversified, which means that it can invest a large percentage of its assets in the securities of any one or more issuers. This increases the Fund's potential risk exposure.

The portfolio may invest a substantial amount of its assets in issuers located within a specific region, and is, therefore, more susceptible to adverse developments affecting those regions.

Investments in high-yield or lower-rated securities are subject to greater-thanaverage price volatility, illiquidity and possibility of default.

When interest rates rise, the prices of fixed-income securities in the Fund will generally fall. Conversely, when interest rates fall, the prices of fixed-income securities in the Fund will generally rise.

Investments in the Fund are subject to possible loss due to the financial failure of issuers of underlying securities and their inability to meet their debt obligations.

Prepayment risk is the chance that an issuer may exercise its right to prepay its security, if falling interest rates prompt the issuer to do so. Forced to reinvest the unanticipated proceeds at lower interest rates, the Fund would experience a decline in income and lose the opportunity for additional price appreciation.

At times, the Fund's investments may represent industries or industry sectors that are interrelated or have common risks, making it more susceptible to any economic, political, or regulatory developments or other risks affecting those industries and sectors.

The portfolio may invest in derivative securities, which may include futures and options. These types of instruments can increase price fluctuation.

These risks may increase share price volatility.

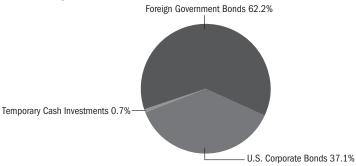
Past performance is no guarantee of future results, and there is no guarantee that market forecasts discussed will be realized.

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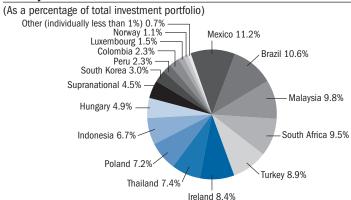
Portfolio Summary | 10/31/13

Portfolio Diversification

(As a percentage of total investment portfolio)



Country Diversification



10 Largest Holdings

(As a	percentage of total debt holdings)*	
1.	Thailand Government Bond, 3.625%, 6/16/23	5.34%
2.	Turkey Government Bond, 7.0%, 10/1/14	5.29
3.	Export-Import Bank of Korea, 7.55%, 8/27/15	2.95
4.	South Africa Government Bond - CPI Linked, 2.75%, 1/31/22	2.89
5.	Gazprombank OJSC Via GPB Eurobond Finance Plc, 8.617%, 12/15/15	2.80
6.	Russian Railways via RZD Capital Plc, 8.3%, 4/2/19	2.79
7.	Federal Grid Co OJS via Federal Grid Finance, Ltd., 8.446%, 3/13/19	2.77
8.	America Movil SAB de CV, 6.45%, 12/5/22	2.68
9.	Brazil Letras do Tesouro Nacional, 7/1/16	2.48
10.	Eskom Holdings SOC, Ltd., 10.0%, 1/25/23	2.48

^{*} This list excludes temporary cash investments and derivative instruments. The portfolio is actively managed, and current holdings may be different. The holdings listed should not be considered recommendations to buy or sell any security listed.

Prices and Distributions | 10/31/13

Net Asset Value per Share

Class	10/31/13	2/5/13*
A	\$9.07	\$9.98
C	\$9.06	\$9.97
Υ	\$9.08	\$9.98

Distributions per Share: 2/5/13-10/31/13

Class	Dividends	Short-Term Capital Gains	Long-Term Capital Gains	Tax Return of Capital
Α	\$0.1477	\$ -	\$ -	\$0.0423
С	\$0.1126	\$ -	\$ -	\$0.0423
Y	\$0.1593	\$ -	\$ -	\$0.0423

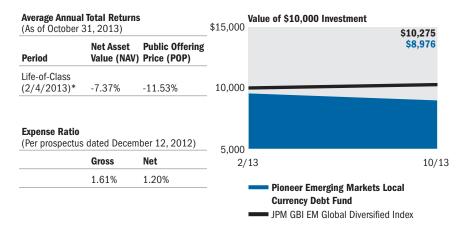
JP Morgan Government Bond Index—Emerging Markets Global Diversified Index is an unmanaged, comprehensive, global, local emerging markets index, and consists of regularly traded, liquid-fixed-rate, domestic currency government bonds to which international investors can gain exposure. Index returns are calculated monthly, assume reinvestment of dividends and, unlike Fund returns, do not reflect any fees, expenses or sales charges. It is not possible to invest directly in an index.

The index defined here pertains to the "Value of \$10,000 Investment" and "Value of \$5 Million Investment" charts on pages 11–13.

^{*} Class A, C, and Y shares were first publicly offered on February 5, 2013.

Investment Returns

The mountain chart on the right shows the change in value of a \$10,000 investment made in Class A shares of Pioneer Emerging Markets Local Currency Debt Fund at public offering price during the periods shown, compared to that of the JP Morgan Government Bond Index-Emerging Markets Global Diversified Index.



Call 1-800-225-6292 or visit us.pioneerinvestments.com for the most recent month-end performance results. Current performance may be lower or higher than the performance data quoted.

The performance data quoted represents past performance, which is no guarantee of future results. Investment return and principal value will fluctuate, and shares, when redeemed, may be worth more or less than their original cost.

NAV results represent the percent change in net asset value per share. Returns would have been lower had sales charges been reflected. POP returns reflect deduction of maximum 4.50% sales charge. All results are historical and assume the reinvestment of dividends and capital gains. Other share classes are available for which performance and expenses will differ.

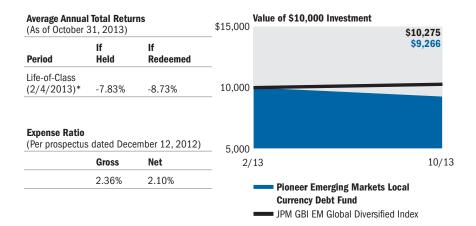
Performance results reflect any applicable expense waivers in effect during the periods shown. Without such waivers Fund performance would be lower. Waivers may not be in effect for all funds. Certain fee waivers are contractual through a specified period. Otherwise, fee waivers can be rescinded at any time. See the prospectus and financial statements for more information.

The net expense ratio reflects contractual expense limitations currently in effect through March 1, 2015, for Class A shares. There can be no assurance that Pioneer will extend the expense limitations beyond such time. Please see the prospectus and financial statements for more information. The performance table and graph do not reflect the deduction of fees and taxes that a shareowner would pay on Fund distributions or the redemption of Fund shares.

^{*} Class A shares were first publicly offered on February 5, 2013.

Investment Returns

The mountain chart on the right shows the change in value of a \$10,000 investment made in Class C shares of Pioneer Emerging Markets Local Currency Debt Fund during the periods shown, compared to that of the JP Morgan Government Bond Index-Emerging Markets Global Diversified Index.



Call 1-800-225-6292 or visit us.pioneerinvestments.com for the most recent month-end performance results. Current performance may be lower or higher than the performance data quoted.

The performance data quoted represents past performance, which is no guarantee of future results. Investment return and principal value will fluctuate, and shares, when redeemed, may be worth more or less than their original cost.

Class C shares held for less than one year are also subject to a 1% contingent deferred sales charge (CDSC). "If Held" results represent the percent change in net asset value per share. Returns would have been lower had sales charges been reflected. All results are historical and assume the reinvestment of dividends and capital gains. Other share classes are available for which performance and expenses will differ.

Performance results reflect any applicable expense waivers in effect during the periods shown. Without such waivers Fund performance would be lower. Waivers may not be in effect for all funds. Certain fee waivers are contractual through a specified period. Otherwise, fee waivers can be rescinded at any time. See the prospectus and financial statements for more information.

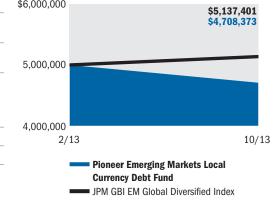
The net expense ratio reflects contractual expense limitations currently in effect through March 1, 2015, for Class C shares. There can be no assurance that Pioneer will extend the expense limitations beyond such time. Please see the prospectus and financial statements for more information. The performance table and graph do not reflect the deduction of fees and taxes that a shareowner would pay on Fund distributions or the redemption of Fund shares.

^{*} Class C shares were first publicly offered on February 5, 2013.

Investment Returns

The mountain chart on the right shows the change in value of a \$5 million investment made in Class Y shares of Pioneer Emerging Markets Local Currency Debt Fund during the periods shown, compared to that of the JP Morgan Government Bond Index-Emerging Markets Global Diversified Index.

| Average Annual Total Returns (As of October 31, 2013) | | If | Period | Held | Redeemed | | Life-of-Class (2/4/2013)* -7.15% | -7.15% | | -7.15% |



Value of \$5 Million Investment

Expense Ratio

(Per prospectus dated December 12, 2012)

Gross	Net	
1.35%	0.85%	

Call 1-800-225-6292 or visit us.pioneerinvestments.com for the most recent month-end performance results. Current performance may be lower or higher than the performance data quoted.

The performance data quoted represents past performance, which is no guarantee of future results. Investment return and principal value will fluctuate, and shares, when redeemed, may be worth more or less than their original cost.

Class Y shares are not subject to sales charges and are available for limited groups of eligible investors, including institutional investors. All results are historical and assume the reinvestment of dividends and capital gains. Other share classes are available for which performance and expenses will differ.

Performance results reflect any applicable expense waivers in effect during the periods shown. Without such waivers Fund performance would be lower. Waivers may not be in effect for all funds. Certain fee waivers are contractual through a specified period. Otherwise, fee waivers can be rescinded at any time. See the prospectus and financial statements for more information.

The net expense ratio reflects contractual expense limitations currently in effect through March 1, 2015, for Class Y shares. There can be no assurance that Pioneer will extend the expense limitations beyond such time. Please see the prospectus and financial statements for more information. The performance table and graph do not reflect the deduction of fees and taxes that a shareowner would pay on Fund distributions or the redemption of Fund shares.

^{*} Class Y shares were first publicly offered on February 5, 2013.

Comparing Ongoing Fund Expenses

As a shareowner in the Fund, you incur two types of costs:

- (1) ongoing costs, including management fees, distribution and/or service (12b-1) fees, and other Fund expenses; and
- (2) transaction costs, including sales charges (loads) on purchase payments.

This example is intended to help you understand your ongoing expenses (in dollars) of investing in the Fund and to compare these costs with the ongoing costs of investing in other mutual funds. The example is based on an investment of \$1,000 at the beginning of the Fund's latest six-month period and held throughout the six months.

Using the Tables

Actual Expenses

The first table below provides information about actual account values and actual expenses. You may use the information in this table, together with the amount you invested, to estimate the expenses that you paid over the period as follows:

- (1) Divide your account value by \$1,000 Example: an \$8,600 account value ÷ \$1,000 = 8.6
- (2) Multiply the result in (1) above by the corresponding share class's number in the third row under the heading entitled "Expenses Paid During Period" to estimate the expenses you paid on your account during this period.

Expenses Paid on a \$1,000 Investment in Pioneer Emerging Markets Local Currency Debt Fund

Based on actual returns from May 1, 2013, through October 31, 2013.

Share Class	Α	С	Υ
Beginning Account Value on 5/1/13	\$1,000.00	\$1,000.00	\$1,000.00
Ending Account Value (after expenses) on 10/31/13	\$918.04	\$914.38	\$919.31
Expenses Paid During Period*	\$5.41	\$9.02	\$4.11

^{*} Expenses are equal to the Fund's annualized net expense ratio of 1.12%, 1.87% and 0.85% for Class A, Class C and Class Y shares, respectively, multiplied by the average account value over the period, multiplied by 184/365 (to reflect the partial year period).

Hypothetical Example for Comparison Purposes

The table below provides information about hypothetical account values and hypothetical expenses based on the Fund's actual expense ratio and an assumed rate of return of 5% per year before expenses, which is not the Fund's actual return. The hypothetical account values and expenses may not be used to estimate the actual ending account balance or expenses you paid for the period.

You may use this information to compare the ongoing costs of investing in the Fund and other funds. To do so, compare this 5% hypothetical example with the 5% hypothetical examples that appear in the shareholder reports of the other funds.

Please note that the expenses shown in the tables are meant to highlight your ongoing costs only and do not reflect any transaction costs, such as sales charges (loads) that are charged at the time of the transaction. Therefore, the table below is useful in comparing ongoing costs only and will not help you determine the relative total costs of owning different funds. In addition, if these transaction costs were included, your costs would have been higher.

Expenses Paid on a \$1,000 Investment in Pioneer Emerging Markets Local Currency Debt Fund

Based on a hypothetical 5% return per year before expenses, reflecting the period from May 1, 2013, through October 31, 2013.

Share Class	Α	С	Υ
Beginning Account Value on 5/1/13	\$1,000.00	\$1,000.00	\$1,000.00
Ending Account Value (after expenses) on 10/31/13	\$1,019.56	\$1,015.78	\$1,020.92
Expenses Paid During Period*	\$5.70	\$9.50	\$4.33

^{*} Expenses are equal to the Fund's annualized net expense ratio of 1.12%, 1.87% and 0.85% for Class A, Class C and Class Y shares, respectively, multiplied by the average account value over the period, multiplied by 184/365 (to reflect the partial year period).

Schedule of Investments \mid 10/31/13

Princi Amou	ipal int (\$)	S&P/Moody's Ratings (unaudited)		Val	ue
RUB	12,000,000	BBB/Baa1	CORPORATE BONDS — 36.5% TRANSPORTATION — 2.8% Railroads — 2.8% Russian Railways via RZD Capital Plc, 8.3%, 4/2/19	\$	378,026
			Total Transportation	\$	378,026
BRL	500,000	NR/Ba2	FOOD, BEVERAGE & TOBACCO — 1.4% Agricultural Products — 1.4% Cosan Luxembourg SA, 9.5%,	•	100.110
			3/14/18	\$	199,110
			Total Food, Beverage & Tobacco	\$	199,110
TRY BRL	520,000 700,000	NR/Baa2 BBB-/Baa3	BANKS — 14.7% Diversified Banks — 14.7% Akbank TAS, 7.5%, 2/5/18 Banco ABC Brasil SA, 8.5%,	\$	239,529
DILL	700,000	DDD-/ Daas	3/28/16		285,018
BRL	300,000	BBB/Baa2	Banco Santander Brasil SA Cayman Islands, 8.0%, 3/18/16		125,506
CLP	50,000,000	A/Aa3	Banco Santander Chile, 6.5%, 9/22/20		97,023
RUB	13,000,000	NR/Aa3	Export-Import Bank of Korea, 7.55%, 8/27/15		399,567
RUB	12,000,000	NR/Baa3	Gazprombank OJSC Via GPB Eurobond Finance Plc, 8.617%, 12/15/15		378,961
NGN	50,000,000	AAA/NR	International Bank for Reconstruction & Development, 10.0%, 10/28/15		314,861
BRL	400,000	NR/Baa2	Itau Unibanco Holding SA, 10.5%, 11/23/15		177,185
				\$:	2,017,650
			Total Banks	\$:	2,017,650
			DIVERSIFIED FINANCIALS — 8.5% Other Diversified Financial Services — 8.5%		
BRL	700,000	NR/Baa2	Banco Safra SA, 10.25%, 8/8/16	\$	299,112
ZAR	6,600,000	A-/NR	Development Bank of Southern Africa, Ltd., 12/31/27		191,688
PLN	870,000	AAA/Aaa	European Investment Bank, 4.25%, 10/25/22		294,334
RUB	12,000,000	BBB/Baa3	Federal Grid Co OJS via Federal Grid Finance, Ltd., 8.446%, 3/13/19		375,222
			and I manot, Eta., 0.77070, 0/ 10/ 10	\$	1,160,356
			Total Diversified Financials	\$	1,160,356

	cipal unt (\$)	S&P/Moody's Ratings (unaudited)		Va	lue
			TELECOMMUNICATION SERVICES — 3.5% Integrated Telecommunication Services — 0.9%		
BRL	300,000	BBB-/Baa3	Oi SA, 9.75%, 9/15/16	\$	120,915
MXN	5,000,000	A-/A2	Wireless Telecommunication Services — 2.6% America Movil SAB de CV, 6.45%, 12/5/22	\$	362,718
			Total Telecommunication Services	\$	483,633
ZAR ZAR	3,000,000	NR/NR BBB/Baa3	UTILITIES – 5.6% Electric Utilities – 3.3% Eskom Holdings SOC, Ltd., 10.0%, 1/25/23 Eskom Holdings SOC, Ltd.,	\$	335,544
			12/31/18	\$	125,371
СОР	560,000,000	BBB/NR	Independent Power Producers & Energy Traders — 2.3% Emgesa SA ESP, 8.75%, 1/25/21 Total Utilities	\$ \$	312,530 773,445
			TOTAL CORPORATE BONDS	<u>_</u>	
			(Cost \$5,734,582)	\$	5,012,220
			FOREIGN GOVERNMENT BONDS — 61.3%		
BRL	250,000	BBB/Baa2	Brazil Letras do Tesouro Nacional,		
BRL			7/1/15	\$	94,148
DI/L	1,000,000	A-/Baa2		\$	94,148 336,579
HUF	1,000,000 30,000,000	A-/Baa2 BB/Ba1	7/1/15 Brazil Letras do Tesouro Nacional,	\$	
		,	7/1/15 Brazil Letras do Tesouro Nacional, 7/1/16 Hungary Government Bond,	\$	336,579
HUF	30,000,000	BB/Ba1	7/1/15 Brazil Letras do Tesouro Nacional, 7/1/16 Hungary Government Bond, 6.75%, 2/24/17 Hungary Government Bond,	\$	336,579 148,139
HUF HUF HUF	30,000,000	BB/Ba1 BB/Ba1	7/1/15 Brazil Letras do Tesouro Nacional, 7/1/16 Hungary Government Bond, 6.75%, 2/24/17 Hungary Government Bond, 7.5%, 11/12/20 Hungary Government Bond,	\$	336,579 148,139 209,470
HUF HUF HUF	30,000,000 40,000,000 61,000,000	BB/Ba1 BB/Ba1 BB/Ba1	7/1/15 Brazil Letras do Tesouro Nacional, 7/1/16 Hungary Government Bond, 6.75%, 2/24/17 Hungary Government Bond, 7.5%, 11/12/20 Hungary Government Bond, 7.75%, 8/24/15 Indonesia Treasury Bond,	\$	336,579 148,139 209,470 299,261
HUF HUF IDR 2	30,000,000 40,000,000 61,000,000 2,200,000,000	BB/Ba1 BB/Ba1 BB/Ba1 NR/Baa3	7/1/15 Brazil Letras do Tesouro Nacional, 7/1/16 Hungary Government Bond, 6.75%, 2/24/17 Hungary Government Bond, 7.5%, 11/12/20 Hungary Government Bond, 7.75%, 8/24/15 Indonesia Treasury Bond, 10.0%, 9/15/24 Indonesia Treasury Bond,	\$	336,579 148,139 209,470 299,261 227,367
HUF HUF IDR :	30,000,000 40,000,000 61,000,000 2,200,000,000 1,500,000,000	BB/Ba1 BB/Ba1 NR/Baa3 NR/Baa3	7/1/15 Brazil Letras do Tesouro Nacional, 7/1/16 Hungary Government Bond, 6.75%, 2/24/17 Hungary Government Bond, 7.5%, 11/12/20 Hungary Government Bond, 7.75%, 8/24/15 Indonesia Treasury Bond, 10.0%, 9/15/24 Indonesia Treasury Bond, 10.5%, 8/15/30 Indonesia Treasury Bond,	\$	336,579 148,139 209,470 299,261 227,367 162,377

Schedule of Investments \mid 10/31/13 (continued)

Princi Amou	ipal nt (\$)	S&P/Moody's Ratings (unaudited)		Value
			Foreign Government Bonds — (continued)	
MYR	920,000	A/A3	Malaysia Government Bond, 3.58%, 9/28/18	\$ 293,744
MYR	920,000	NR/A3	Malaysia Government Bond, 3.741%, 2/27/15	294,345
MYR	900,000	NR/A3	Malaysia Government Bond, 4.012%, 9/15/17	292,214
MYR	670,000	NR/A3	Malaysia Government Bond, 4.16%, 7/15/21	219,387
MYR	670,000	NR/A3	Malaysia Government Bond, 4.378%, 11/29/19	221,850
MXN	2,800,000	A-/Baa1	Mexican Bonos, 10.0%, 11/20/36	278,548
MXN	2,000,000	A-/Baa1	Mexican Bonos, 10.0%, 12/5/24	202,420
MXN	3,700,000	A-/Baa1	Mexican Bonos, 6.0%, 6/18/15	294,308
MXN	3,200,000	A-/Baa1	Mexican Bonos, 8.5%, 12/13/18	282,711
PEN	330,000	A-/Baa2	Peru Government Bond, 7.84%, 8/12/20	138,149
PEN	400,000	A-/Baa2	Peru Government Bond, 8.2%, 8/12/26	178,202
PLN	896,462	A/A2	Poland Government Bond, 3.0%, 8/24/16	306,005
PLN	500,000	A/A2	Poland Government Bond, 4.0%, 10/25/23	159,967
PLN	900,000	A/A2	Poland Government Bond, 4.75%, 10/25/16	305,518
PLN	600,000	A/A2	Poland Government Bond, 4.75%, 4/25/17	204,364
ZAR	3,571,590	NR/Baa1	South Africa Government Bond – CPI Linked, 2.75%, 1/31/22	391,385
ZAR	2,450,000	NR/Baa1	South Africa Government Bond, 6.75%, 3/31/21	235,879
THB	23,000,000	A-/Baa1	Thailand Government Bond, 3.625%, 6/16/23	722,531
THB	8,200,000	A-/Baa1	Thailand Government Bond, 5.125%, 3/13/18	281,470
TRY	338,806	NR/NR	Turkey Government Bond, 4.5%, 2/11/15	178,408
TRY	1,357,550	NR/NR	Turkey Government Bond, 7.0%, 10/1/14	715,880
TRY	150,000	NR/Baa3	Turkey Government Bond, 9.0%, 3/5/14	75,776
			TOTAL FOREIGN GOVERNMENT BONDS	
			(Cost \$8,869,935)	\$ 8,410,129

Princip Amoun		S&P/Moody's Ratings (unaudited)		Val	ue
			TEMPORARY CASH INVESTMENTS — 0.7% Commercial Paper — 0.7%		
MXN	1,300,000	BB/NR	Consubanco SA Institucion de Banca Multiple, 4/16/14 (b)	\$	96,867
			TOTAL TEMPORARY CASH INVESTMENTS		
			(Cost \$102,957)	\$	96,867
			TOTAL INVESTMENT IN SECURITIES — 98.5%		
			(Cost \$14,707,474) (a)	\$13	3,519,216
			OTHER ASSETS & LIABILITIES -1.5%	\$	206,498
			TOTAL NET ASSETS — 100.0%	\$13	3,725,714
NR	Not rated by eith	er S&P or Moody's	S.		
(a)			alized depreciation investments based of 4,707,474 was as follows:	n cos	t for
		s unrealized appre cess of value over	eciation for all investments in which tax cost	\$	107,697
	there is an ex	cess of tax cost ov	eciation for all investments in which ver value		,295,955)
(1-)	Net unrealized	•	. In a control of the		,188,258)
(b) NOTE:	*	•	 Income is recognized through accretion d in U.S. Dollars unless otherwise noted: 	oi ai	SCOUIIL.
BRL	Brazilian Real	is are denominate	u III 0.3. Dollais ulliess otherwise noteu.		
CLP	Chilean Peso				
COP	Colombian Peso				
HUF	Hungarian Forint				
IDR	Indonesian Rupi				
MXN	Mexican Peso				
MYR	Malaysian Ringg	it			
NGN	Nigerian Naira				
PEN	Peruvian Nuevo	Sol			
PLN	Polish Zloty				
RUB	Russian Ruble				
THB	Thai Baht				
TRY	Turkish Lira				
ZAR	South African Ra	ind			
			porary cash investments) for the period \$3,027,018, respectively.	ended	i

Schedule of Investments | 10/31/13 (continued)

Various inputs are used in determining the value of the Fund's investments. These inputs are summarized in the three broad levels listed below.

- Level 1 quoted prices in active markets for identical securities.
- Level 2 other significant observable inputs (including quoted prices for similar securities, interest rates, prepayment speeds, credit risk, etc.) See Notes to Financial Statements Note 1A.
- Level 3 significant unobservable inputs (including the Fund's own assumptions in determining fair value of investments) See Notes to Financial Statements Note 1A.

Generally, equity securities are categorized as Level 1, fixed income securities and senior loans as Level 2 and securities valued using fair value methods (other than prices supplied by independent pricing services) as Level 3.

The following is a summary of the inputs used as of October 31, 2013, in valuing the Fund's investments:

	Lev	el 1	Level 2	Lev	/el 3	Total
Corporate Bonds	\$	_	\$ 5,012,220	\$	_	\$ 5,012,220
Foreign Government Bonds		_	8,410,129		_	8,410,129
Commercial Paper		_	96,867		_	96,867
Total	\$	_	\$13,519,216	\$	_	\$13,519,216

During the period ended October 31, 2013, there were no transfers between Levels 1, 2 and 3.

Statement of Assets and Liabilities \mid 10/31/13

ASSETS:		
Investment in securities (cost \$14,707,474)	\$13	3,519,216
Cash		53,743
Foreign currencies, at value (cost \$12,167)		12,204
Receivables —		
Interest		212,300
Due from Pioneer Investment Management, Inc.		18,503
Prepaid expenses		31,151
Total assets	\$1	3,847,117
LIABILITIES:		
Payables –		
Fund shares repurchased	\$	12,343
Dividends		46,150
Due to affiliates		9,791
Accrued expenses		53,119
Total liabilities	\$	121,403
NET ASSETS:		
Paid-in capital	\$1	5,041,437
Distributions in excess of net investment income		(46,150)
Accumulated net realized loss on investments and foreign currency transactions		(80,860)
Net unrealized depreciation on investments	(1,188,258)
Net unrealized depreciation on other assets and liabilities denominated		
in foreign currencies		(455)
Total net assets	\$1	3,725,714
NET ASSET VALUE PER SHARE:		
(No par value, unlimited number of shares authorized)		
Class A (based on \$4,605,190/507,570 shares)	\$	9.07
Class C (based on \$4,580,757/505,720 shares)	\$	9.06
Class Y (based on \$4,539,767/500,000 shares)	\$	9.08
MAXIMUM OFFERING PRICE:		
Class A (\$9.07 ÷ 95.5%)	\$	9.50

Statement of Operations

For the Period from February 5, 2013 to 10/31/13

INVESTMENT INCOME:

Interest	\$	549,147		
Total investment income			\$	549,147
EXPENSES:				
Management fees	\$	73,067		
Transfer agent fees and expenses				
Class A		227		
Class C		120		
Class Y		75		
Distribution fees				
Class A		8,730		
Class C		34,752		
Shareholder communications expense		255		
Administrative reimbursement		9,635		
Custodian fees		14,450		
Registration fees		46,711		
Professional fees		79,060		
Printing expense		23,200		
Fees and expenses of nonaffiliated Trustees		3,500		
Miscellaneous		13,150		
Total expenses			\$	306,932
Less fees waived and expenses reimbursed				
by Pioneer Investment Management, Inc.				(173,957)
Net expenses			\$	132,975
Net investment income			\$	416,172
REALIZED AND UNREALIZED GAIN (LOSS) ON INVESTMENTS AND FOREIGN CURRENCY TRANSACTIONS:				
Net realized loss on:				
Investments	\$	(306,658)		
Other assets and liabilities denominated in foreign currencies		(42,699)	\$	(349,357)
Change in net unrealized depreciation on:				
Investments	\$(1,188,258)		
Other assets and liabilities denominated in foreign currencies		(455)	\$(1,188,713
Net loss on investments and foreign currency transactions			\$(1,538,070
Net decrease in net assets resulting from operations			\$(1,121,898

Statement of Changes in Net Assets

	2/5/13 (a) to 10/31/13
FROM OPERATIONS:	
Net investment income	\$ 416,172
Net realized loss on investments and foreign currency transactions	(349,357
Change in net unrealized depreciation on investments and foreign	(1 100 712
currency transactions	(1,188,713
Net increase in net assets resulting from operations	\$ (1,121,898
DISTRIBUTIONS TO SHAREOWNERS:	
Net investment income:	
Class A (\$0.15 per share)	\$ (74,581
Class C (\$0.11 per share)	(56,600
Class Y (\$0.16 per share)	(79,660
Tax return of capital:	
Class A (\$0.04 per share)	(21,345
Class C (\$0.04 per share)	(21,245
Class Y (\$0.04 per share)	(21,140
Total distributions to shareowners	\$ (274,571
FROM FUND SHARE TRANSACTIONS:	
Net proceeds from sale of shares	\$15,138,736
Reinvestment of distributions	1,404
Cost of shares repurchased	(17,957
Net increase in net assets resulting from Fund share transactions	\$15,122,183
Net increase in net assets	\$13,725,714
NET ASSETS:	
Beginning of year	_
End of year	\$13,725,714
Distributions in excess of net investment income	\$ (46,150
(a) The Fund commenced operations on February 5, 2013.	

⁽a) The Fund commenced operations on February 5, 2013.

Statement of Changes in Net Assets (continued)

	'13 Shares	'13 Amount
Class A*		
Shares sold	508,804	\$5,081,877
Reinvestment of distributions	112	1,004
Less shares repurchased	(1,346)	(12,343)
Net increase	507,570	5,070,538
Class C*		
Shares sold	506,311	\$5,056,859
Reinvestment of distributions	45	400
Less shares repurchased	(636)	(5,614)
Net increase	505,720	\$5,051,645
Class Y*		
Shares sold	500,000	\$5,000,000
Reinvestment of distributions	_	_
Less shares repurchased	_	_
Net increase	500,000	\$5,000,000

^{*} The Fund commenced operations on February 5, 2013.

Financial Highlights

	2/5/13 (a) to 10/31/13
Class A	
Net asset value, beginning of period	\$ 9.98
Increase from investment operations:	
Net investment income	\$ 0.29
Net realized and unrealized gain on investments	(1.01)
Net increase in net assets from investment operations	\$ (0.72)
Distributions to shareowners:	
Net investment income	(0.15)
Tax return of capital	(0.04)
Total distributions	(0.19)
Net asset value, end of period	\$ 9.07
Total return*	(7.37)%(b)
Ratio of net expenses to average net assets†	1.12%**
Ratio of net investment income to average net assets†	4.16%**
Portfolio turnover rate	23%
Net assets, end of period (in thousands)	\$4,605
Ratios with no waiver of fees and assumption of expenses by the Adviser and no reduction for fees paid indirectly:	
Total expenses	2.79%**
Net investment income	2.49%**

⁽a) Class A shares were first publicly offered on February 5, 2013.

⁽b) Not annualized.

^{*} Assumes initial investment at net asset value at the beginning of the period, reinvestment of all distributions, the complete redemption of the investment at net asset value at the end of the period and no sales charges. Total return would be reduced if sales charges were taken into account.

^{**} Annualized.

[†] Ratios with no reduction for fees paid indirectly.

Financial Highlights (continued)

	2/5/13 (a) to 10/31/13
Class C	
Net asset value, beginning of period	\$ 9.97
Increase from investment operations:	
Net investment income	\$ 0.23
Net realized and unrealized gain on investments	(0.99)
Net decrease in net assets from investment operations	\$ (0.76)
Distributions to shareowners:	
Net investment income	(0.11)
Tax return of capital	(0.04)
Total distribution	(0.15)
Net asset value, end of period	\$ 9.06
Total return*	(7.83)%(b)
Ratio of net expenses to average net assets†	1.86%**
Ratio of net investment income to average net assets†	3.42%**
Portfolio turnover rate	23%
Net assets, end of period (in thousands)	\$4,581
Ratios with no waiver of fees and assumption of expenses by the Adviser and no reduction for fees paid indirectly:	
Total expenses	3.54%**
Net investment income	1.74%**

⁽a) Class C shares were first publicly offered on February 5, 2013.

⁽b) Not annualized.

^{*} Assumes initial investment at net asset value at the beginning of the period, reinvestment of all distributions, the complete redemption of the investment at net asset value at the end of the period and no sales charges. Total return would be reduced if sales charges were taken into account.

^{**} Annualized.

[†] Ratios with no reduction for fees paid indirectly.

	2/5/13 (a) to 10/31/13
Class Y	
Net asset value, beginning of period	\$ 9.98
Increase from investment operations:	
Net investment income	\$ 0.31
Net realized and unrealized gain on investments	(1.01)
Net increase in net assets from investment operations	\$ (0.70)
Distributions to shareowners:	
Net investment income	(0.16)
Tax return of capital	(0.04)
Total distributions	(0.20)
Net asset value, end of period	\$ 9.08
Total return*	(7.15)%(b)
Ratio of net expenses to average net assets†	0.85%**
Ratio of net investment income to average net assets†	4.43%**
Portfolio turnover rate	23%
Net assets, end of period (in thousands)	\$4,540
Ratios with no waiver of fees and assumption of expenses by the Adviser and no reduction for fees paid indirectly:	
Total expenses	2.53%**
Net investment income	2.75%**

⁽a) Class Y shares were first publicly offered on February 5, 2013.

⁽b) Not annualized.

^{*} Assumes initial investment at net asset value at the beginning of the period, reinvestment of all distributions and the complete redemption of the investment at net asset value at the end of the period.

^{**} Annualized.

[†] Ratios with no reduction for fees paid indirectly.

Notes to Financial Statements | 10/31/13

1. Organization and Significant Accounting Policies

Pioneer Emerging Markets Local Currency Debt Fund (the Fund) is a series of Pioneer Series Trust VII, a Delaware statutory trust. The Fund is registered under the Investment Company Act of 1940 as a non-diversified, open-end management investment company. The investment objective of the Fund is total return through a combination of income and capital appreciation.

The Fund offers three classes of shares designated as Class A, Class C, and Class Y shares. Class A, Class C, and Class Y shares were first publicly offered on February 5, 2013. Each class of shares represents an interest in the same portfolio of investments of the Fund and has identical rights (based on relative net asset values) to assets and liquidation proceeds. Share classes can bear different rates of class-specific fees and expenses such as transfer agent and distribution fees. Differences in class-specific fees and expenses will result in differences in net investment income and, therefore, the payment of different dividends from net investment income earned by each class. The Amended and Restated Declaration of Trust of the Fund gives the Board the flexibility to specify either per-share voting or dollar-weighted voting when submitting matters for shareholder approval. Under per-share voting, each share of a class of the Fund is entitled to one vote. Under dollar-weighted voting, a shareholder's voting power is determined not by the number of shares owned, but by the dollar value of the shares on the record date. Each share class has exclusive voting rights with respect to matters affecting only that class, including with respect to the distribution plan for that class. There is no distribution plan for Class Y shares.

The Fund's financial statements have been prepared in conformity with U.S. generally accepted accounting principles that require the management of the Fund to, among other things, 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 financial statements, and the reported amounts of income, expenses and gain or loss on investments during the reporting period. Actual results could differ from those estimates.

The following is a summary of significant accounting policies followed by the Fund in the preparation of its financial statements, which are consistent with those policies generally accepted in the investment company industry:

A. Security Valuation

Security transactions are recorded as of trade date. The net asset value of the Fund is computed once daily, on each day the New York Stock Exchange (NYSE) is open, as of the close of regular trading on the NYSE. Fixed income

securities with remaining maturity of more than sixty days are valued at prices supplied by independent pricing services, which consider such factors as market prices, market events, quotations from one or more brokers, Treasury spreads, yields, maturities and ratings. Valuations may be supplemented by dealers and other sources, as required. Equity securities that have traded on an exchange are valued at the last sale price on the principal exchange where they are traded. Equity securities that have not traded on the date of valuation, or securities for which sale prices are not available, generally are valued using the mean between the last bid and asked prices. Short-term fixed income securities with remaining maturities of sixty days or less generally are valued at amortized cost.

Trading in foreign securities is substantially completed each day at various times prior to the close of the NYSE. The values of such securities used in computing the net asset value of the Fund's shares are determined as of such times.

Securities for which independent pricing services are unable to supply prices or for which market prices and/or quotations are not readily available or are considered to be unreliable are valued at the direction or with the approval of the Valuation Committee using fair value methods pursuant to procedures adopted by the Board of Trustees. The Valuation Committee is comprised of certain members of the Board of Trustees. Inputs used when applying fair value methods to value a security may include credit ratings, the financial condition of the company, current market conditions and comparable securities. The Fund may use fair value methods if it is determined that a significant event has occurred after the close of the exchange or market on which the security trades and prior to the determination of the Fund's net asset value. Examples of a significant event might include political or economic news, corporate restructurings, natural disasters, terrorist activity or trading halts. Thus, the valuation of the Fund's securities may differ significantly from exchange prices and such differences could be material. Pioneer Investment Management, Inc. (PIM), the funds' investment adviser, is responsible for monitoring developments that may impact fair valued securities and for discussing and assessing fair values on an ongoing basis, and at least quarterly, with the Valuation Committee.

At October 31, 2013, there were no securities that were valued using fair value methods (other than securities that were valued using prices supplied by independent pricing services).

Principal amounts of mortgage-backed securities are adjusted for monthly paydowns. Premiums and discounts related to certain mortgage-backed securities are amortized or accreted in proportion to the monthly paydowns. All discounts/premiums on debt securities are accreted/amortized for financial reporting purposes over the life of the respective securities, and such accretion/amortization is included in interest income.

Dividend income is recorded on the ex-dividend date, except that certain dividends from foreign securities where the ex-dividend date may have passed are recorded as soon as the Fund becomes aware of the ex-dividend data in the exercise of reasonable diligence. Interest income, including interest on income bearing cash accounts, is recorded on the accrual basis. Dividend and interest income are reported net of unrecoverable foreign taxes withheld at the applicable country rates.

Gains and losses on sales of investments are calculated on the identified cost method for both financial reporting and federal income tax purposes.

B. Foreign Currency Translation

The books and records of the Fund are maintained in U.S. dollars. Amounts denominated in foreign currencies are translated into U.S. dollars using current exchange rates.

Net realized gains and losses on foreign currency transactions, if any, represent, among other things, the net realized gains and losses on foreign currency contracts, disposition of foreign currencies and the difference between the amount of income accrued and the U.S. dollars actually received. Further, the effects of changes in foreign currency exchange rates on investments are not segregated in the statement of operations from the effects of changes in the market prices of those securities but are included with the net realized and unrealized gain or loss on investments.

C. Forward Foreign Currency Contracts

The Fund may enter into forward foreign currency contracts (contracts) for the purchase or sale of a specific foreign currency at a fixed price on a future date. All contracts are marked to market daily at the applicable exchange rates, and any resulting unrealized appreciation or depreciation is recorded in the Fund's financial statements. The Fund records realized gains and losses at the time a contract is offset by entry into a closing transaction or extinguished by delivery of the currency. Risks may arise upon entering into these contracts from the potential inability of counterparties to meet the terms of the contract and from unanticipated movements in the value of foreign currencies relative to the U.S. dollar.

D. Federal Income Taxes

It is the Fund's policy to comply with the requirements of the Internal Revenue Code applicable to regulated investment companies and to distribute all of its taxable income and net realized capital gains, if any, to its shareowners. Therefore, no federal income tax provision is required. As of October 31, 2013, the Fund did not accrue any interest and penalties with

respect to unrecognized tax positions, which, if applicable, would be recorded as an income tax expense in the Statement of Operations. Tax years remain subject to examination by federal and state tax authorities.

The amount and character of income and capital gain distributions to shareowners are determined in accordance with federal income tax rules, which may differ from U.S. generally accepted accounting principles. Distributions in excess of net investment income or net realized gains are temporary overdistributions for financial statement purposes resulting from differences in the recognition or classification of income or distributions for financial statement and tax purposes. Capital accounts within the financial statements are adjusted for permanent book/tax differences to reflect tax character, but are not adjusted for temporary differences. At October 31, 2013, the Fund reclassified \$80,746 to decrease paid in capital, \$187,751 to increase distributions in excess of net investment income and \$268,497 to decrease accumulated net realized loss on investments to reflect permanent book/tax differences. These adjustments have no impact on net assets or the results of operations.

During the year ended October 31, 2013, the Fund was permitted to carryforward indefinitely \$80,860 of short-term losses under Regulated Investment Company Modernization Act of 2010 without limitation.

The tax character of distributions paid during the years ended October 31, 2013 was as follows:

	2013
Distributions paid from:	
Ordinary income	\$210,841
Return of capital	63,730
Total	\$274,571

The following shows the components of distributable earnings on a federal income tax basis at October 31, 2013:

Total	\$(1,315,723)
Net unrealized depreciation	(1,188,713)
Dividend payable	(46,150)
Capital loss carryforward	\$ (80,860)
Distributable earnings:	
	2013

The difference between book-basis and tax-basis net unrealized depreciation is attributable to the tax deferral of losses on wash sales.

E. Fund Shares

The Fund records sales and repurchases of its shares as of trade date. Pioneer Funds Distributor, Inc. (PFD), the principal underwriter for the Fund and a wholly-owned indirect subsidiary of UniCredit S.p.A. (UniCredit), earned \$55 in underwriting commissions on the sale of Class A shares during the period from February 5, 2013 to October 31, 2013.

F. Class Allocations

Income, common expenses and realized and unrealized gains and losses are calculated at the Fund level and allocated daily to each class of shares based on its respective percentage of adjusted net assets at the beginning of the day.

Distribution fees are calculated based on the average daily net asset value attributable to Class A and Class C shares of the Fund, respectively (see Note 4). Class Y shares do not pay distribution fees. All expenses and fees paid to the transfer agent, Pioneer Investment Management Shareholder Services, Inc. (PIMSS), for its services are allocated among the classes of shares based on the number of accounts in each class and the ratable allocation of related out-of-pocket expenses (see Note 3).

The Fund declares as daily dividends substantially all of its net investment income. All dividends are paid on a monthly basis. Short-term capital gain distributions, if any, may be declared with the daily dividends. Distributions to shareowners are recorded as of the ex-dividend date. Distributions paid by the Fund with respect to each class of shares are calculated in the same manner and at the same time, except that net investment income dividends to Class A, Class C and Class Y shares can reflect different transfer agent and distribution expense rates.

G. Risks

At times, the Fund's investments may represent industries or industry sectors that are interrelated or have common risks, making the Fund more susceptible to any economic, political, or regulatory developments or other risks affecting those industries and sectors. The Fund's investments in foreign markets and countries with limited developing markets may subject the Fund to a greater degree of risk than investments in a developed market. These risks include disruptive political or economic conditions and the imposition of adverse governmental laws or currency exchange restrictions. The Fund's prospectus contains unaudited information regarding the Fund's principal risks. Please refer to that document when considering the Fund's principal risks.

2. Management Agreement

PIM, a wholly-owned indirect subsidiary of UniCredit, manages the Fund's portfolio. Management fees are calculated daily at the annual rate of 0.70% of the Fund's average daily net assets up to \$1 billion and 0.65% on assets over \$1 billion. For the period ended October 31, 2013, the effective management fee was equivalent to 0.70% of the Fund's average daily net assets.

PIM has contractually agreed to limit ordinary operating expenses of the Fund to the extent required to reduce Fund expenses to 1.20%, 2.10% and 0.85% of the average daily net assets attributable to Class A, Class C and Class Y shares, respectively. Fees waived and expenses reimbursed during the period ended October 31, 2013 are reflected on the Statement of Operations. These expense limitations are in effect through March 1, 2014. There can be no assurance that PIM will extend the expense limitation agreement for a class of shares beyond the date referred to above.

In addition, under the management and administration agreements, certain other services and costs, including accounting, regulatory reporting and insurance premiums, are paid by the Fund as administrative reimbursements. Included in "Due to affiliates" reflected on the Statement of Assets and Liabilities is \$9,350 in management fees, administrative costs and certain other reimbursements payable to PIM at October 31, 2013.

3. Transfer Agent

PIMSS, a wholly owned indirect subsidiary of UniCredit, provides substantially all transfer agent and shareowner services to the Fund at negotiated rates.

In addition, the Fund reimburses PIMSS for out-of-pocket expenses incurred by PIMSS related to shareholder communications activities such as proxy and statement mailings, outgoing phone calls and omnibus relationship contracts.

For the period from February 5, 2013 to October 31, 2013, such out-of-pocket expenses by class of shares were as follows:

Shareholder Communications:	
Class A	\$175
Class C	65
Class Y	15
Total	\$255

Included in "Due from affiliates" reflected on the Statement of Assets and Liabilities is \$123 in transfer agent fees and out-of-pocket reimbursements payable from PIMSS at October 31, 2013.

4. Distribution Plan

The Fund has adopted a Distribution Plan pursuant to Rule 12b-1 of the Investment Company Act of 1940 with respect to its Class A and Class C shares. Pursuant to the Plan, the Fund pays PFD 0.25% of the average daily net assets attributable to Class A shares as compensation for personal services and/or account maintenance services or distribution services with regard to Class A shares. Pursuant to the Plan, the Fund also pays PFD 1.00% of the average daily net assets attributable to Class C shares. The fee for Class C shares consists of a 0.25% service fee and a 0.75% distribution fee paid as compensation for personal services and/or account maintenance services or distribution services with regard to Class C shares. Included in "Due to affiliates" reflected on the Statement of Assets and Liabilities is \$318 in distribution fees payable to PFD at October 31, 2013.

In addition, redemptions of each class of shares (except Class Y shares) may be subject to a contingent deferred sales charge (CDSC). A CDSC of 1.00% may be imposed on redemptions of certain net asset value purchases of Class A shares within 12 months of purchase. Redemptions of Class C shares within 12 months of purchase are subject to a CDSC of 1.00%, based on the lower of cost or market value of shares being redeemed. Shares purchases as part of an exchange remain subject to any CDSC that applied to the original purchase of those shares. There is no CDSC for Class Y shares. Proceeds from the CDSCs are paid to PFD. For the period from February 5, 2013 to October 31, 2013, no CDSCs were paid to PFD.

5. Expense Offset Arrangements

The Fund has entered into certain expense offset arrangements with PIMSS which may result in a reduction in the Fund's total expenses due to interest earned on cash held by PIMSS. For the period from February 5, 2013 to October 31, 2013, the Fund's expenses were not reduced under such arrangements.

Report of Independent Registered Public Accounting Firm

To the Board of Trustees of Pioneer Series Trust VII and the Shareowners of Pioneer Emerging Markets Local Currency Debt Fund

We have audited the accompanying statement of assets and liabilities, including the schedule of investments, of Pioneer Emerging Markets Local Currency Debt Fund (the "Fund") (one of the portfolios constituting the Pioneer Series Trust VII) as of October 31, 2013, and the related statement of operations, statement of changes in net assets and financial highlights for the period from February 5, 2013 (Commencement of Operations) through October 31, 2013. These financial statements and financial highlights are the responsibility of the Fund's management. Our responsibility is to express an opinion on these financial statements and financial highlights based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements and financial highlights are free of material misstatement. We were not engaged to perform an audit of the Fund's internal control over financial reporting. Our audit included consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Fund's internal control over financial reporting. Accordingly, we express no such opinion. An audit also includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements and financial highlights, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. Our procedures included confirmation of securities owned as of October 31, 2013, by correspondence with the custodian and brokers or by other appropriate auditing procedures where replies from brokers were not received. We believe that our audit provides a reasonable basis for our opinion.

In our opinion, the financial statements and financial highlights referred to above present fairly, in all material respects, the financial position of Pioneer Emerging Markets Local Currency Debt Fund (one of the portfolios constituting the Pioneer Series Trust VII) at October 31, 2013, the results of its operations, the changes in its net assets and the financial highlights for the period from February 5, 2013 (Commencement of Operations) through October 31, 2013, in conformity with U.S. generally accepted accounting principles.

Ernst + Young LLP

Boston, Massachusetts December 23, 2013

Trustees, Officers and Service Providers

Investment Adviser

Pioneer Investment Management, Inc.

Custodian and Sub-Administrator

Brown Brothers Harriman & Co.

Independent Registered Public Accounting Firm

Ernst & Young LLP

Principal Underwriter

Pioneer Funds Distributor, Inc.

Legal Counsel

Bingham McCutchen LLP

Shareowner Services and Transfer Agent

Pioneer Investment Management Shareholder Services, Inc.

Proxy voting policies and procedures of the Funds are available without charge, upon request, by calling our toll free number (1-800-225-6292). Information regarding how the Funds voted proxies relating to portfolio securities during the most recent 12-month period ended June 30 is publicly available to shareowners at us.pioneerinvestments.com. This information is also available on the Securities and Exchange Commission's web site at www.sec.gov.

Trustees and Officers

The Fund's Trustees and Officers are listed on the following pages, together with their principal occupations during at least the past five years. Trustees who are interested persons of the Fund within the meaning of the 1940 Act are referred to as Interested Trustees. Trustees who are not interested persons of the Fund are referred to as Independent Trustees. Each of the Trustees, except Mr. Cogan and Mr. West, serves as a trustee of each of the 52 U.S. registered investment portfolios for which Pioneer serves as investment adviser (the "Pioneer Funds"). Each of Mr. Cogan and Mr. West serves as a Trustee of 47 Pioneer funds. The address for all Trustees and all officers of the Fund is 60 State Street, Boston, Massachusetts 02109.

The Statement of Additional Information of the Fund includes additional information about the Trustees and is available, without charge, upon request, by calling 1-800-225-6292.

ndependent Trustees

Name, Age and Position Held with the Fund	Term of Office and Length of Service	Principal Occupation	Other Directorships Held by Trustee
Thomas J. Pema (63) Chairman of the Board and Trustee	Trustee since 2012. Serves until a successor trustee is elected or earlier retirement or removal.	Chairman and Chief Executive Officer, Quadriserv, Inc. (technology products for securities lending industry) (2008 – present); private investor (2004 – 2008); and Senior Executive Vice President, The Bank of New York (financial and securities services) (1986 – 2004)	Director, Broadridge Financial Solutions, Inc. (investor communications and securities processing provider for financial services industry) (2009 - present); Director, Quadrisery, Inc. (2005 - present); and Commissioner, New Jersey State Civil Service Commission (2011 - present)
David R. Bock (69) Trustee	Trustee since 2012. Serves until a successor trustee is elected or earlier retirement or removal.	Managing Partner, Federal City Capital Advisors (corporate advisory services company) (1997 – 2004 and 2008 – present); Interim Chief Executive Officer, Oxford Analytica, Inc. (privately held research and consulting company) (2010); Executive Vice President and Chief Financial Officer, -Irax, Inc. (publicly traded health care services company) (2004 – 2007); and Executive Vice President and Chief Financial Officer, Pedestal Inc. (internet-based mortgage trading company) (2000 – 2002)	Director of Enterprise Community Investment, Inc. (privately-held affordable housing finance company) (1985 – 2010); Director of Oxford Analytica, Inc. (2008 – present); Director of The Swiss Helvetia Fund, Inc. (closed-end fund) (2010 – present); and Director of New York Montgage Tust (publicy) traded mortgage REIT) (2004 – 2009, 2012 - present)
Benjamin M. Friedman (69) Trustee	Trustee since 2012. Serves until a successor trustee is elected or earlier retirement or removal.	William Joseph Maier Professor of Political Economy, Harvard University (1972 – present)	Tustee, Mellon Institutional Funds Investment Trust and Mellon Institutional Funds Master Portfolio (oversaw 17 portfolios in fund complex) (1989-2008)

Independent Trustees (continued)

Name, Age and	Term of Office and		Other Directorships
Position Held With the Fund	Length of service	Principal Occupation ne	Held by Irustee
Margaret B.W. Graham (66) Trustee	Trustee since 2012. Serves until a successor trustee is elected or earlier retirement or removal.	Founding Director, Vice President and Corporate Secretary, The Winthrop Group, Inc. (consulting firm) (1982-present); Desautels Faculty of Management, McGill University (1999 – present); and Manager of Research Operations and Organizational Learning, Xerox PARC, Xerox's advance research center (1990-1994)	None
Marguerite A. Piret (65) Trustee	Trustee since 2012. Serves until a successor trustee is elected or earlier retirement or removal.	President and Chief Executive Officer, Newbury, Piret & Company, Inc. Fur (investment banking firm) (1981 – present) cor Bool Institute of the Present Institute of the Pre	Director of New America High Income Fund, Inc. (closed-end investment company) (2004 - present); and member, Board of Governors, Investment Company Institute (2000 - 2006)
Stephen K. West (85) Trustee	Trustee since 2012. Serves until a successor trustee is elected or earlier retirement or removal.	Senior Counsel, Sullivan & Cromwell LLP (law firm) (1998 – present); and (clt Partner, Sullivan & Cromwell LLP (prior to 1998) Dir PL	Director, The Swiss Helvetia Fund, Inc. (closed-end investment company); and Director, Invesco, Ltd. (formerly AMVESCAP, PLC) (investment manager) (1997-2005)

Interested Trustee

i Term of Office and Occupation Principal Occupation Held by Trustee	(87)*, ** Since 2012. Serves at the Non-Executive Chairman and a director of Pioneer Investment Management USA Inc. ("PIM-USA"); Chairman and a director of Pioneer; Chairman and Director of Pioneer Institutional Asset Management, Inc. (since 2006); Director of Pioneer Alternative Investment Management (Unit) October 2011); President and a difficated funds; Deputy Chairman and a director of Pioneer Alternative Investment Management (Bermuda) Limited and affiliated funds; Deputy Chairman and a director of Pioneer Global Asset Management S.p.A. ("FGAM") (until April 2010); Director of Nano-C, Inc. (since 2003); Director of Oel Management Inc. (2004 - 2011); Director of Nano-C, Inc. (since 2003); Director of Oel Management Inc. (2004 - 2011); Director of Fiduciary Counselling, Inc. (until December 2011); President of all of the Pioneer Funds; and Retired Partner, Wilmer Cutler Pickering Hale and Dorr LLP	ury (55)* Trustee since 2012. Director, CEO and President of Ploneer Institutional Asset Management, Inc. (since trustee is elected or earlier Pebruary 2007); Director of PGAM (2007 – 2010); Head of New Europe Division, PGAM (2000 – 2005); Head of New Markets Division, PGAM (2000 – 2007)
Name, Age and Position Held with the Fund	John F. Cogan, Jr. (87)*, ** Trustee, President and Chief Executive Officer of the Fund	Daniel K. Kingsbury (55)* Trustee and Executive Vice President

^{*} Mr. Cogan and Mr. Kingsbury are interested frustees because they are officers or directors of the Fund's investment adviser and certain of its affiliates. **Mr. Cogan resigned as a Trustee of the Pioneer Funds effective November 12, 2013.

Fund Officers

Name, Age and Position Held with the Fund	Term of Office and Length of Service	Principal Occupation	Other Directorships Held by Officer
Christopher J. Kelley (48) Secretary	Since 2012. Serves at the discretion of the Board.	Vice President and Associate General Counsel of Pioneer since January 2008 and Secretary of all of the Pioneer Funds since June 2010; Assistant Secretary of all of the Pioneer Funds from September 2003 to May 2010; and Vice President and Senior Counsel of Pioneer from July 2002 to December 2007	None
Carol B. Hannigan (52) Assistant Secretary	Since 2012. Serves at the discretion of the Board.	Fund Governance Director of Pioneer since December 2006 and Assistant Secretary of all the Pioneer Funds since June 2010; Manager – Fund Governance of Pioneer from December 2003 to November 2006; and Senior Paralegal of Pioneer from January 2000 to November 2003	None
Thomas Reyes (50) Assistant Secretary	Since 2012. Serves at the discretion of the Board.	Counsel of Pioneer since June 2007 and Assistant Secretary of all the Pioneer Funds since June 2010; and Vice President and Counsel at State Street Bank from October 2004 to June 2007	None
Mark E. Bradley (53) Treasurer and Chief Financial and Accounting Officer of the Fund	Since 2012. Serves at the discretion of the Board.	Vice President – Fund Treasury of Pioneer; Treasurer of all of the Pioneer Funds since March 2008; Deputy Treasurer of Pioneer from March 2004 to February 2008; and Assistant Treasurer of all of the Pioneer Funds from March 2004 to February 2008	None
Luis I. Presutti (48) Assistant Treasurer	Since 2012. Serves at the discretion of the Board.	Assistant Vice President – Fund Treasury of Pioneer; and Assistant Treasurer of all of the Pioneer Funds	None
Gary Sullivan (55) Assistant Treasurer	Since 2012. Serves at the discretion of the Board.	Fund Accounting Manager – Fund Treasury of Pioneer, and Assistant Treasurer of all of the Pioneer Funds	None

Name, Age and Position Held with the Fund	Term of Office and Length of Service	Ott Principal Occupation Hel	Other Directorships Held by Officer
David F.Johnson (33) Assistant Treasurer	Since 2012. Serves at the discretion of the Board.	Fund Administration Manager – Fund Treasury of Pioneer since November 2008; Assistant Treasurer of all of the Pioneer Funds since January 2009; and Client Service Manager – Institutional Investor Services at State Street Bank from March 2003 to March 2007	None
Jean M. Bradley (61) Chief Compliance Officer -	Since 2012. Serves at the discretion of the Board.	Chief Compliance Officer of Ploneer and of all the Pioneer Funds since March 2010; Director of Adviser and Portfolio Compliance at Pioneer since October 2005; and Senior Compliance Officer for Columbia Management Advisers, Inc. from October 2003 to October 2005	None
Kelly O'Donnell (42) Anti-Money Laundering Officer	Since 2012. Serves at the discretion of the Board.	Director—Transfer Agency Compliance of Pioneer and Anti-Money Laundering Officer of all the Pioneer Funds since 2006	None

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How to Contact Pioneer

We are pleased to offer a variety of convenient ways for you to contact us for assistance or information.

Call us for:

Account Information, including existing accounts,	
new accounts, prospectuses, applications	
and service forms	1-800-225-6292
FactFone SM for automated fund yields, prices,	
account information and transactions	1-800-225-4321
Retirement plans information	1-800-622-0176

Write to us:

PIMSS, Inc. P.O. Box 55014 Boston, Massachusetts 02205-5014

Our toll-free fax 1-800-225-4240

Our internet e-mail address ask.pioneer@pioneerinvestments.com (for general questions about Pioneer only)

Visit our web site: us.pioneerinvestments.com

This report must be preceded or accompanied by a prospectus.

The Fund files a complete schedule of investments with the Securities and Exchange Commission for the first and third quarters for each fiscal year on Form N-Q. Shareholders may view the filed Form N-Q by visiting the Commission's web site at www.sec.gov. The filed form may also be viewed and copied at the Commission's Public Reference Room in Washington, DC. Information regarding the operations of the Public Reference Room may be obtained by calling 1-800-SEC-0330.



Pioneer Investment Management, Inc.

Boston, MA 02109 60 State Street

us.pioneerinvestments.com

Securities offered through Pioneer Funds Distributor, Inc. 60 State Street, Boston, MA 02109

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