

MoSys, Inc.  
Form 10-K  
March 12, 2013

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**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

**FORM 10-K**

ý **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES  
EXCHANGE ACT OF 1934**

**For the Fiscal Year December 31, 2012 or**

o **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES  
EXCHANGE ACT OF 1934**

**Commission file number: 000-32929**

**MOSYS, INC.**

(Exact name of registrant as specified in its charter)

**Delaware**  
(State or other jurisdiction of  
incorporation or organization)

**77-0291941**  
(IRS Employer  
Identification Number)

**3301 Olcott Street**  
**Santa Clara, California 95054**  
(Address of principal executive offices)  
**(408) 418-7500**  
(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act:

<b>Title of each class</b>	<b>Name of each exchange on which registered</b>
Common Stock, par value \$0.01 per share	Global Market of the NASDAQ Stock Market, LLC

Securities registered pursuant to Section 12(g) of the Act:

<b>Title of each class</b>	<b>Name of each exchange on which registered</b>
Series AA Preferred Stock, par value \$0.01 per share	None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes o No ý

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Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes  No

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes  No

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes  No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§ 229.405 of this chapter) is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See definition of "large accelerated filer," "large accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer <input type="radio"/>	Accelerated filer <input checked="" type="radio"/>	Non-accelerated filer <input type="radio"/> (Do not check if a smaller reporting company)	Smaller reporting company <input type="radio"/>
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Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). Yes  No

The aggregate market value of the common stock held by non-affiliates of the Registrant, as of June 30, 2012 was \$116,627,970 based upon the last sale price reported for such date on the Global Market of the NASDAQ Stock Market. For purposes of this disclosure, shares of common stock held by persons who beneficially own more than 5% of the outstanding shares of common stock and shares held by officers and directors of the Registrant have been excluded because such persons may be deemed to be affiliates. This determination is not necessarily conclusive.

As of March 1, 2013, 40,391,414 shares of the registrant's common stock, \$0.01 par value per share, were outstanding.

### DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's proxy statement to be delivered to stockholders in connection with the registrant's 2013 Annual Meeting of Stockholders to be held on or about June 4, 2013 are incorporated by reference into Part III of this Form 10-K. The registrant intends to file its proxy statement within 120 days after its fiscal year end.

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**ANNUAL REPORT ON FORM 10-K  
FOR THE YEAR ENDED DECEMBER 31, 2012**

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**Part I**

*This Annual Report on Form 10-K and the documents incorporated herein by reference contain forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934, which include, without limitation, statements about the market for our products, technology, our strategy, competition, expected financial performance and other aspects of our business identified in this Annual Report, as well as other reports that we file from time to time with the Securities and Exchange Commission. Any statements about our business, financial results, financial condition and operations contained in this Annual Report that are not statements of historical fact may be deemed to be forward-looking statements. Without limiting the foregoing, the words "believes," "anticipates," "expects," "intends," "plans," "projects," or similar expressions are intended to identify forward-looking statements. Our actual results could differ materially from those expressed or implied by these forward-looking statements as a result of various factors, including the risk factors described in Part I, Item 1A, "Risk Factors," and elsewhere in this report. We undertake no obligation to update publicly any forward-looking statements for any reason, except as required by law, even as new information becomes available or other events occur in the future.*

MoSys®, 1T-SRAM® and Bandwidth Engine® are registered trademarks of MoSys, Inc. GigaChip is a trademark of MoSys, Inc.

**Item 1. Business**

**Company Overview**

MoSys, Inc., together with its subsidiaries ("MoSys," the "Company," "we," "our" or "us"), is a fabless semiconductor company focused on the development and sale of integrated circuits, or ICs, for the high-speed networking, communications, storage and computing markets. Our technology delivers time-to-market, performance, power and economic benefits for system original equipment manufacturers, or OEMs. We have developed a family of ICs, called Bandwidth Engine, that combines our proprietary 1T-SRAM high-density embedded memory and high-speed 10 Gigabits per second, or Gbps, serial interface, or I/O, with our intelligent access technology and a highly efficient interface protocol. As the bandwidth requirements and amount of packet processing increase in high-speed networking systems, critical memory access bottlenecks can occur. Our Bandwidth Engine IC, with its combination of serial I/O, high-speed memory, and efficient, intelligent access, drastically increases memory accesses per second, removing these bottlenecks. The first applications for our Bandwidth Engine IC are in networking and communications systems to enable next generation, high density 10 Gbps, 40 Gbps, 80 Gbps and higher solutions. Historically, our primary business was the design, development, marketing, sale and support of differentiated intellectual property, or IP, including embedded memory and high-speed parallel and serial I/O used in advanced systems-on-chips, or SoCs. We are focused on developing differentiated IP-rich IC products, such as the Bandwidth Engine, and are dedicating substantially all of our research and development, marketing and sales budget to these IC products.

Our future success and ability to achieve and maintain profitability will be dependent on the marketing and sales of our Bandwidth Engine IC products into networking, communications and other markets requiring high bandwidth memory access. Since the beginning of 2010, we have invested an increasing amount of our research and development resources towards development of our Bandwidth Engine family of ICs, and as of the end of 2012 had ceased our efforts to actively market our IP and establish license agreements for customers' new SoC development projects. However, we have made opportunistic sales of some of our IP. For instance, in December 2011, we sold a number of patents in an arrangement that provided \$35 million in cash with no equity dilution to the Company and, in March 2012, we sold a portion of our SerDes technology and supporting workforce for approximately \$4.3 million, of which we have received \$3.6 million through December 2012.

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Due to the shift in our engineering and research and development focus and the decline in major consumer electronics applications utilizing customized versions of our 1T-SRAM technology, our competitiveness and the demand for our IP have declined since the beginning of 2011. Revenue from IP licensing and royalties did represent the majority of our revenues for 2012. We expect revenue from IP licensing and royalties to represent a significant portion of our revenues in 2013, although at a significantly reduced level. Our expectation is that our revenue will transition from primarily licensing and royalty to predominately IC product sales.

**Industry Background**

The amount of data being transferred by networking, storage and computing systems is increasing rapidly, primarily driven by the growth of the Internet and demand for real-time processing of bandwidth intensive applications, such as video-on-demand, Internet protocol TV, peer-to-peer and cloud computing, web2.0 applications, 3G and 4G wireless, voice-over-Internet protocol, and many others. In order to meet these demands, the network backbone, access, storage and data center infrastructure must scale in bandwidth and processing capability. In addition, system designers face the challenge of increasing the throughput of all subsystems for a variety of applications, such as video games, medical record and imaging transfers, and file sharing. These increased demands strain communication between onboard IC devices, limiting the data throughput in network switches and routers and the network backbone. To support this trend, the next generations of networking systems must offer higher levels of packet forwarding rates and bandwidth density. This in turn necessitates new generations of packet processors and improved memory subsystems to enable system performance in support of these increased demands.

Networking systems, such as routers and switches, contain network line cards. The type and number of semiconductors included on the line cards depend on the capacity, port type and target functionality of each card. Several types of semiconductors are included on each line card, including physical interface electronics, one or more packet processors and multiple memory chips. Packet processors are complex ICs developed using field programmable gate arrays, or FPGAs, application-specific integrated circuits, or ASICs, application specific standard products, or ASSPs, or network processing units, or NPUs, that perform high speed processing for functions, such as traffic shaping, metering, billing, statistics, detection and steering. Various types of memory ICs are used in order to facilitate the temporary storage and assist in the analysis and tracking of information embedded within each packet flowing through the processors. After a packet enters the line card through a physical interface, a packet or data processor helps separate the packet into smaller pieces for rapid analysis. Typically, the data is broken up into the packet header, which contains vital information on packet destination and type, such as the IP address, and the payload, which contains the data being sent. The packet header is stripped from the packet, stored in memory ICs and processed separately by a packet processing engine on the line card. The analysis of the packet header must occur at full data rates and typically requires accessing memory ICs many times. Simultaneously, the packet's payload, which may be substantially larger than the packet header, is also stored in memory ICs. Once processing is complete, the packet is re-combined to be sent from the system. Within the line card, communication between the packet processor and memory ICs occurs through either a parallel or serial interface. Combinations of physical pins on each type of chip are grouped together in a parallel or serial architecture to form a pathway, called a bus, through which information is transferred from one IC to the next.

Today, the majority of physical buses use a parallel architecture to communicate between processors and memory ICs, which means information can travel only in one direction and in one instance at a time. As processing speeds increase, in a parallel architecture the number of pins required and the speed of the bus become a limitation on system performance and capability. In a serial architecture, the number of connections is reduced substantially across fewer, higher-rate pins and data

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is transferred simultaneously in both directions. High speed serial bus architectures and more advanced I/O protocols must be supported by the various ICs included on the line card in order to remove the bottleneck and meet next generation bandwidth requirements.

The majority of networking systems sold today includes line cards that process data at speeds of 10 Gbps to 40Gbps, supporting many aggregated slower ports. To accommodate the substantial and growing increase in demand for networking communications and applications, networking equipment manufacturers are beginning to produce next-generation systems that run at aggregate speeds of 100 Gbps with plans to scale to thousands of Gbps, or Terabits, per second. Another major challenge to system designers is what we call the "memory performance barrier." Processor performance in applications such as computing and networking have continued to nearly double every 18 months, or even faster, while the performance of memory technology has generally been able to double once every 10 years. Existing memory IC solutions based on parallel I/O architecture easily support speeds up to 40 Gbps, but will struggle to meet speeds of 100 Gbps and beyond due to system-level limitations for pin counts, power and performance. Traditional memory solutions currently used on line cards include both dynamic random access memory, or DRAM, and static random access memory, or SRAM, IC solutions. Line cards in networking systems use both specialized, high-performance DRAM ICs, such as reduced-latency DRAM, or RLDRAM, low-latency DRAM, or LLDRAM, and commodity DRAM, such as double data rate, or DDR ICs. In addition, networking systems use higher-performance SRAM ICs such as quad data rate, or QDR SRAM. Substantially all of these DRAM and SRAM memory ICs use parallel interfaces, which are slower than serial interfaces and will be challenged to meet the performance requirements of networking systems greater than 40 Gbps. The result is a gap between processor and memory performance. To meet the higher performance requirements being demanded by the industry, while using current components and architectural approaches, system designers must add more discrete memory ICs to the line cards. This results in higher cost and power consumption, the use of more space on the line cards and additional communication interference between the ICs, which in turn results in additional bandwidth limitation problems.

To address the bandwidth limitations currently confronting networking system designers, we have developed our Bandwidth Engine family of ICs. We expect our Bandwidth Engine IC products to address the increasing demands placed on conventional memory technology used on the line cards in high-bandwidth networking systems. We believe that our product and technology is required as a replacement for existing memory IC solutions in order to meet the needs of the next-generation networking systems that will require a large number of packet lookups and to support aggregated rates greater than 100 Gbps.

**Bandwidth Engine IC Products**

Our Bandwidth Engine ICs combine: (1) our proprietary high-density, high-speed, low latency embedded memory, (2) our high-speed serial 10 Gbps serial interface technology, or SerDes, (3) an open-standard interface protocol and (4) intelligent access technology. We believe an IC combining our 1T-SRAM memory and serial I/O with logic and other intelligence functions provides a system-level solution and significantly improves overall system performance at lower cost, size and power consumption. Our first-generation Bandwidth Engine ICs can provide over two billion accesses per second, which is more than twice the performance of current memory-based solutions. They also can enable system designers to significantly narrow the gap between processor and memory IC performance. Customers that design Bandwidth Engine ICs onto the line cards in their networking systems will re-architect their systems at the line card level and use our product to replace traditional memory solutions. When compared with existing commercially available solutions, our Bandwidth Engine ICs may:

provide up to four times the performance;

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reduce power by approximately 50%;

reduce cost by greater than 50%; and

result in a dramatic reduction in IC pin counts on the line card.

The Bandwidth Engine is a memory-dominated IC that has been designed to be a high-performance companion IC to packet processors. While the Bandwidth Engine primarily functions as a memory device with a high-performance and high-efficiency interface, it also can accelerate certain processing operations by serving as a co-processor element.

Our first generation Bandwidth Engine IC contains 576 megabytes, or MB, of memory and uses 10.3 Gbps SerDes I/O technology. Variations of this IC can have up to two interface ports, with up to eight serial receiver and eight serial transmitter lanes per port for a total of 16 lanes of 10.3 Gbps SerDes interface. These ICs include an arithmetic logic unit, or ALU, that can perform read-modify-write operations. These ICs are tested to meet or exceed the standards for telecommunications carrier class and enterprise grade applications.

Our second generation Bandwidth Engine IC family and architecture was announced in late 2012. These devices will operate at up to 480 Gbps using sixteen 15 Gbps SerDes lanes. In addition to a speed improvement of up to 50%, the architecture will enable several family member parts with added specialized features. To date, we have announced three devices:

MSR620 adds burst features optimized for oversubscription buffer applications;

MSR720 adds a write cache and memory coherency capability that allows for deterministic look ups optimized for state and que type applications; and

MSR820 delivers increased intelligence for lookup, metering and statistics applications by adding dual counters, atomic and extensive metering functions.

The devices will represent a significant improvement in speed and features, supporting aggregate line rates of up to 400 Gbps and further reduce size, pin count and power. We expect to begin sampling these devices in mid-2013.

*On-chip Functionality*

A significant performance bottleneck in any network line card is the need to transfer data between discrete ICs. Many of these data-transfer operations are iterative in nature, requiring subsequent, back-to-back accesses of the memory IC by the processor IC. Our Bandwidth Engine ICs have an ALU, which enables the Bandwidth Engine IC to perform mathematical operations on data. By moving certain processing functions from the processor IC to the Bandwidth Engine IC through the use of this embedded ALU, the number of I/O transactions is reduced and the processor IC is freed up to perform other networking or micro-processing functions.

*High-Performance Interface*

High-speed, efficient I/Os are critical building blocks to meet high data transfer rate requirements for communication between ICs on network line cards. We believe that current networking equipment system requirements necessitate an industry transition from parallel I/O to serial I/O. As a result, semiconductor companies are increasingly turning to serial I/O architectures to achieve needed system performance. For example, high-performance ICs that are sold into wide markets, such as FPGAs and NPIs, are using serial I/Os to ensure they can match the performance of, and compete with ASICs. Using serial I/O, IC developers also are able to reduce pin count (the wired electrical pins that connect an IC to the network line card on which it is mounted) on the IC. With reducing geometries, the size of most high-performance ICs is dictated by the number of pins required, rather than the amount of

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logic and memory embedded in the chip. As a result, using serial I/O facilitates cost reduction and reduced system power consumption, while improving the performance of both the IC itself and the overall system.

*GigaChip Interface Protocol*

In addition to the physical characteristics of the serial I/O, the protocol used to transmit data is also an important element that impacts speed and performance. To address this and complement our Bandwidth Engine devices, we have developed the GigaChip Interface, or GCI, which is an open-interface transport protocol optimized for efficient chip-to-chip communications. The GCI electrical interface is compatible with the current industry standard (Common Electrical Interface, release #11 or CEI-11). GCI can enable highly efficient serial chip-to-chip communications, and its transport efficiency averages 90% for the data transfers it handles. GCI is included in our Bandwidth Engine ICs, and we are offering it to customers and prospective partners on terms intended to encourage widespread adoption.

*High-Performance and High-Density Memory Architecture*

The Bandwidth Engine uses our proprietary 1T-SRAM high-density memory technology to provide the density of DRAM and the speed of SRAM. The internal multi-bank memory array architecture used in our Bandwidth Engine ICs enables concurrent access operations. We believe that this architecture is also optimized for small algorithmic operations and data transfers, such as packet header analysis.

*Carrier and Enterprise Grade Quality and Reliability*

Networking equipment providers focused on the carrier and enterprise market have rigid performance and reliability standards that they require their IC vendors to achieve. Our Bandwidth Engine architecture and interface are designed for data robustness and employ end-to-end error checking and correction codes. Although the Bandwidth Engine functions as more than a discrete memory device, the onboard memory array represents a significant portion of the total chip area. Memory-dominated devices require substantially different and more robust testing than non-memory ICs in order to achieve the quality and reliability requirements of advanced networking systems. We have considered these requirements for our target customers and market segments and have incorporated appropriate design and manufacturing performance margins into our Bandwidth Engine IC products. As a result, our first generation Bandwidth Engine passed extensive reliability and life tests required for carrier grade qualification certification as part of its release to production.

**Our Technology**

Our historical business was focused on the licensing of our proprietary 1T-SRAM and SerDes I/O technologies. We leveraged our proprietary IP to design our Bandwidth Engine IC. The following discussion explains these technologies in further detail, as well as our historical licensing activities, which have generated substantially all of our revenues in 2012.

***1T-SRAM***

Our innovative 1T-SRAM technologies provide major advantages over a traditional SRAM in cell stability, memory density and power consumption, making it more economical for designers to incorporate large amounts of embedded memory in their designs. In addition, our 1T-SRAM technologies offer all the benefits of the traditional SRAM, such as low latency, high speed and the opportunity to use a simple interface. Our 1T-SRAM technologies can achieve these advantages while



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utilizing standard logic manufacturing processes and providing the simple, standard SRAM interface that designers are accustomed to.

*High-Density*

The high-density of our 1T-SRAM technologies stems from the use of a single-transistor, or 1T, which is similar to DRAM, with a storage cell for each bit of information. Embedded memory utilizing our 1T-SRAM technologies is typically two to three times denser than the six-transistor storage cells used by traditional SRAM, i.e., 6T-SRAM. Increased density enables manufacturers of electronic products, such as cellular phones, video game consoles and digital cameras and camcorders, to incorporate additional functionality into a single IC, generally a SoC, resulting in overall cost savings.

*Low-power Consumption*

Embedded memory utilizing our 1T-SRAM technologies can consume as little as one-half the active power and generate less heat than traditional SRAM when operating at the same speed. This reduces system level heat dissipation and enables reliable operation using lower cost packaging.

*High-speed*

Embedded memory utilizing our 1T-SRAM technologies typically provides speeds essentially equal to or greater than the speeds of traditional SRAM and DRAM, particularly for larger memory sizes. Our 1T-SRAM memory designs can sustain random access cycle times of less than three nanoseconds, significantly faster than embedded 6T-SRAM technology.

*SerDes (I/Os)*

*High-speed*

To meet increasing system performance requirements, which in many cases are being driven by the growth in the Internet and the need to transmit data faster, systems are requiring both more memory and faster communication between ICs in a system. Our interface technology includes high-speed serial I/Os, called SerDes. Our SerDes technology allows for fast exchange of data between ICs in the system and can support data rates of 2.5 to 11 Gbps in a number of protocols, including XAUI, 10G KR and PCI Express (generations 1 to 3). We are developing next generation SerDes solutions, which we are targeting to achieve data rates of 15 Gbps and support advanced geometry nodes, such as 28 nanometers, primarily for use in our IC products.

*Interoperability*

We make our I/O technologies compliant with industry standards so that they can interoperate with interfaces on existing ICs. In addition, we make them programmable to support multiple data rates, which allows for greater flexibility for the system designer, while lowering their development and validation costs. Interoperability reduces development time, thereby reducing the overall time to market of our licensees' ICs.

*Low power*

While SerDes I/Os provide significantly enhanced performance over parallel I/Os, SerDes I/Os have higher power consumption, which is a challenge for IC designers. Our SerDes I/Os are tuned for low-power consumption to meet our customers' stringent power consumption requirements.

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**Our Strategy**

Our primary business objective is to become an IP-rich fabless semiconductor company offering ICs that deliver unparalleled bandwidth performance for next generation networking systems. The key components of the expansion of our strategic plan to become an IC supplier include the following IC-focused strategies:

*Target Large and Growing Markets*

Our initial strategy is to target the multi-billion dollar networking and telecommunications equipment market, which includes OEM companies such as Alcatel-Lucent, Brocade Communications Systems, Inc., Cisco Systems, Inc., Tel. LM Ericsson, Fujitsu Ltd., Hitachi Ltd., Huawei Technologies, Juniper Networks, Inc., Nokia Siemens Networks, ZTE Corporation, and others. To date, we have secured two design wins with networking and telecommunications OEMs. A "design win" means that the customer has completed its prototype evaluation, frozen its line-card specification and informed us that its next generation systems will use our Bandwidth Engine IC. We are engaged with multiple other customers, where we are working to achieve design wins, and we refer to these engagements as design-wins-in-progress.

*Leverage Technologies to Create New Products*

Our strategy is to combine our proprietary IP and design and applications expertise to address the needs of several upcoming generations of advanced networking equipment. We believe an IC combining our 1T-SRAM and serial I/O with logic, such as in an ALU, and other functions can provide a system-level solution and significantly improve overall system performance at lower cost while using less power. We intend to develop a Bandwidth Engine product portfolio that can serve a wide range of system performance requirements and provide cost reduction options. In addition, we can provide customized IC solutions to customers using their proprietary technology and architecture, which would allow for improved communication between our Bandwidth Engine IC and the customer's packet processor.

Another strategy is to leverage our high-speed serial I/O to create non-memory denominated ICs, which will work alongside the Bandwidth Engine ICs on 100 Gbps and higher system solutions. This will provide our customers with a more complete solution, and possibly allow us to sell a chipset containing multiple MoSys ICs.

*Expand Adoption of the GigaChip Interface Protocol*

Our goal is for our GCI interface protocol to become an open industry standard that is designed into other ICs in the system, as we believe this will further enable serial communication on network line cards and encourage adoption of our Bandwidth Engine IC products. Since 2010, we have publicly announced the following IC providers that intend to support GCI: Altera Corporation, Avago Technologies, Inc., LSI, Inc., NetLogic Microsystems, Inc. (acquired by Broadcom Corporation, or Broadcom), Renesas Electronics Corporation, or Renesas, and Xilinx, Inc. In addition, multiple network equipment companies, including actual and prospective customers, have adopted GCI.

*Build Long-Term Relationships with Suppliers of Packet Processors*

A key consideration of network system designers is to demonstrate interoperability between our Bandwidth Engine IC and the packet processors utilized in their systems. To obtain design wins for our Bandwidth Engine IC, we must demonstrate this interoperability, and also show that our IC works optimally with the packet processor to achieve the performance requirements. In addition, packet processor suppliers must adopt our GCI interface. To that end, we have been working closely with FPGA, ASIC and NPU providers, to enable interoperability between our Bandwidth Engine IC products and their high-performance products. To facilitate the acceptance of our Bandwidth Engine

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ICs, we have made available development and characterization kits for system designers to evaluate and develop code for next-generation networking systems. Our characterization kits are fully-functional hardware platforms that allow FPGA and ASIC providers, and their customers, to demonstrate interoperability of the Bandwidth Engine IC with the ASIC or FPGA the designers use within their networking systems. As we engage with ASSP and NPU providers, we will be developing characterization kits to support their products as well. We believe that having long-term relationships with packet processor providers is critical to our success, as such relationships may enable us to speed our time-to-market, provide us with a competitive advantage and expand our target markets.

**Licensing and Distribution Strategy for our IP**

Historically, we have offered our memory and I/O technologies on a worldwide basis to semiconductor companies, electronic product manufacturers, foundries, intellectual property companies and design companies through product development, technology licensing and joint marketing relationships. We licensed our IP technology to semiconductor companies who incorporated our technology into ICs that they sold to their customers. As a result of the change in our corporate strategy, beginning in 2012, our IP licensing activities have been limited and this is expected to continue. We intend to avoid future licensing projects that require significant use of our engineering resources, as our engineering personnel are now focused on our IC products. However, during 2012, substantially all of our revenues were generated from licensing and royalties related to our existing licensing arrangements, as we continue to perform and deliver under outstanding license agreements and collect royalties from 1T-SRAM licensees. To date, we have substantially completed our performance obligations under our existing agreements, and, as a result, we expect licensing revenues to decline in 2013.

Customers in the United States accounted for 41%, 39% and 38% of our revenues for the years ended December 31, 2012, 2011 and 2010, respectively. Customers in Japan accounted for 26%, 33% and 43% of our revenues for the years ended December 31, 2012, 2011 and 2010, respectively. Customers in Taiwan accounted for 28%, 23% and 18% of our revenues for the years ended December 31, 2012, 2011 and 2010, respectively. Our remaining revenues were from customers in the rest of Asia and in Europe.

*Project Licenses*

Historically, we formed product development and IP licensing relationships directly with semiconductor companies. In these relationships, the prospective licensee's implementation of our technologies typically included customized development. Usually, these relationships involved both engineering work to implement our technology in the specified product and licensing the technology for manufacture and sale of the product. Although the precise terms contained in our license agreements vary, they generally include licensing fees and development fees for customizations based on the achievement of specified development milestones and royalties. The vast majority of our contracts allow for milestone billings based on work performed. If we perform the contracted services, usually the licensee is obligated to pay the license fees even if the licensee cancels the project prior to completion. The agreements often also provide for the payment of additional contract fees if we provide engineering or manufacturing support services related to the manufacture of the product. Provisions in our memory license agreements generally require the payment of royalties to us based on the future sale or manufacture of products utilizing our technologies. Generally, our project licenses grant rights on a non-exclusive, non-transferable basis, limited to the use of our technology as modified for the project covered by the license agreement. Our license agreements generally have a fixed term and are subject to renewal. Each new project requires a separate agreement or an addendum to modify an existing agreement. We are not expecting to enter into similar kinds of projects in the future, as such licenses generally require significant engineering effort and support.

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*Technology Licenses*

Historically, we also offered our technology to semiconductor companies and foundries through 1T-SRAM and I/O technology license agreements, under which we granted the licensee the additional right to create and modify designs to offer to its own customers or use internally. The contract fees associated with these arrangements typically require the licensee to pay us to port our technology to the licensee's manufacturing process and develop a template design that the licensee will be able to use to generate future designs. These agreements also may obligate the licensee to pay contract fees upon the achievement of specified development milestones and may provide for the payment of additional contract fees for engineering or manufacturing support services. Our memory technology license agreements include royalty provisions based on the sale or manufacture of products utilizing our technologies. The technology licenses are non-transferable and authorize the licensee to modify designs for its customers or internal use from the template design that we provide under the agreement. Typically, the template design applies only to a specified manufacturing process generation or specific application. The licensee may add future process generations or uses to the license agreement for additional contract fees.

**Research and Development**

Our ability to compete in the future depends on successfully improving our technology to meet the market's increasing demand for higher performance and lower cost requirements. We have assembled a team of highly skilled engineers whose activities are focused on developing higher density, higher bandwidth, higher speed and lower cost next generation IC products. Development of our Bandwidth Engine IC products requires the hiring of specialized chip design and product engineers, as well as significant fabrication and testing costs, including mask costs, as we bring these products to market. Our significant future research and development activities will include:

designing next generation ICs with larger memory blocks and higher-speed SerDes;

developing versions of our initial Bandwidth Engine IC with alternative features, such as lower-speed SerDes, increased intelligence or smaller memory blocks to allow us to serve a broader range of applications and systems;

porting our 1T-SRAM and SerDes technology to more advanced foundry process nodes; and

developing new products that can leverage our proprietary IP portfolio and expand our market opportunity.

No development efforts are being dedicated to creating new or enhanced technology solely for use in licensing offerings.

As of December 31, 2012, we employed 76 individuals in engineering and research and development, of which 17 were employed in our design center in Hyderabad, India. For the years ended December 31, 2012, 2011 and 2010, research and development expenditures totaled approximately \$28.5 million, \$26.2 million and \$25.5 million, respectively.

**Sales and Marketing**

As of December 31, 2012, we had 7 sales and marketing personnel managing and supporting our efforts to secure design wins for our IC products. Our sales and marketing personnel are located in the United States, Japan and China. In addition to our direct sales team, we sell our technologies through sales representatives and distributors in the United States and Asia.

Our IP revenue has been highly concentrated, with a few customers accounting for a significant percentage of our total revenue. For the year ended December 31, 2012, Taiwan Semiconductor Manufacturing Co., Ltd., or TSMC, Broadcom and Renesas, represented 28%, 26% and 12% of total revenue, respectively. For the year ended December 31, 2011, TSMC, Renesas, and Broadcom represented 23%, 17% and 12% of total revenue, respectively. For the year ended December 31, 2010, Renesas, TSMC and Rohm Co., Ltd. represented 23%, 18% and 15% of total revenue, respectively.

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**Intellectual Property**

We regard our patents, copyrights, trademarks, trade secrets and similar intellectual property as critical to our success, and rely on a combination of patent, trademark, copyright, and trade secret laws to protect our proprietary rights.

As of December 31, 2012, we held approximately 70 U.S. and 35 foreign patents on various aspects of our technology, with expiration dates ranging from 2013 to 2031. We currently have approximately 80 pending patent applications in the U.S. and abroad. There can be no assurance that others will not independently develop or patent similar or competing technology or design around any patents that may be issued to us, or that we will be able to successfully enforce our patents against infringement by others.

In December 2011, we sold 43 United States and 30 related foreign memory technology patents for \$35 million in cash pursuant to a patent purchase agreement. Under the agreement, we retained a license to all of the sold patents that is unlimited with respect to our development, manufacturing and distribution of our Bandwidth Engine IC product line and any other proprietary products that we develop as long as they are not DRAM ICs. We also retained the rights necessary to renew existing 1T-SRAM licenses and to grant licenses similar in scope to identified foundries. We also retained rights to grant licenses for our second source purposes, to enable certain kinds of technology development and to a limited extent, for certain ASIC products that incorporate one of our technology macros. However, the patent purchase agreement limits our rights to grant licenses under the sold patents outside the scope of our retained license and, in particular, limits the number of future licenses of 1T-SRAM memory technology that we can grant to developers of SoCs, which used to be the principal focus of our 1T-SRAM licensing activities.

The semiconductor industry is characterized by frequent litigation regarding patent and other intellectual property rights. Our licensees or we might, from time to time, receive notice of claims that we have infringed patents or other intellectual property rights owned by others. Our successful protection of our patents and other intellectual property rights and our ability to make, use, import, offer to sell, and sell products free from the intellectual property rights of others are subject to a number of factors, particularly those described in Part I, Item 1A, "Risk Factors."

**Competition**

The markets for our Bandwidth Engine IC products are highly competitive. We believe that the principal competitive factors are:

processing speed and performance;

density and cost;

low-power consumption;

reliability;

interface requirements;

ease with which technology can be customized for and incorporated into customers' products; and

level of technical support provided.

We believe that we can compete favorably with respect to each of these criteria. Using our proprietary 1T-SRAM embedded memory and high-speed serial I/O IP provides our Bandwidth Engine ICs with a competitive advantage over alternative devices. Alternative solutions are either DRAM or SRAM-based and can support either the memory size or speed requirements of high-performance

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networking systems, but generally not both. DRAM solutions provide a significant amount of memory at competitive cost, but DRAM solutions do not have the required fast access and cycle times to enable high-performance. The DRAM solutions currently used in networking systems include RLDRAM from Micron Technology, Inc. and Integrated Silicon Solutions, Inc., LLDRAM from Renesas and DDR from Samsung Electronics Co., Ltd., or Samsung, Micron and others. SRAM solutions can meet high-speed performance requirements, but often lack adequate memory size. The SRAM solutions currently used in networking systems primarily include QDR or similar SRAM products from Cypress Semiconductor Corporation, GSI Technology, Inc. and Samsung. The majority of the currently available SRAM and DRAM solutions use a parallel, rather than a serial I/O. To offset these drawbacks, system designers generally use more discrete memory ICs, resulting in higher power consumption and greater utilization of space on the line card. Our competitors include established semiconductor companies with significantly longer operating histories, greater name recognition and reputation, large customer bases, dedicated manufacturing facilities and greater financial, technical, sales and marketing resources. This may allow them to respond more quickly than us to new or emerging technologies or changes in customer requirements. Many of our competitors also have significant influence in the semiconductor industry. They may be able to introduce new technologies or devote greater resources to the development, marketing and sales of their products than we can. Furthermore, in the event of a manufacturing capacity shortage, these competitors may be able to manufacture products when we are unable to do so.

Our Bandwidth Engine ICs compete with embedded memory solutions, stand-alone memory ICs, including both DRAM and SRAM ICs, and ASICs designed by customers in-house to meet their system requirements. Our prospective customers may be unwilling to adopt and design-in our ICs due to the uncertainties and risks surrounding designing a new IC into their systems and relying on a supplier that has almost no history of manufacturing such ICs. In addition, Bandwidth Engine ICs require the customer and its other IC suppliers to implement our new chip-to-chip communication protocol, GCI. These parties may be unwilling to do this if they believe it could adversely impact their own future product developments or competitive advantages, or if they believe it might complicate their development process or increase the cost of their products. In order to remain competitive, we believe we must provide unparalleled memory IC solutions with the highest bandwidth capability for our target markets, which solutions are engineered and built for high-reliability carrier class and enterprise applications.

**Manufacturing**

We depend on third-party vendors to manufacture, package, assemble and production test our Bandwidth Engine IC products, as we do not own or operate a semiconductor fabrication, packaging or production testing facility for boards and system assembly. By outsourcing manufacturing, we are able to avoid the high cost associated with owning and operating our own facilities, allowing us to focus our efforts on the design and marketing of our products.

*Manufacturing and Testing.* We use TSMC to manufacture and ASE, Inc. and Evans Analytical Group, LLC, or EAG, to assemble, package and production test, our IC products. We utilize eSilicon Corporation to assist with the management and support of certain of our manufacturing and testing operations.

*Quality Assurance.* We maintain an ongoing review of product manufacturing and testing processes. Our IC products are subjected to extensive testing to assess whether their performance exceeds the design specifications. Our test vendors provide us with immediate test data and the ability to generate characterization reports that are made available to our customers.

Table of Contents**Employees**

As of December 31, 2012, we had 95 employees, consisting of 76 in research and development and engineering, 7 in sales and marketing and 12 in finance and administration. By location, we had 76 employees in the United States, 17 in our development center in India and 2 sales and marketing employees in Asia. We believe our future success depends, in part, on our ability to continue to attract and retain qualified technical and management personnel, particularly highly skilled design engineers involved in new product development, for which competition is intense. We believe that our employee relations are good.

**Available Information**

We were founded in 1991 and reincorporated in Delaware in September 2000. Our website address is [www.mosys.com](http://www.mosys.com). The information in our website is not incorporated by reference into this report. Through a link on the Investor section of our website, we make available our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and any amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934 as soon as reasonably practicable after they are filed with, or furnished to, the Securities and Exchange Commission, or SEC. You can also read and copy any materials we file with the SEC, at the SEC's Public Reference Room at 450 Fifth Street, NW, Washington, DC 20549. You can obtain additional information about the operation of the Public Reference Room by calling the SEC at 1.800.SEC.0330. In addition, the SEC maintains a website ([www.sec.gov](http://www.sec.gov)) that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC, including us.

**Executive Officers**

The names of our executive officers and certain information about them are set forth below:

Name	Age	Position(s) with the Company
Leonard Perham	69	President and Chief Executive Officer
James W. Sullivan	44	Vice President of Finance and Chief Financial Officer
Thomas Riordan	56	Chief Operating Officer and Executive Vice President

*Leonard Perham*, Mr. Perham was appointed President and Chief Executive Officer in November 2007. Mr. Perham was one of the original investors in MoSys and served on our Board of Directors from 1991 to 1997. In 2000, Mr. Perham retired from Integrated Device Technology, Inc., or IDT, where he served as Chief Executive Officer from 1991 and President and board member from 1986. From March 2000 to February 2012, Mr. Perham served as a member of or chairman of the board of directors of NetLogic Microsystems, a fabless semiconductor company. Mr. Perham also has been a venture partner with AsiaTech Management, a venture capital firm. Prior to joining IDT, Mr. Perham was President and CEO of Optical Information Systems, Inc., a division of Exxon Enterprises. He was also a member of the founding team at Zilog, Inc. and held management positions at Advanced Micro Devices and Western Digital. Mr. Perham received a Bachelor of Science degree in Electrical Engineering from Northeastern University.

*James W. Sullivan*, Mr. Sullivan became our Vice President of Finance and Chief Financial Officer in January 2008. From July 2006 until January 2008, Mr. Sullivan served as Vice President of Finance and Chief Financial Officer at Aaptera, Inc., a venture-backed company providing software for mobile advertising, search and commerce. From July 2002 until June 2006, Mr. Sullivan was the Chief Financial Officer at 8x8, Inc., a provider of voice over internet protocol communication services. Mr. Sullivan's prior experience includes various positions at 8x8, Inc. and PricewaterhouseCoopers LLP.

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He received a Bachelor of Science degree in Accounting from New York University and is a Certified Public Accountant.

*Thomas Riordan*, Mr. Riordan became our Chief Operating Officer and Executive Vice President in May 2011. Prior to joining the Company, Mr. Riordan was President and Chief Executive Officer of Exclara, a fabless semiconductor supplier of ICs for solid-state lighting from 2006 until 2010. From 2000 to 2004, Mr. Riordan served as Vice President of PMC-Sierra's microprocessor division. Mr. Riordan joined PMC-Sierra in August 2000 when it purchased Quantum Effects Devices, which he had co-founded and served as President and Chief Executive Officer. Mr. Riordan serves on the board of directors of Mellanox Technologies and PLX Technology. Mr. Riordan holds Bachelor of Science and Master of Science degrees in Electrical Engineering as well as a Bachelor of Arts degree in Government from the University of Central Florida and has done post-graduate work in Electrical Engineering at Stanford University.

**Item 1A. Risk Factors**

*If any of the following risks actually occur, our business, results of operations and financial condition could suffer significantly.*

***We have a history of losses and are uncertain as to our future profitability.***

We recorded an operating loss of \$31.0 million, excluding the one-time gain on sale of assets of \$3.3 million, for the year ended December 31, 2012 and ended the period with an accumulated deficit of \$93.0 million. We recorded an operating loss of \$24.3 million, excluding the one-time gain on sale of patents of \$35.6 million, for the year ended December 31, 2011 and ended the period with an accumulated deficit of \$65.4 million. In addition, we recorded an operating loss of \$23.2 million for the year ended December 31, 2010. We expect to continue to incur operating losses for the foreseeable future as we secure customers for and invest in the commercialization of our IC products. Due to the strong commitment of our resources to research and development and expansion of our offerings to customers, we will need to increase revenues substantially beyond levels that we have attained in the past in order to generate sustainable operating profit. Given our history of fluctuating revenues and operating losses, the expected reduction in royalty and licensing revenues and challenges we face in securing customers for our IC products, we cannot be certain that we will be able to achieve profitability on either a quarterly or annual basis in the future.

***Our success depends upon the semiconductor market's acceptance of our Bandwidth Engine ICs.***

The future prospects of our business depend on the adoption and acceptance by our target markets of our Bandwidth Engine ICs. In 2011, we began focusing our engineering, marketing and sales efforts on our IC products and de-emphasizing our technology licensing activities, which historically have been our primary revenue source. Our primary focus is on obtaining design wins, or winning competitive bids, in which customers select our IC products to design into their systems. Our prospective customers may be unwilling to adopt and design-in our ICs due to the uncertainties and risks surrounding designing a new IC into their systems and relying on a supplier that has almost no history of manufacturing such ICs. In addition, our Bandwidth Engine IC products require our customers and their other IC suppliers to implement our new and proprietary chip-to-chip communication protocol, GCI, which they may be unwilling to do. We have determined and negotiated prices with a few customers for our ICs and have gained only limited experience with the cost of making and selling these products. Thus, currently we do not know whether we will be able to profitably make and sell these products. We are investing significant resources to develop our next generation IC products, but may not introduce these new products successfully or obtain significant revenue from them.



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An important part of our strategy to gain market acceptance is to penetrate new markets by targeting market leaders to accept our IC solutions. This strategy is designed to encourage other participants in those markets to follow these leaders in adopting our solutions. If a high-profile industry participant adopts our ICs for one or more of its products but fails to achieve success with those products, or is unable to successfully implement our ICs, other industry participants' perception of our solutions could be harmed. Any such event could reduce the amount of future sales of our IC products.

***We utilize a limited number of suppliers to manufacture our integrated circuits, and, if any of these suppliers fail to support future versions of our technology, it will be difficult for us to develop and introduce new products and our business may not grow.***

We are a fabless semiconductor company and use a limited number of suppliers to manufacture our integrated circuits, and certain of these suppliers, such as our foundry, TSMC, are sole sources. We are dependent upon supply from TSMC and other suppliers to produce our integrated circuits. Furthermore, we are dependent on TSMC to support the production of wafers for future versions of our integrated circuits, and such production may require changes to TSMC's existing process technology. If TSMC elects to not alter their process technology to support future versions of our integrated circuits, we would need to identify a new foundry. Even if TSMC alters its production processes to produce wafers for future versions of our integrated circuits, we may experience lower than anticipated manufacturing yields and device reliability problems due to the introduction of changes in production processes. Our inability to obtain supply for our existing and future integrated circuit products or to obtain the support of third party foundries for the development and manufacture of our products at smaller process geometries could materially and adversely affect our ability to achieve our strategic product development objectives and limit our prospects for future growth.

In addition, we do not have long-term supply contracts with TSMC or any of our other manufacturing suppliers, and, therefore, such suppliers are not obligated to manufacture products for us or meet our supply requirements. In addition, such suppliers are under no obligation to meet our future design specifications, except as may be provided in a particular purchase order. If we are unable to obtain an adequate supply of our current or future products from our suppliers or find alternative sources in a timely manner, we will be unable to fulfill our customer orders and our operating results will be harmed.

Because the manufacturing of integrated circuits is extremely complex, the process of qualifying a new foundry and/or other suppliers is a lengthy process and there can be no assurance that we will be able to find and qualify replacement suppliers without materially adversely affecting our business, financial condition, results of operations and prospects for future growth.

***We may not achieve the anticipated benefits of becoming a fabless semiconductor company by developing and bringing to market the Bandwidth Engine IC product line.***

In 2010, we expanded our business model to become a fabless semiconductor company through the development of a product line of ICs called the Bandwidth Engine. Our goal is to increase our total available market by creating high-performance ICs for networking systems, using our proprietary technology and design expertise. This development effort has required that we add significant headcount and design resources, such as expensive software tools, which has increased our losses from and cash used in operations. We may not be successful in our development efforts to bring Bandwidth Engine ICs to market successfully nor be successful in selling ICs due to various risks and uncertainties, including, but not limited to:

customer acceptance;

adoption of the GCI protocol;

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difficulties and delays in our development, production, testing and marketing activities;

the anticipated costs and technological risks of developing and bringing ICs to market;

the willingness of our manufacturing partners to assist successfully with fabrication;

the availability of quantities of ICs supplied by our manufacturing partners at a competitive cost;

our ability to generate the desired gross margin percentages and return on our product development investment;

competition from established IC suppliers;

the adequacy of our intellectual property protection for our proprietary IC designs and technologies;

the vigor and growth of markets served by our current and prospective customers; and

our lack of recent experience as a fabless semiconductor company making and selling proprietary ICs.

If we experience significant delays in bringing our IC products to market or if customer adoption of our products is delayed, we may need to raise additional capital to support the product development efforts and fund our working capital needs.

***Our main objective is the development and sale of our products to networking and communications systems providers and their subsystem and component vendors, and, if demand for these products does not grow, we may not achieve revenue growth and our strategic objectives.***

We market and sell our ICs to networking and communications systems providers and their subsystem and component vendors. We believe our future business and financial success depends on market acceptance and increasing sales of these products. In order to meet our growth and strategic objectives, networking infrastructure OEMs must incorporate our products into their systems, and the demand for their systems must grow as well. We cannot provide assurance that sales of products will increase substantially in the future or that the demand for our customers' systems will increase. Our future revenues from these products may not increase in accordance with our growth and strategic objectives if instead our OEM customers modify their product designs, select products sold by our competitors or develop their own proprietary ICs. Thus, the future success of this part of our business depends in large part on factors outside our control, and sales of our products may not meet our revenue growth and strategic objectives.

***The Bandwidth Engine ICs have a lengthy sales cycle, which makes it difficult to predict success in this market and the timing of future revenue.***

Bandwidth Engine ICs have a lengthy sales cycle, ranging from six to 24 months from the date of our initial proposal to a prospective customer until the date on which the customer confirms that it has designed our product into its system. As lengthy, or an even lengthier period, could ensue before we would know the volume of products that such customer will, or is likely to, order. A number of factors can contribute to the length of the sales cycle, including technical evaluations of our products by the customers, the design process required to integrate our products into the customers' products and the timing of the customers' new product announcements. In anticipation of product orders, we may incur substantial costs before the sales cycle is complete and before we receive any customer payments. As a result, in the event that a sale is not completed or is cancelled or delayed, we may have incurred substantial expenses, making it more difficult for us to become profitable or otherwise negatively impacting our financial results. Furthermore, because of this lengthy sales cycle, the recording of revenue from our selling efforts may be substantially delayed, our ability to forecast our future revenue



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may be more limited and our revenue may fluctuate significantly from quarter to quarter. We cannot provide any assurances that our efforts to build a strong and profitable business based on the Bandwidth Engine ICs will succeed. If these efforts are not successful, in light of the substantial resources that we have invested, our future operating results and cash flows could be materially adversely affected.

***We expect our licensing and royalty revenues to decrease compared with our historical results, and we do not expect revenues from our IC products to replace these lost revenues in the near future.***

In 2011, we began to place greater emphasis on our IC business and re-deploy engineering, marketing and sales resources from IP to IC activities. We are no longer actively pursuing new license arrangements, and, as a result, our license and royalty revenues in 2012 declined when compared with prior years. We do not expect to generate sufficient revenues from our IC products to approximate the level of our historical IP revenues and allow us to achieve profitability in 2013. As a result, our operating results, cash flows and financial condition for 2013 are likely to be adversely affected.

***The semiconductor industry is cyclical in nature and subject to periodic downturns, which can negatively affect our revenue.***

The semiconductor industry is cyclical and has experienced pronounced downturns for sustained periods of up to several years. To respond to any downturn, many semiconductor manufacturers and their customers will slow their research and development activities, cancel or delay new product developments, reduce their workforces and inventories and take a cautious approach to acquiring new equipment and technologies. As a result, our business has been in the past and could be adversely affected in the future by an industry downturn, which could negatively impact our future revenue and profitability. Also, the cyclical nature of the semiconductor industry may cause our operating results to fluctuate significantly from year-to-year, which may tend to increase the volatility of the price of our common stock.

***Royalties generated from the licensing of our memory technologies are currently a key component of revenues, and, if we fail to realize expected royalties, our operating results will suffer.***

We are relying on the receipt of future royalties to provide working capital to partially fund our investment in our IC product line. Royalty payments owed to us are calculated based on factors such as our licensees' selling prices, wafer production and other variables as provided in each license agreement. The amount of royalties we will receive depends on our licensees' business success, production volumes and other factors beyond our control. This exposes our business model to risks that we cannot minimize directly and may result in significant fluctuations in our royalty revenue and operating results from quarter-to-quarter. We do not expect to enter into any new memory technology licensing activities, therefore the number of royalty-bearing agreements will not increase and contribute to our royalty stream. In addition, the production volumes of the current royalty-bearing products shipped by our licensees are expected to decrease; therefore we do not expect our royalty revenue to grow in future periods. If we are unable to generate as much royalty revenue in the future as we believe will be necessary to partially fund our investment in our IC product line, we may need to raise capital from other sources.

***Our revenue has been highly concentrated among a small number of licensees and customers, and our results of operations could be harmed if we lose a key revenue source and fail to replace it.***

Our overall revenue has been highly concentrated, with a few customers accounting for a significant percentage of our total revenue. For the year ended December 31, 2012, our three largest customers represented 28%, 26%, and 12% of total revenue, respectively. For the year ended December 31, 2011, our three largest customers represented 23%, 17% and 12% of total revenue

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respectively. For the year ended December 31, 2010, our three largest customers represented 23%, 18% and 15% of total revenue, respectively. We expect that a relatively small number of licensees will continue to account for a substantial portion of our revenue for the foreseeable future.

Our royalty revenue also has been highly concentrated among a few licensees, and we expect this trend to continue for the foreseeable future. In particular, a substantial portion of our licensing and royalty revenue in 2012, 2011 and 2010 has come from the license fees and royalties for integrated circuits supplied by one integrated device manufacturer, or IDM, for Nintendo® gaming devices that incorporate our 1T-SRAM technology. Royalties earned for the sale of Nintendo gaming devices from this customer represented 11%, 16% and 22% of total revenue in 2012, 2011 and 2010, respectively. In 2012, Nintendo introduced a new gaming system, which does not incorporate our technology, which will cause a reduction in royalties we receive related to the existing gaming devices.

As a result of this revenue concentration, our results of operations could be impaired by the decision of a single key licensee or customer to cease using our technology or products or by a decline in the number of products that incorporate our technology that are sold by a single licensee or customer or by a small group of licensees or customers.

***Our revenue concentration may also pose credit risks, which could negatively affect our cash flow and financial condition.***

We might also face credit risks associated with the concentration of our revenue among a small number of licensees and customers. As of December 31, 2012, three customers represented 100% of total trade receivables. Our failure to collect receivables from any customer that represents a large percentage of receivables on a timely basis, or at all, could adversely affect our cash flow or results of operations and might cause our stock price to fall.

eft"> 866,520 Primary Health Properties PLC 138,725 215,428 Sabra Health Care REIT, Inc. 10,556 193,284 Welltower, Inc. 21,572 1,152,808 2,428,040 REITS-Hotels (1.96%) Far East Hospitality Trust 1,430,000 727,941 Japan Hotel REIT Investment Corp. 1,200 908,892 Park Hotels & Resorts, Inc. 22,972 661,134 Sunstone Hotel Investors, Inc. 20,000 312,000 2,609,967 REITS-Manufactured Homes (0.96%) Sun Communities, Inc. 13,643 1,280,396 REITS-Mortgage (0.50%) CYS Investments, Inc. 93,100 667,527 REITS-Office Property (4.90%) Alexandria Real Estate Equities, Inc. 8,930 1,112,410 alstria office REIT-AG 20,000 300,934 City Office REIT, Inc. 154,362 1,756,640 Daiwa Office Investment Corp. 50 295,920 Kilroy Realty Corp. 7,300 523,191 MCUBS MidCity Investment Corp. 1,675 1,264,064 Propertylink Group<sup>(c)</sup> 1,619,252 1,255,626 6,508,785 REITS-Regional Malls (3.07%) CapitaLand Retail China Trust 369,500 437,492 Simon Property Group, Inc. 10,600 1,657,204 Tanger Factory Outlet Centers, Inc. 71,000 1,558,450

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## Principal Real Estate Income Fund Statement of Investments

*April 30, 2018 (Unaudited)*

Description	Shares	Value (Note 2)
REITS-Regional Malls (3.07%) (continued)		
Taubman Centers, Inc.	7,600	\$425,448
		4,078,594
REITS-Shopping Centers (4.96%)		
Aventus Retail Property Fund, Ltd.	117,094	189,532
Brixmor Property Group, Inc.	32,500	483,925
DDR Corp.	132,000	957,000
Eurocommercial Properties NV	26,783	1,122,308
Fortune Real Estate Investment Trust	364,000	431,773
Kenedix Retail REIT Corp.	436	923,688
Kimco Realty Corp.	32,000	464,320
Link REIT	129,500	1,148,376
NewRiver REIT PLC	219,556	876,562
		6,597,484
REITS-Single Tenant (1.55%)		
Spirit Realty Capital, Inc.	208,000	1,674,400
STORE Capital Corp.	15,349	387,255
		2,061,655
REITS-Storage (0.49%)		
CubeSmart	22,000	647,680
REITS-Warehouse/Industrials (4.97%)		
Gramercy Property Trust	45,055	1,058,793
Industrial & Infrastructure Fund Investment Corp.	224	248,138
Liberty Property Trust	12,200	510,204
Macquarie Mexico Real Estate Management SA de CV	480,000	514,339
PLA Administradora Industrial S de RL de CV	165,100	264,484
Prologis, Inc.	24,000	1,557,840
Terreno Realty Corp.	11,000	408,650
WPT Industrial Real Estate Investment Trust	158,441	2,048,642
		6,611,090
Storage/Warehousing (0.21%)		
Safestore Holdings PLC	36,000	271,595
<b>TOTAL COMMON STOCKS</b>		
(Cost \$64,383,735)		69,379,213

Rate	Maturity Date	Principal Amount	Value (Note 2)
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COMMERCIAL MORTGAGE BACKED SECURITIES (89.70%)

Commercial Mortgage Backed Securities-Other (14.44%)

Bank of America Commercial Mortgage Trust 2008-1 <sup>(d)</sup>	6.717%	02/10/51	\$ 119,808	\$ 119,700
DBJPM Mortgage Trust 2017-C6 <sup>(d)(e)</sup>	1.182%	06/10/27	26,176,526	1,758,775
FHLMC Multifamily Structured Pass Through Certificates <sup>(d)(e)</sup>	1.667%	01/25/26	9,690,000	985,883

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## Principal Real Estate Income Fund Statement of Investments

April 30, 2018 (Unaudited)

	Rate	Maturity Date	Principal Amount	Value (Note 2)
Commercial Mortgage Backed Securities-Other (continued)				
FHLMC Multifamily Structured Pass Through Certificates <sup>(d)(e)</sup>	1.714%	06/25/42	\$27,830,000	\$465,404
FHLMC Multifamily Structured Pass Through Certificates <sup>(d)(e)</sup>	1.970%	12/25/18	59,523,998	570,526
FHLMC Multifamily Structured Pass Through Certificates <sup>(d)(e)</sup>	3.615%	06/25/21	9,000,000	862,421
JPMorgan Chase Commercial Mortgage Securities Trust 2006-CIBC17 <sup>(d)</sup>	5.489%	12/12/43	1,553,573	1,298,714
JPMorgan Chase Commercial Mortgage Securities Trust 2013-C15 <sup>(b)(d)(e)</sup>	1.687%	10/15/23	11,500,000	803,004
JPMorgan Chase Commercial Mortgage Securities Trust 2014-C21 <sup>(b)(d)</sup>	3.900%	07/15/24	12,747,500	8,910,371
JPMorgan Chase Commercial Mortgage Securities Trust 2017-JP6 <sup>(d)(e)</sup>	1.478%	05/15/27	11,943,848	874,366
LB Commercial Mortgage Trust 2007-C3 <sup>(d)</sup>	6.094%	07/15/44	216,426	220,359
LB-UBS Commercial Mortgage Trust 2006-C7	5.407%	11/15/38	1,253,443	961,288
Morgan Stanley Capital I Trust 2016-UB11 <sup>(b)(d)(e)</sup>	1.500%	08/15/26	13,495,500	1,362,154
				19,192,965
Commercial Mortgage Backed Securities-Subordinated (75.26%)				
BANK 2017-BNK5 <sup>(b)(d)</sup>	4.259%	07/15/27	7,500,000	4,980,984
BANK 2017-BNK9 <sup>(b)</sup>	3.367%	11/15/54	5,000,000	3,163,321
Bank of America Commercial Mortgage Trust 2016-UBS10 <sup>(b)</sup>	3.000%	05/15/26	3,500,000	2,542,759
BENCHMARK Mortgage Trust 2018-B1 <sup>(b)(d)</sup>	3.000%	01/15/51	11,500,000	7,146,413
CD Commercial Mortgage Trust 2017-CD5 <sup>(b)</sup>	3.350%	08/15/50	3,000,000	2,402,605
CFCRE Commercial Mortgage Trust 2016-C3 <sup>(b)(d)</sup>	3.052%	01/10/26	5,484,000	4,150,151
CFCRE Commercial Mortgage Trust 2016-C7 <sup>(b)(d)</sup>	4.588%	12/10/26	1,500,000	1,257,233
Commercial Mortgage Pass Through Certificates <sup>(b)(d)</sup>	3.496%	01/10/24	2,000,000	1,193,076
Commercial Mortgage Trust 2012-CCRE2 <sup>(b)</sup>	4.250%	08/15/22	1,900,000	1,576,444
Commercial Mortgage Trust 2013-CCRE11 <sup>(b)(d)</sup>	4.371%	10/10/23	5,108,000	3,965,646
Commercial Mortgage Trust 2013-LC6 <sup>(b)</sup>	3.500%	01/10/23	1,350,000	1,054,360
Commercial Mortgage Trust 2014-CCRE17 <sup>(b)(d)</sup>	4.458%	05/10/24	8,600,000	5,620,348
Commercial Mortgage Trust 2014-LC17 <sup>(b)</sup>	3.687%	09/10/24	2,780,000	2,065,085
Commercial Mortgage Trust 2014-UBS2 <sup>(b)(d)</sup>	5.182%	02/10/24	2,932,500	2,516,537
Commercial Mortgage Trust 2014-UBS5 <sup>(b)</sup>	3.495%	09/10/24	2,715,000	2,168,533
CSAIL Commercial Mortgage Trust 2015-C4 <sup>(d)</sup>	3.736%	11/15/25	5,000,000	3,749,781



## Principal Real Estate Income Fund Statement of Investments

*April 30, 2018 (Unaudited)*

	Rate	Maturity Date	Principal Amount	Value (Note 2)
Commercial Mortgage Backed Securities-Subordinated (continued)				
Goldman Sachs Mortgage Securities Trust 2013-GC13 <sup>(b)(d)</sup>	4.226%	07/10/23	\$3,000,000	\$2,750,982
Goldman Sachs Mortgage Securities Trust 2013-GC16 <sup>(b)(d)</sup>	5.503%	11/10/46	2,342,405	2,269,972
Goldman Sachs Mortgage Securities Trust 2013-GCJ14 <sup>(b)(d)</sup>	4.922%	08/10/23	2,000,000	1,557,801
Goldman Sachs Mortgage Securities Trust 2014-GC20 <sup>(b)(d)</sup>	5.020%	04/10/47	8,225,000	5,521,120
Goldman Sachs Mortgage Securities Trust 2014-GC22 <sup>(b)</sup>	3.582%	06/10/47	8,326,000	5,447,639
JPMorgan Chase Commercial Mortgage Securities Trust 2006-CIBC16	5.623%	05/12/45	1,697,241	1,580,651
JPMorgan Chase Commercial Mortgage Securities Trust 2013-C15 <sup>(b)</sup>	3.500%	10/15/23	2,500,000	1,862,287
JPMorgan Chase Commercial Mortgage Securities Trust 2013-C16 <sup>(b)(d)</sup>	3.744%	11/15/23	1,433,000	1,075,602
JPMorgan Chase Commercial Mortgage Securities Trust 2013-C16 <sup>(b)(d)</sup>	5.177%	11/15/23	2,117,483	2,016,272
Morgan Stanley Bank of America Merrill Lynch Trust 2013-C8 <sup>(b)(d)</sup>	4.194%	02/15/23	3,000,000	2,736,149
Morgan Stanley Bank of America Merrill Lynch Trust 2015-C20 <sup>(b)(d)(e)</sup>	1.760%	02/15/25	23,967,000	1,959,429
Morgan Stanley Bank of America Merrill Lynch Trust 2015-C26 <sup>(b)(d)</sup>	4.557%	10/15/25	3,576,000	2,514,951
Morgan Stanley Bank of America Merrill Lynch Trust 2017-C34 <sup>(b)(d)</sup>	3.300%	10/15/27	3,450,000	2,028,839
Morgan Stanley Capital I Trust 2016-UB11 <sup>(b)(d)</sup>	2.847%	08/15/26	5,000,000	3,061,779
Wells Fargo Commercial Mortgage Trust 2015-NXS1 <sup>(d)</sup>	4.238%	04/15/25	3,440,000	2,989,009
Wells Fargo Commercial Mortgage Trust 2015-NXS3 <sup>(b)</sup>	3.153%	09/15/57	1,500,000	1,151,219
Wells Fargo Commercial Mortgage Trust 2014-LC18 <sup>(b)</sup>	2.840%	01/15/25	8,635,000	5,579,553
Wells Fargo Commercial Mortgage Trust 2015-C31	3.852%	11/15/25	2,886,000	2,294,832
WFRBS Commercial Mortgage Trust 2014-C20 <sup>(b)</sup>	3.986%	05/15/24	2,650,000	2,101,030
				100,052,392
<b>TOTAL COMMERCIAL MORTGAGE BACKED SECURITIES</b>				
(Cost \$117,828,110)				119,245,357

## Principal Real Estate Income Fund Statement of Investments

April 30, 2018 (Unaudited)

	7-Day Yield	Shares	Value (Note 2)
SHORT TERM INVESTMENTS (3.19%)			
State Street Institutional Treasury Plus Money Market Fund	1.611 %	4,234,006	\$4,234,006
TOTAL SHORT TERM INVESTMENTS (Cost \$4,234,006)			4,234,006
TOTAL INVESTMENTS (145.08%) (Cost \$186,445,851)			\$192,858,576
Liabilities in Excess of Other Assets (-45.08%)			(59,926,986 )
NET ASSETS (100.00%)			\$132,931,590

(a) *Non-income producing security.*

*Security exempt from registration under Rule 144A of the Securities Act of 1933. Such securities may normally be sold to qualified institutional buyers in transactions exempt from registration. The total value of Rule 144A securities amounts \$100,871,102, which represents approximately 75.88% of net assets as of April 30, 2018.*

*Securities were purchased pursuant to Regulation S under the Securities Act of 1933, which exempts securities offered and sold outside of the United States from registration. Such securities cannot be sold in the United States without either an effective registration statement filed pursuant to the Securities Act of 1933, or pursuant to an exemption from registration. As of April 30, 2018, the aggregate market value of those securities was \$2,235,785, representing 1.68% of net assets.*

*Variable rate investment. Interest rates reset periodically. Interest rate shown reflects the rate in effect at April 30, 2018. Certain variable rate securities are not based on a published reference rate and spread but are determined by the issuer or agent and are based on current market conditions. These securities do not indicate a reference rate and spread in their description above.*

(e) *Interest only security.*

*See Notes to Financial Statements.*

## Principal Real Estate Income Fund

Statement of Assets and Liabilities *April 30, 2018 (Unaudited)*

## ASSETS:

Investments, at value	\$ 192,858,576
Cash denominated in foreign currency, at value (Cost \$40,237)	40,237
Receivable for investments sold	328,479
Interest receivable	762,865
Dividends receivable	207,487
Prepaid and other assets	20,942
Total Assets	194,218,586

## LIABILITIES:

Loan payable (Note 3)	60,000,000
Interest due on loan payable	240,814
Payable for investments purchased	792,756
Payable to adviser	77,397
Payable to administrator	58,999
Payable to transfer agent	7,428
Payable for trustee fees	26,002
Other payables	83,600
Total Liabilities	61,286,996
Net Assets	\$ 132,931,590

## NET ASSETS CONSIST OF:

Paid-in capital	\$ 130,175,528
Distributions in excess of net investment income	(2,771,199 )
Accumulated net realized loss on investments and foreign currency transactions	(883,675 )
Net unrealized appreciation on investments and translation of assets and liabilities denominated in foreign currencies	6,410,936
Net Assets	\$ 132,931,590

## PRICING OF SHARES:

Net Assets	\$ 132,931,590
Shares of beneficial interest outstanding (unlimited number of shares authorized, no par value per share)	6,899,800
Net asset value per share	\$ 19.27
Cost of Investments	\$ 186,445,851

*See Notes to Financial Statements.*



## Principal Real Estate Income Fund Statement of Operations

*For the Six Months Ended April 30, 2018 (Unaudited)*

## INVESTMENT INCOME:

Interest	\$4,085,343
Dividends (net of foreign withholding tax of \$87,849)	1,651,678
Total Investment Income	5,737,021

## EXPENSES:

Investment advisory fees	1,008,948
Interest on loan	801,834
Administration fees	158,378
Transfer agent fees	13,642
Audit fees	15,372
Legal fees	38,059
Custodian fees	18,050
Trustee fees	50,149
Printing fees	22,938
Insurance fees	16,493
Other	44,859
Total Expenses	2,188,722
Net Investment Income	3,548,299

## REALIZED AND UNREALIZED GAIN/(LOSS) ON INVESTMENTS AND FOREIGN CURRENCY:

Net realized gain/(loss) on:	
Investments	651,994
Foreign currency transactions	5,535
Net realized gain	657,529
Net change in unrealized appreciation/(depreciation) on:	
Investments	(607,239 )
Translation of assets and liabilities denominated in foreign currencies	1,271
Net change in unrealized depreciation	(605,968 )
Net Realized and Unrealized Gain on Investments and Foreign Currency	51,561
Net Increase in Net Assets Resulting from Operations	\$3,599,860

*See Notes to Financial Statements.*

## Principal Real Estate Income Fund

## Statements of Changes in Net Assets

	For the Six Months Ended April 30, 2018 (Unaudited)	For the Year Ended October 31, 2017
<b>OPERATIONS:</b>		
Net investment income	\$3,548,299	\$6,844,807
Net realized gain on investments and foreign currency transactions	657,529	1,095,187
Net change in unrealized appreciation/(depreciation) on investments and translation of assets and liabilities denominated in foreign currencies	(605,968 )	6,449,845
Net increase in net assets resulting from operations	3,599,860	14,389,839
<b>DISTRIBUTIONS TO SHAREHOLDERS:</b>		
From net investment income	(4,553,867 )	(10,395,296 )
From net realized gains	–	(228,918 )
From tax return of capital	–	(1,139,946 )
Net decrease in net assets from distributions to shareholders	(4,553,867 )	(11,764,160 )
Net Increase/(Decrease) in Net Assets	(954,007 )	2,625,679
<b>NET ASSETS:</b>		
Beginning of period	133,885,597	131,259,918
End of period (including distributions in excess of net investment income of \$(2,771,199) and \$(1,765,631))	\$132,931,590	\$133,885,597
<b>OTHER INFORMATION:</b>		
<b>Share Transactions:</b>		
Shares outstanding - beginning of period	6,899,800	6,899,800
Net increase in shares outstanding	–	–
Shares outstanding - end of period	6,899,800	6,899,800

*See Notes to Financial Statements.*

## Principal Real Estate Income Fund Statement of Cash Flows

*For the Six Months Ended April 30, 2018 (Unaudited)*

**CASH FLOWS FROM OPERATING ACTIVITIES:**

Net increase in net assets resulting from operations	\$3,599,860
Adjustments to reconcile net increase in net assets from operations to net cash provided by operating activities:	
Purchases of investment securities	(41,214,825)
Proceeds from disposition of investment securities	40,313,483
Net proceeds from short-term investment securities	162,266
Net realized (gain)/loss on:	
Investments	(651,994 )
Net change in unrealized (appreciation)/depreciation on:	
Investments	607,239
Amortization of premiums and accretion of discounts on investments	1,128,412
Increase/(Decrease) in assets:	
Interest receivable	102,109
Dividends receivable	(70,508 )
Prepaid and other assets	32,183
Increase/(Decrease) in liabilities:	
Interest due on loan payable	61,652
Payable to transfer agent	5,083
Payable to adviser	(96,346 )
Payable to administrator	25,571
Payable for trustee fees	(668 )
Other payables	30,206
Net cash provided by operating activities	\$4,033,723

**CASH FLOWS USED IN FINANCING ACTIVITIES:**

Cash distributions paid	\$(4,553,867 )
Net cash used in financing activities	\$(4,553,867 )
Effect of exchange rates on cash	\$(171 )
Net decrease in cash	\$(520,315 )
Cash and Foreign Currency, beginning balance	\$560,552
Cash and Foreign Currency, ending balance	\$40,237

**SUPPLEMENTAL DISCLOSURE OF CASH FLOW INFORMATION:**

Cash paid during the period for interest from bank borrowing	\$740,182
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*See Notes to Financial Statements.*

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Principal Real Estate Income Fund

Net asset value - beginning of period

**Income/(loss) from investment operations:**

Net investment income<sup>(a)</sup>

Net realized and unrealized gain/(loss) on investments

Total income from investment operations

**Less distributions to common shareholders:**

From net investment income

From net realized gains

From tax return of capital

Total distributions

**Capital share transactions:**

Common share offering costs charged to paid-in capital

Total capital share transactions

Net increase/(decrease) in net asset value

Net asset value - end of period

Market price - end of period

**Total Return<sup>(b)</sup>**

**Total Return - Market Price<sup>(b)</sup>**

**Supplemental Data:**

Net assets, end of period (in thousands)

**Ratios to Average Net Assets:**

Total expenses

Total expenses excluding interest expense

Net investment income

Total expenses to average managed assets<sup>(d)</sup>

**Portfolio turnover rate**

**Borrowings at End of Period**

Aggregate Amount Outstanding (in thousands)

Asset Coverage Per \$1,000 (in thousands)

(a) *Calculated using average shares throughout the period.*

*Total investment return is calculated assuming a purchase of common share at the opening on the first day and a sale at closing on the last day of each period reported. For purposes of this calculation, dividends and distributions, if any, are assumed to be reinvested at prices obtained under the Fund's dividend reinvestment plan. Total investment returns do not reflect brokerage commissions, if any. Periods less than one year are not annualized.*

(c) *Annualized.*

(d) *Average managed assets represent net assets applicable to common shares plus average amount of borrowings during the period.*

(e) *Not annualized.*

*See Notes to Financial Statements.*

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## Financial Highlights

*For a share outstanding throughout the periods presented.*

For the Six Months Ended April 30, 2018 (Unaudited)	For the Year Ended October 31, 2017	For the Year Ended October 31, 2016	For the Year Ended October 31, 2015	For the Year Ended October 31, 2014	For the Period June 25, 2013 (Commencement) to October 31, 2013
\$ 19.40	\$ 19.02	\$ 19.88	\$ 21.02	\$ 19.68	\$ 19.10
0.51	0.99	1.35	1.46	1.57	0.33
0.02	1.10	(0.47 )	(0.87 )	1.44	0.70
0.53	2.09	0.88	0.59	3.01	1.03
(0.66 )	(1.51 )	(1.74 )	(1.67 )	(1.67 )	(0.41 )
–	(0.03 )	–	(0.06 )	–	–
–	(0.17 )	–	–	–	–
(0.66 )	(1.71 )	(1.74 )	(1.73 )	(1.67 )	(0.41 )
–	–	–	–	–	(0.04 )
–	–	–	–	–	(0.04 )
(0.13 )	0.38	(0.86 )	(1.14 )	1.34	0.58
\$ 19.27	\$ 19.40	\$ 19.02	\$ 19.88	\$ 21.02	\$ 19.68
\$ 16.75	\$ 17.09	\$ 16.62	\$ 17.56	\$ 19.34	\$ 17.76
3.25 %	12.46 %	5.94 %	3.61 %	16.82 %	5.40 %
1.88 %	13.37 %	4.80 %	(0.54 %)	19.10 %	(9.16 %)
\$ 132,932	\$ 133,886	\$ 131,260	\$ 137,178	\$ 145,023	\$ 135,798
3.30 % <sup>(c)</sup>	3.03 %	2.82 %	2.59 %	2.59 %	2.15 % <sup>(c)</sup>
2.09 % <sup>(c)</sup>	2.06 %	2.07 %	2.08 %	2.04 %	1.99 % <sup>(c)</sup>
5.35 % <sup>(c)</sup>	5.18 %	7.04 %	7.02 %	7.74 %	5.01 % <sup>(c)</sup>
2.28 % <sup>(c)</sup>	2.09 %	1.94 %	1.83 %	1.81 %	1.93 % <sup>(c)</sup>
21 % <sup>(c)</sup>	45 %	41 %	22 %	18 %	1 % <sup>(c)</sup>
\$ 60,000	\$ 60,000	\$ 60,000	\$ 60,000	\$ 60,000	\$ 60,000
\$ 3,216	\$ 3,231	\$ 3,188	\$ 3,286	\$ 3,417	\$ 3,263



Principal Real Estate Income Fund Notes to Financial Statements

April 30, 2018 (Unaudited)

## 1. ORGANIZATION

Principal Real Estate Income Fund (the ‘‘Fund’’) is a Delaware statutory trust registered as a non-diversified, closed-end management investment company under the Investment Company Act of 1940, as amended (the ‘‘1940 Act’’).

The Fund’s investment objective is to seek to provide high current income, with capital appreciation as a secondary investment objective, by investing in commercial real estate related securities.

Investing in the Fund involves risks, including exposure to below-investment grade investments. The Fund’s net asset value will vary and its distribution rate may vary and both may be affected by numerous factors, including changes in the market spread over a specified benchmark, market interest rates and performance of the broader equity markets. Fluctuations in net asset value may be magnified as a result of the Fund’s use of leverage.

## 2. SIGNIFICANT ACCOUNTING POLICIES

**Use of Estimates:** The preparation of the financial statements in accordance with accounting principles generally accepted in the United States of America (‘‘GAAP’’) requires management to make estimates and assumptions that affect the reported amounts and disclosures in the financial statements during the period reported. Management believes the estimates and security valuations are appropriate; however, actual results may differ from those estimates, and the security valuations reflected in the financial statements may differ from the value the Fund ultimately realizes upon sale of the securities. The Fund is considered an investment company under U.S. GAAP and follows the accounting and reporting guidance applicable to investment companies in the Financial Accounting Standards Board *Accounting Standards Codification* Topic 946 Financial Services – Investment Companies. The financial statements have been prepared as of the close of the New York Stock Exchange (‘‘NYSE’’) on April 30, 2018.

**Portfolio Valuation:** The net asset value per Common Share of the Fund is determined no less frequently than daily, on each day that the NYSE is open for trading, as of the close of regular trading on the NYSE (normally 4:00 p.m.

New York time). The Fund's net asset value per Common Share is calculated in the manner authorized by the Fund's Board of Trustees (the "Board"). Net asset value is computed by dividing the value of the Fund's total assets, less its liabilities by the number of shares outstanding.

The Board has established the following procedures for valuation of the Fund's assets under normal market conditions. Marketable securities listed on foreign or U.S. securities exchanges generally are valued at closing sale prices or, if there were no sales, at the mean between the closing bid and ask prices on the exchange where such securities are primarily traded.

The Fund values commercial mortgage-backed securities and other debt securities not traded in an organized market on the basis of valuations provided by an independent pricing service, approved by the Board, which uses information with respect to transactions in such securities, interest rate movements, new issue information, cash flows, yields, spreads, credit quality, and other pertinent information as determined by the pricing service, in determining value. If the independent primary or secondary pricing service is unable to provide a price for a security, if the price provided by the independent primary or secondary pricing service is deemed unreliable, or if events occurring after the close of the market for a security but before the time as of which the Fund values its Common Shares would materially affect net asset value, such security will be valued at its fair value as determined in good faith under procedures approved by the Board.

Principal Real Estate Income Fund Notes to Financial Statements

*April 30, 2018 (Unaudited)*

When applicable, fair value of an investment is determined by the Fund's Fair Valuation Committee as a designee of the Board. In fair valuing the Fund's investments, consideration is given to several factors, which may include, among others, the following: the fundamental business data relating to the issuer, borrower, or counterparty; an evaluation of the forces which influence the market in which the investments are purchased and sold; the type, size and cost of the investment; the information as to any transactions in or offers for the investment; the price and extent of public trading in similar securities (or equity securities) of the issuer, or comparable companies; the coupon payments, yield data/cash flow data; the quality, value and salability of collateral, if any, securing the investment; the business prospects of the issuer, borrower, or counterparty, as applicable, including any ability to obtain money or resources from a parent or affiliate and an assessment of the issuer's, borrower's, or counterparty's management; the prospects for the industry of the issuer, borrower, or counterparty, as applicable, and multiples (of earnings and/or cash flow) being paid for similar businesses in that industry; one or more independent broker quotes for the sale price of the portfolio security; and other relevant factors.

**Securities Transactions and Investment Income:** Investment security transactions are accounted for on a trade date basis. Dividend income is recorded on the ex-dividend date. Certain dividend income from foreign securities will be recorded, in the exercise of reasonable diligence, as soon as the Fund is informed of the dividend if such information is obtained subsequent to the ex-dividend date and may be subject to withholding taxes in these jurisdictions. Interest income, which includes amortization of premium and accretion of discount, is recorded on the accrual basis. Realized gains and losses from securities transactions and unrealized appreciation and depreciation of securities are determined using the first-in/first-out cost basis method for both financial reporting and tax purposes.

**Fair Value Measurements:** The Fund discloses the classification of its fair value measurements following a three-tier hierarchy based on the inputs used to measure fair value. Inputs refer broadly to the assumptions that market participants would use in pricing the asset or liability, including assumptions about risk. Inputs may be observable or unobservable. Observable inputs reflect the assumptions market participants would use in pricing the asset or liability that are developed based on market data obtained from sources independent of the reporting entity. Unobservable inputs reflect the reporting entity's own assumptions about the assumptions market participants would use in pricing the asset or liability that are developed based on the best information available.

Various inputs are used in determining the value of the Fund's investments as of the end of the reporting period. When inputs used fall into different levels of the fair value hierarchy, the level in the hierarchy within which the fair value measurement falls is determined based on the lowest level input that is significant to the fair value measurement in its entirety. The designated input levels are not necessarily an indication of the risk or liquidity associated with these investments. These inputs are categorized in the following hierarchy under applicable financial accounting standards:





## Principal Real Estate Income Fund Notes to Financial Statements

April 30, 2018 (Unaudited)

**Level 1** – Unadjusted quoted prices in active markets for identical investments, unrestricted assets or liabilities that a Fund has the ability to access at the measurement date;

Quoted prices which are not active, quoted prices for similar assets or liabilities in active markets or inputs  
**Level 2** – other than quoted prices that are observable (either directly or indirectly) for substantially the full term of the asset or liability; and

Significant unobservable prices or inputs (including the Fund’s own assumptions in determining the fair  
**Level 3** – value of investments) where there is little or no market activity for the asset or liability at the measurement date.

The following is a summary of the inputs used to value the Fund’s investments as of April 30, 2018:

Investments in Securities at Value*	Level 1 - Quoted Prices	Level 2 - Other Significant Observable Inputs	Level 3 - Significant Unobservable Inputs	Total
Common Stocks	\$69,379,213	\$–	\$ –	\$69,379,213
Commercial Mortgage Backed Securities	–	119,245,357	–	119,245,357
Short Term Investments	4,234,006	–	–	4,234,006
Total	\$73,613,219	\$119,245,357	\$ –	\$192,858,576

\*See Statement of Investments for industry classifications.

The Fund recognizes transfers between levels as of the end of the period. For the six months ended April 30, 2018, the Fund did not have any significant transfers between Level 1 and Level 2 securities. The Fund did not have any securities that used significant unobservable inputs (Level 3) in determining fair value, during the semi-annual period.

**Commercial Mortgage Backed Securities (“CMBS”):** As part of its investments in commercial real estate related securities, the Fund will invest in CMBS which are subject to certain risks associated with direct investments in CMBS. A CMBS is a type of mortgage-backed security that is secured by a loan (or loans) on one or more interests in commercial real estate property. Investments in CMBS are subject to the various risks which relate to the pool of

underlying assets in which the CMBS represents an interest. CMBS may be backed by obligations (including certificates of participation in obligations) that are principally secured by commercial real estate loans or interests therein having multi-family or commercial use. Securities backed by commercial real estate assets are subject to securities market risks as well as risks similar to those of direct ownership of commercial real estate loans because those securities derive their cash flows and value from the performance of the commercial real estate underlying such investments and/or the owners of such real estate.

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Principal Real Estate Income Fund Notes to Financial Statements

*April 30, 2018 (Unaudited)*

**Real Estate Investment Trusts (“REITs”):** As part of its investments in real estate related securities, the Fund will invest in REITs and is subject to certain risks associated with direct investment in REITs. REITs possess certain risks which differ from an investment in common stocks. REITs are financial vehicles that pool investors’ capital to acquire, develop and/or finance real estate and provide services to their tenants. REITs may concentrate their investments in specific geographic areas or in specific property types, e.g., regional malls, shopping centers, office buildings, apartment buildings and industrial warehouses. REITs may be affected by changes in the value of their underlying properties and by defaults by borrowers or tenants. REITs depend generally on their ability to generate cash flow to make distributions to shareowners, and certain REITs have self-liquidation provisions by which mortgages held may be paid in full and distributions of capital returns may be made at any time.

As REITs generally pay a higher rate of dividends than most other operating companies, to the extent application of the Fund’s investment strategy results in the Fund investing in REIT shares, the percentage of the Fund’s dividend income received from REIT shares will likely exceed the percentage of the Fund’s portfolio that is comprised of REIT shares. Distributions received by the Fund from REITs may consist of dividends, capital gains and/or return of capital.

Dividend income from REITs is recognized on the ex-dividend date. The calendar year-end amounts of ordinary income, capital gains, and return of capital included in distributions received from the Fund’s investments in REITs are reported to the Fund after the end of the calendar year; accordingly, the Fund estimates these amounts for accounting purposes until the characterization of REIT distributions is reported to the Fund after the end of the calendar year. Estimates are based on the most recent REIT distribution information available.

The performance of a REIT may be affected by its failure to qualify for tax-free pass-through of income under the Internal Revenue Code of 1986, as amended (the “Code”), or its failure to maintain exemption from registration under the 1940 Act. Due to the Fund’s investments in REITs, the Fund may also make distributions in excess of the Fund’s earnings and capital gains. Distributions, if any, in excess of the Fund’s earnings and profits will first reduce the adjusted tax basis of a holder’s Common Shares and, after that basis has been reduced to zero, will constitute capital gains to the Common Shareholder.

**Concentration Risk:** The Fund invests in companies in the real estate industry, which may include CMBS, REITs, REIT-like structures, and other securities that are secured by, or otherwise have exposure to, real estate. Any fund that concentrates in a particular segment of the market will generally be more volatile than a fund that invests more broadly. Any market price movements, regulatory changes, or economic conditions affecting CMBS, REITs, REIT-like structures, and real estate more generally, will have a significant impact on the Fund’s performance.

**Foreign Currency Risk:** The Fund expects to invest in securities denominated or quoted in currencies other than the U.S. dollar. Changes in foreign currency exchange rates may affect the value of securities owned by the Fund, the unrealized appreciation or depreciation of investments and gains on and income from investments. Currencies of certain countries may be volatile and therefore may affect the value of securities denominated in such currencies, which means that the Fund's net asset value could decline as a result of changes in the exchange rates between foreign currencies and the U.S. dollar. These risks often are heightened for investments in smaller, emerging capital markets.

Principal Real Estate Income Fund Notes to Financial Statements

*April 30, 2018 (Unaudited)*

The accounting records of the Fund are maintained in U.S. dollars. Prices of securities denominated in foreign currencies are translated into U.S. dollars at the closing rates of the exchanges at period end. Amounts related to the purchase and sale of foreign securities and investment income are translated at the rates of exchange prevailing on the respective dates of such transactions.

The Fund does not isolate that portion of the results of operations resulting from changes in foreign exchange rates on investments from the fluctuations arising from changes in market prices of securities held. Such fluctuations are included with the net realized and unrealized gain or loss from investments.

Reported net realized foreign exchange gains or losses arise from sales of foreign currencies, currency gains or losses realized between the trade and settlement dates on securities transactions, and the difference between the amounts of dividends, interest, and foreign withholding taxes recorded on the Fund's books and the U.S. dollar equivalent of the amounts actually received or paid. Net unrealized foreign exchange gains and losses arise from changes in the fair values of assets and liabilities, other than investments in securities at fiscal period-end, resulting from changes in exchange rates.

A foreign currency contract is a commitment to purchase or sell a foreign currency at a future date, at a negotiated rate. The Fund may enter into foreign currency contracts to settle specific purchases or sales of securities denominated in a foreign currency and for protection from adverse exchange rate fluctuation. Risks to a Fund include the potential inability of the counterparty to meet the terms of the contract.

### 3. LEVERAGE

Under normal market conditions, the Fund's policy is to utilize leverage through Borrowings and the issuance of preferred shares in an amount that represents up to 33 1/3% of the Fund's total assets, including proceeds from such Borrowings and issuances (or approximately 50% of the Fund's net assets). It is possible that the assets of the Fund will decline due to market conditions such that this 33 1/3% limit will be exceeded. In that case, the leverage risk to shareholders will increase. Borrowings will be subject to interest costs, which may or may not be recovered by appreciation of the securities purchased. In certain cases, interest costs may exceed the return received on the securities purchased.

The Fund maintains a \$70,000,000 line of credit with State Street Bank and Trust Company (“SSB”), which by its terms expires on September 14, 2018, subject to the restrictions and terms of the credit agreement. As of April 30, 2018, the Fund has drawn down \$60,000,000 from the SSB line of credit, which was the maximum borrowing outstanding during the period. The Fund is charged an interest rate of 1.00% (per annum) above the three-month LIBOR (London Interbank Offered Rate) of 1.320%, as of the last renewal date, for borrowing under this credit agreement, on the last day of the interest period. The Fund is charged a commitment fee on the average daily unused balance of the line of credit at the rate of 0.15% (per annum). The Fund pledges its investment securities as the collateral for the line of credit per the terms of the agreement. The average annualized interest rate charged and the average outstanding loan payable for the six months ended April 30, 2018, was as follows:

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Principal Real Estate Income Fund Notes to Financial Statements

*April 30, 2018 (Unaudited)*

Average Interest Rate	2.661%
Average Outstanding Loan Payable	\$60,000,000

#### 4. INVESTMENT ADVISORY AND OTHER AGREEMENTS

ALPS Advisors, Inc. (“AAI”) serves as the Fund’s investment adviser pursuant to an Investment Advisory Agreement with the Fund. As compensation for its services to the Fund, AAI receives an annual investment advisory fee of 1.05% based on the Fund’s average Total Managed Assets (as defined below). Pursuant to an Investment Sub-Advisory Agreement, AAI has retained Principal Real Estate Investors, LLC (“PrinRei”) as the Fund’s sub-advisor and pays PrinRei an annual fee of 0.55% based on the Fund’s average Total Managed Assets.

ALPS Fund Services, Inc. (“AFS”), an affiliate of AAI, serves as administrator to the Fund. Under an Administration, Bookkeeping and Pricing Services Agreement, AFS is responsible for calculating the net asset values, providing additional fund accounting and tax services, and providing fund administration and compliance-related services to the Fund. AFS is entitled to receive a monthly fee, accrued daily based on the Fund’s average Total Managed Assets, as defined below, plus reimbursement for certain out-of-pocket expenses.

DST Systems, Inc. (“DST”), the parent company of AAI and AFS, serves as the Transfer Agent to the Fund. Under the Transfer Agency Agreement, DST is responsible for maintaining all shareholder records of the Fund. DST is entitled to receive an annual minimum fee of \$22,500 plus out-of-pocket expenses. DST is a wholly-owned subsidiary of SS&C Technologies Holdings, Inc. (“SS&C”), a publicly traded company listed on the NASDAQ Global Select Market, which acquired DST in a transaction which closed on April 16, 2018.

The Fund pays no salaries or compensation to any of its interested Trustee or Officers. The three independent Trustees of the Fund receive an annual retainer of \$18,000 and an additional \$3,000 for attending each meeting of the Board. In addition to the Attendance Fee, the Chairman of the Board will be paid a meeting fee of \$1,000 for each Board Meeting and the Chairman of the Audit Committee of the Board will be paid a meeting attendance fee of \$1,000 for each Meeting of the Audit Committee of the Board. The independent Trustees are also reimbursed for all reasonable out-of-pocket expenses relating to attendance at meetings of the Board.



A Trustee and certain Officers of the Fund are also officers of AAI and AFS.

**Total Managed Assets:** For these purposes, the term Total Managed Assets is defined as the value of the total assets of the Fund minus the sum of all accrued liabilities of the Fund (other than aggregate liabilities representing Limited Leverage, as defined below), calculated as of 4:00 p.m. Eastern time on such day or as of such other time or times as the Board may determine in accordance with the provisions of applicable law and of the declaration and bylaws of the Fund and with resolutions of the Board as from time to time in force. Under normal market conditions, the Fund's policy is to utilize leverage through Borrowings (as defined below) and through the issuance of preferred shares (if any) in an amount that represents approximately 33 1/3% of the Fund's total assets, including proceeds from such Borrowings and issuances (or approximately 50% of the Fund's net assets) (collectively, "Limited Leverage"). "Borrowings" are defined to include: amounts received by the Fund pursuant to loans from banks or other financial institutions; amounts borrowed from banks or other parties through reverse repurchase agreements; amounts received by the Fund from the Fund's issuance of any senior notes or similar debt securities. Other than with respect to reverse repurchase agreements, Borrowings do not include trading practices or instruments that, according to the SEC or its staff, may cause senior securities concerns, and are intended to include transactions that are subject to the asset coverage requirements in Section 18 of the 1940 Act for the issuance of senior securities evidencing indebtedness (e.g., bank borrowings and the Fund's issuance of any senior notes or similar securities) and senior securities in the form of stock (e.g., the Fund's issuance of preferred shares).

Principal Real Estate Income Fund Notes to Financial Statements

*April 30, 2018 (Unaudited)*

## 5. DISTRIBUTIONS

The Fund intends to make a level monthly distribution to Common Shareholders after payment of interest on any outstanding borrowings or dividends on any outstanding preferred shares. Distributions to shareholders are recorded by the Fund on ex-dividend date. The Fund may also retain cash reserves if deemed appropriate by PrinRei to meet the terms of any leverage or derivatives transactions. Such distributions shall be administered by DST. While a portion of the Fund's distributed income may qualify as qualified dividend income, all or a portion of the Fund's distributed income may also be fully taxable. Any such income distributions, as well as any distributions by the Fund of net realized short-term capital gains, will be taxed as ordinary income. A portion of the distributions the Fund receives from its investments may be treated as return of capital. While the Fund anticipates distributing some or all of such return of capital, it is not required to do so in order to maintain its status as a regulated investment company under Subchapter M of the Code.

On September 13, 2017 the Board approved the adoption of a managed distribution plan in accordance with AAI's Section 19(b) exemptive order described below (the "Managed Distribution Plan"). Under the Managed Distribution Plan, to the extent that sufficient investment income is not available on a monthly basis, the Fund will make regular monthly distributions, which may consist of long-term capital gains and/or return of capital in order to maintain the distribution rate. In accordance with the Managed Distribution Plan, beginning with its October 2017 distribution, the Fund made monthly distributions to common shareholders set initially at a fixed monthly rate of \$0.11 per common share. For the period of November 2016 through September 2017, the Fund paid regular monthly distributions of \$0.145 per share.

The amount of the Fund's distributions pursuant to the Managed Distribution Plan are not related to the Fund's performance and, therefore, investors should not make any conclusions about the Fund's investment performance from the amount of the Fund's distributions or from the terms of the Fund's Managed Distribution Plan. The Board may amend, suspend or terminate the Managed Distribution Plan at any time without notice to shareholders.

AAI has received an order granting an exemption from Section 19(b) of the 1940 Act and Rule 19b-1 thereunder to permit the Fund, subject to certain terms and conditions, to include realized long-term capital gains as a part of its regular distributions to its stockholders more frequently than would otherwise be permitted by the 1940 Act (generally once per taxable year). To the extent that the Fund relies on the exemptive order, the Fund will be required to comply with the terms and conditions therein, which, among other things, requires the Fund to make certain disclosures to shareholders and prospective shareholders regarding distributions, and would require the Board to make

determinations regarding the appropriateness of the use of the distribution policy. Under such a distribution policy, it is possible that the Fund might distribute more than its income and net realized capital gains; therefore, distributions to shareholders may result in a return of capital. The amount treated as a return of capital will reduce a shareholder's adjusted basis in the shareholder's shares, thereby increasing the potential gain or reducing the potential loss on the sale of shares. There is no assurance that the Fund will continue to rely on the exemptive order in the future.

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## Principal Real Estate Income Fund Notes to Financial Statements

*April 30, 2018 (Unaudited)*

Subsequent to April 30, 2018, the Fund paid the following distributions:

<b>Ex-Date</b>	<b>Record Date</b>	<b>Payable Date</b>	<b>Rate (per share)</b>
May 21, 2018	May 22, 2018	May 31, 2018	\$0.11
June 18, 2018	June 19, 2018	June 28, 2018	\$0.11

## 6. CAPITAL TRANSACTIONS

The Fund is a statutory trust established under the laws of the state of Delaware by an Agreement and Declaration of Trust dated August 31, 2012, as amended and restated through the date hereof. The Declaration of Trust provides that the Trustees of the Fund may authorize separate classes of shares of beneficial interest. The Trustees have authorized an unlimited number of Common Shares. The Fund intends to hold annual meetings of Common Shareholders in compliance with the requirements of the NYSE.

Additional shares of the Fund may be issued under certain circumstances pursuant to the Fund's Dividend Reinvestment Plan, as defined within the Fund's organizational documents. Additional information concerning the Dividend Reinvestment Plan is included within this report.

## 7. PORTFOLIO INFORMATION

For the six months ended April 30, 2018, the cost of purchases and proceeds from sales of securities, excluding short-term securities, were as follows:

Purchases	Sales
\$ 41,598,780	\$ 40,411,321

## 8. TAXES

**Classification of Distributions:** Net investment income/(loss) and net realized gain/(loss) may differ for financial statement and tax purposes. The character of distributions made during the year from net investment income or net realized gains may differ from its ultimate characterization for federal income tax purposes. Also, due to the timing of dividend distributions, the fiscal year in which amounts are distributed may differ from the fiscal year in which the income or realized gain was recorded by the Fund.

## Principal Real Estate Income Fund Notes to Financial Statements

April 30, 2018 (Unaudited)

The amounts and characteristics of tax basis distributions and composition of distributable earnings/(accumulated losses) are finalized at fiscal year-end and are not available for the six months ended April 30, 2018.

The tax character of distributions paid during the year ended October 31, 2017 was as follows:

	For the Year Ended October 31, 2017
Ordinary Income	\$10,624,214
Return of Capital	1,139,946
Total	\$11,764,160

**Tax Basis of Investments:** Net unrealized appreciation/(depreciation) of investments based on federal tax cost as of April 30, 2018, were as follows:

Cost of investments for income tax purposes	\$186,452,970
Gross appreciation on investments (excess of value over tax cost)	\$11,538,227
Gross depreciation on investments (excess of tax cost over value)	(5,132,621 )
Net unrealized appreciation on investments	\$6,405,606

The differences between book-basis and tax-basis are primarily due to investments in wash sales. In addition, certain tax cost basis adjustments are finalized at fiscal year-end and therefore have not been determined as of April 30, 2018.

**Federal Income Tax Status:** For federal income tax purposes, the Fund currently qualifies, and intends to remain qualified, as a regulated investment company under the provisions of Subchapter M of the Code by distributing substantially all of its investment company taxable net income and realized gain, not offset by capital loss carryforwards, if any, to its shareholders. No provision for federal income taxes has been made.

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As of and during the six months ended April 30, 2018, the Fund did not have a liability for any unrecognized tax benefits. The Fund files U.S. federal, state, and local tax returns as required. The Fund's tax returns are subject to examination by the relevant tax authorities until expiration of the applicable statute of limitations, which is generally three years after the filing of the tax return. Tax returns for open years have incorporated no uncertain tax positions that require a provision for income taxes.

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Principal Real Estate Income Fund Approval of Investment Advisory and Sub-Advisory Agreements

*April 30, 2018 (Unaudited)*

At the March 15, 2018 meeting (“Meeting”) of the Board of Trustees (the “Board”) of Principal Real Estate Income Fund (the “Fund”), the Board, including those Trustees who are not “interested persons” of the Fund (the “Independent Trustees”), as that term is defined in the Investment Company Act of 1940, as amended (the “1940 Act”), approved ALPS Advisors, Inc. (the “Adviser”) and Principal Real Estate Investors, LLC, (the “Sub-Adviser”) to serve as the Fund’s investment adviser and sub-adviser, respectively, and approved each of (1) the renewal of the investment advisory agreement between the Adviser and the Fund, and the sub-advisory agreement between the Sub-Adviser and the Adviser with respect to the Fund (the “Existing Advisory Agreements”); (2) a new investment advisory agreement between the Adviser and the Fund, and new sub-advisory agreement between the Sub-Adviser and the Adviser with respect to the Fund (the “New Advisory Agreements”); and (3) an interim investment advisory agreement between the Adviser and the Fund, and interim sub-advisory agreement between the Sub-Adviser and the Adviser with respect to the Fund (the “Interim Advisory Agreements” and, together with the Existing Advisory Agreements and New Advisory Agreements, the “Advisory Agreements”), upon the terms and conditions set forth therein.

Consideration by the Board of the New Advisory Agreements and Interim Advisory Agreements was necessary because DST Systems, Inc. (“DST”), the ultimate parent company to the Adviser, had had entered into an agreement to be acquired by SS&C Technologies Holdings, Inc. (“SS&C”) (the “Transaction”). Because the Adviser would be acquired along with DST, the closing of the Transaction (the “Closing”) may be deemed a change in control with respect to the Adviser. The Closing occurred on April 16, 2018. This change in control with respect to the Adviser may be deemed to trigger an “assignment” of the existing investment advisory agreement between the Fund and the Adviser (the “Existing Advisory Agreement”) and the sub-advisory agreement between the Adviser and the Sub-Adviser (the “Existing Sub-Advisory Agreement”) under the Investment Company Act of 1940, as amended (the “1940 Act”). As required by the 1940 Act, the Existing Advisory Agreements provide for their automatic termination in the event of an assignment, and therefore, the Existing Advisory Agreement and the Existing Sub-Advisory Agreement automatically terminated upon Closing. In order for the Adviser to continue as the Fund’s investment adviser and the Sub-Adviser to continue as the Fund’s sub-adviser, the Board and the Fund’s shareholders must approve the New Advisory Agreements, both of which would take effect, if approved, upon the date of such shareholder approval. As of the date of this report, the New Advisory Agreements have not received shareholder approval and efforts to secure such shareholder approval are ongoing. The Interim Advisory Agreements approved by the Board permit the Adviser to continue as the Fund’s investment adviser and the Sub-Adviser to continue as the Fund’s sub-adviser from the date of the Closing until the Fund’s shareholders approve the New Advisory Agreements, subject to a maximum term of 150 days.

In connection with considering the approval of the Advisory Agreements, the Independent Trustees met in executive session with independent counsel, who provided assistance and advice.



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Although not meant to be all-inclusive, the following portion of the minutes summarizes the factors considered and conclusions reached by the Trustees in the executive session and at the Meeting in determining to approve the Advisory Agreements.

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Principal Real Estate Income Fund Approval of Investment Advisory and Sub-Advisory Agreements

*April 30, 2018 (Unaudited)*

**Nature, extent, and quality of services.** In examining the nature, extent and quality of the investment advisory services provided by the Adviser, the Trustees considered the qualifications, experience and capability of the Adviser's management and other personnel and the extent of care and conscientiousness with which the Adviser performs its duties. In this regard, the Trustees considered, among other matters, the process by which the Adviser performs oversight of the Fund, including ongoing due diligence regarding product structure, resources, personnel, technology, performance, compliance and oversight of the Sub-Adviser.

With respect to the nature, extent and quality of the investment advisory services provided by the Sub-Adviser, the Trustees considered the Sub-Adviser's investment management process it uses in managing the assets of the Fund, including the experience and capability of the Sub-Adviser's management and other personnel responsible for the portfolio management of the Fund and compliance with the Fund's investment policies and restrictions. The Trustees also considered the favorable assessment provided by the Adviser as to the nature and quality of the services provided by the Sub-Adviser and the ability of the Sub-Adviser to fulfill its contractual obligations.

Based on the totality of the information considered, the Trustees concluded that the Fund was likely to benefit from the nature, extent and quality of the Adviser's and the Sub-Adviser's services, and that the Adviser and the Sub-Adviser have the ability to provide these services based on their respective experience, operations and current resources.

**Investment performance of the Fund, the Adviser and the Sub-Adviser.** The Board reviewed the Fund's investment performance over time and compared that performance to other funds in its peer group. In making its comparisons, the Board utilized a report from Broadridge, an independent provider of investment company data. As reported by Broadridge, the Fund's net asset value ("NAV") total return exceeded the average return for the Real Estate Lipper Category, as assigned by Lipper, Inc. for the 1-year, 2-year and 3-year periods ended December 31. The Board also considered the views of the Adviser and the Sub-Adviser that in light of the Fund's dynamic allocation strategy that permits it to vary its allocation to both commercial mortgage backed securities and other U.S. and non-U.S. real estate-related securities, such as REITs and REIT-like entities, there are no directly comparable peer funds that utilize a similar investment strategy. The Board also noted that in light of the Fund's primary investment objective to provide high current income, one of the best measures of the Fund's performance is the fact that the Fund has maintained its monthly distribution on its common shares.

**Costs of services and profits realized, and comparison with other advisory contracts.** The Board considered the fees payable under the Advisory Agreements. The Board reviewed the information compiled by Broadridge comparing the Fund's contractual management fee rate (on managed assets) and net management fee rate (on both

managed assets and common assets—which includes advisory and subadvisory and administrative service fees—as well as the Fund’s net total expense ratios) to other funds in its expense group. Based on the data provided on management fee rates, the Board noted that the Fund’s fees were high relative to its Broadridge peer group. The Trustees considered the statements of the Adviser explaining the differentiation between the Fund and the peer group given the Fund’s significant investment in CMBS, a complex asset class, versus the peer group being composed solely of funds that invest in REITs. The Board noted that the Adviser does not serve as investment adviser to any other comparable closed-end funds.

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Principal Real Estate Income Fund Approval of Investment Advisory and Sub-Advisory Agreements

*April 30, 2018 (Unaudited)*

The Trustees also considered that the fee paid to the Sub-Adviser is paid out of the fees paid to the Adviser and that no separate fee for sub-advisory services is charged to the Fund. The Trustees also considered the fees charged by the Sub-Adviser to other accounts managed using a CMBS strategy, and to other accounts managed using a REIT strategy. Based on the material provided by the Sub-Adviser, services provided to another registered investment company client for which it separately manages a CMBS “sleeve” would result in an overall sub-advisory fee of between 0.20% and 0.60% of assets under management and a REIT “sleeve” would result in an overall sub-advisory fee of between 0.45% and 0.85% of assets under management, depending on the amount of assets allocated to either sleeve at any given time. The Trustees considered statements by the Sub-Adviser explaining that this other registered investment company did not receive the same types of services that the Fund receives because, among other factors, the Sub-Adviser does not provide a leverage strategy or a dynamic asset allocation strategy for the other account, and does not utilize derivative instruments for that account, in each case unlike the mandate it has with respect to the Fund. The Trustees also considered the Adviser’s opinion that the compensation payable to the Sub-Adviser is reasonable, appropriate and fair in light of the nature and quality of the services provided to the Fund.

The Board reviewed the meeting materials it received from the Adviser regarding its revenues and expenses in connection with the services provided to the Fund, both solely with respect to the Adviser, as well as together with revenues earned by the Adviser’s affiliates, ALPS Fund Services, Inc. (in its capacity as administrator of the Fund), ALPS Portfolio Solutions Distributor, Inc. (in its capacity as providing distribution assistance) and DST (in its capacity as transfer agent of the Fund). The meeting materials provided in this regard showed, and the Trustees acknowledged, that the Adviser incurred a cumulative loss from its management of the Fund since inception, after giving effect to the structuring fee that the Adviser was obligated to pay to certain members of the underwriting syndicate in connection with the Fund’s initial public offering. The Trustees also reviewed the profitability information provided by the Sub-Adviser for 2015, 2016 and 2017. In each case, the Trustees determined that the profitability of the Adviser and the Sub-Adviser was within the range that courts had found reasonable, and considered that the Adviser and the Sub-Adviser must be able to compensate their respective employees at competitive levels in order to attract and retain high-quality personnel to provide high-quality service to the Fund.

**Economies of scale.** With respect to whether economies of scale are realized by the Adviser and the Sub-Adviser and whether management fee levels reflect these economies of scale for the benefit of Fund investors, the Board considered the Adviser’s view that adding breakpoints would not be appropriate at this time and that any increases in the Fund’s assets are primarily attributable to market appreciation and dividend reinvestments, rather than raising new capital, and therefore found that the level of management fees charged and fee structure remained appropriate.

**Indirect benefits.** The Board considered whether there were any “fall-out” or ancillary benefits that may accrue to the Adviser or Sub-Adviser or their affiliates as a result of their relationships with the Fund. The Trustees considered that

both the Adviser and Sub-Adviser noted their belief that they would not experience any “fall-out” benefits.

Principal Real Estate Income Fund Approval of Investment Advisory and Sub-Advisory Agreements

*April 30, 2018 (Unaudited)*

After evaluation of the performance, fee and expense information and the profitability, ancillary benefits and other considerations as described above, and in light of the nature, extent and quality of services provided by the Adviser and the Sub-Adviser, the Board concluded that the level of fees to be paid to each of the Adviser and the Sub-Adviser was reasonable.

In summary, based on the various considerations discussed above, the Board determined that approval of the Advisory Agreements was in the best interests of the Fund.

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Principal Real Estate Income Fund Dividend Reinvestment Plan

*April 30, 2018 (Unaudited)*

Unless the registered owner of Common Shares elects to receive cash by contacting DST Systems, Inc. (the “Plan Administrator”), all dividends declared on Common Shares will be automatically reinvested by the Plan Administrator for shareholders in the Fund’s Automatic Dividend Reinvestment Plan (the “Plan”), in additional Common Shares. Common Shareholders who elect not to participate in the Plan will receive all dividends and other distributions in cash paid by check mailed directly to the shareholder of record (or, if the Common Shares are held in street or other nominee name, then to such nominee) by the Plan Administrator as dividend disbursing agent. Participation in the Plan is completely voluntary and may be terminated or resumed at any time without penalty by notice if received and processed by the Plan Administrator prior to the dividend record date; otherwise such termination or resumption will be effective with respect to any subsequently declared dividend or other distribution. Such notice will be effective with respect to a particular dividend or other distribution (together, a “Dividend”). Some brokers may automatically elect to receive cash on behalf of Common Shareholders and may re-invest that cash in additional Common Shares.

The Plan Administrator will open an account for each Common Shareholder under the Plan in the same name in which such Common Shareholder’s Common Shares are registered. Whenever the Fund declares a Dividend payable in cash, non-participants in the Plan will receive cash and participants in the Plan will receive the equivalent in Common Shares. The Common Shares will be acquired by the Plan Administrator for the participants’ accounts, depending upon the circumstances described below, either (i) through receipt of additional unissued but authorized Common Shares from the Fund (“Newly Issued Common Shares”) or (ii) by purchase of outstanding Common Shares on the open market (“Open-Market Purchases”) on the NYSE or elsewhere. If, on the payment date for any Dividend, the closing market price plus estimated brokerage commissions per Common Share is equal to or greater than the NAV per Common Share, the Plan Administrator will invest the Dividend amount in Newly Issued Common Shares on behalf of the participants. The number of Newly Issued Common Shares to be credited to each participant’s account will be determined by dividing the dollar amount of the Dividend by the NAV per Common Share on the payment date; provided that, if the NAV is less than or equal to 95% of the closing market value on the payment date, the dollar amount of the Dividend will be divided by 95% of the closing market price per Common Share on the payment date. If, on the payment date for any Dividend, the NAV per Common Share is greater than the closing market value plus estimated brokerage commissions, the Plan Administrator will invest the Dividend amount in Common Shares acquired on behalf of the participants in Open-Market Purchases.

In the event of a market discount on the payment date for any Dividend, the Plan Administrator will have until the last business day before the next date on which the Common Shares trade on an “ex-dividend” basis or 30 days after the payment date for such Dividend, whichever is sooner (the “Last Purchase Date”), to invest the Dividend amount in Common Shares acquired in Open-Market Purchases. It is contemplated that the Fund will pay monthly income Dividends. If, before the Plan Administrator has completed its Open-Market Purchases, the market price per Common Share exceeds the NAV per Common Share, the average per Common Share purchase price paid by the Plan Administrator may exceed the NAV of the Common Shares, resulting in the acquisition of fewer Common Shares than if the Dividend had been paid in Newly Issued Common Shares on the Dividend payment date. Because of the

foregoing difficulty with respect to Open-Market Purchases, the Plan provides that if the Plan Administrator is unable to invest the full Dividend amount in Open-Market Purchases during the purchase period or if the market discount shifts to a market premium during the purchase period, the Plan Administrator may cease making Open-Market Purchases and may invest the uninvested portion of the Dividend amount in Newly Issued Common Shares at the NAV per Common Share at the close of business on the Last Purchase Date provided that, if the NAV is less than or equal to 95% of the then current market price per Common Share, the dollar amount of the Dividend will be divided by 95% of the market price on the payment date for purposes of determining the number of shares issuable under the Plan.



Principal Real Estate Income Fund Dividend Reinvestment Plan

*April 30, 2018 (Unaudited)*

The Plan Administrator maintains all shareholders' accounts in the Plan and furnishes written confirmation of all transactions in the accounts, including information needed by shareholders for tax records. Common Shares in the account of each Plan participant will be held by the Plan Administrator on behalf of the Plan participant, and each shareholder proxy will include those shares purchased or received pursuant to the Plan. The Plan Administrator will forward all proxy solicitation materials to participants and vote proxies for shares held under the Plan in accordance with the instructions of the participants.

In the case of Common Shareholders such as banks, brokers or nominees which hold shares for others who are the beneficial owners, the Plan Administrator will administer the Plan on the basis of the number of Common Shares certified from time to time by the record shareholder's name and held for the account of beneficial owners who participate in the Plan.

There will be no brokerage charges with respect to Common Shares issued directly by the Fund. However, each participant will pay a pro rata share of brokerage commissions incurred in connection with Open-Market Purchases. The automatic reinvestment of Dividends will not relieve participants of any federal, state or local income tax that may be payable (or required to be withheld) on such Dividends. Participants that request a sale of Common Shares through the Plan Administrator are subject to brokerage commissions.

The Fund reserves the right to amend or terminate the Plan. There is no direct service charge to participants with regard to purchases in the Plan; however, the Fund reserves the right to amend the Plan to include a service charge payable by the participants.

All correspondence or questions concerning the Plan should be directed to the Plan Administrator.

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Principal Real Estate Income Fund Additional Information

*April 30, 2018 (Unaudited)*

PORTFOLIO HOLDINGS

The Fund files a complete schedule of portfolio holdings with the U.S. Securities and Exchange Commission (“SEC”) for the first and third quarters of each fiscal year on Form N-Q within 60 days after the end of the period. Copies of the Fund’s Form N-Q are available without a charge, upon request, by contacting the Fund at 1-855-838-9485 and on the SEC’s website at <http://www.sec.gov>. You may also review and copy Form N-Q at the SEC’s Public Reference Room in Washington, D.C. For more information about the operation of the Public Reference Room, please call the SEC at 1-800-SEC-0330.

PROXY VOTING

A description of the Fund’s proxy voting policies and procedures is available (1) without charge, upon request, by calling 1-855-838-9485, (2) on the Fund’s website located at <http://www.principalcef.com>, or (3) on the SEC’s website at <http://www.sec.gov>. Information regarding how the Fund voted proxies relating to portfolio securities during the twelve-month period ended June 30th is available on the SEC’s website at <http://www.sec.gov>.

SECTION 19(a) NOTICES

The following table sets forth the estimated amount of the sources of distribution for purposes of Section 19 of the Investment Company Act of 1940, as amended, and the related rules adopted there under. The Fund estimates the following percentages, of the total distribution amount per share, attributable to (i) current and prior fiscal year net investment income, (ii) net realized short-term capital gain, (iii) net realized long-term capital gain and (iv) return of capital or other capital source as a percentage of the total distribution amount. These percentages are disclosed for the fiscal year-to-date cumulative distribution amount per share for the Fund. The amounts and sources of distributions reported in these 19(a) notices are only estimates and not for tax reporting purposes. The actual amounts and sources

of the amounts for tax reporting purposes will depend upon the Fund's investment experience during the remainder of the calendar year and may be subject to changes based on tax regulations. The Fund will send you a Form 1099-DIV for the calendar year that will tell you how to report these distributions for federal income tax purposes.

<b>Per Share Cumulative Distributions for the Six Months Ended April 30, 2018</b>					<b>Percentage of the Total Cumulative Distributions for the Six Months Ended April 30, 2018</b>				
<b>Net Investment Income</b>	<b>Short- Term Capital Gains</b>	<b>Long- Term Capital Gains</b>	<b>Return of Capital</b>	<b>Total Per Share</b>	<b>Net Investment Income</b>	<b>Short- Term Capital Gains</b>	<b>Long- Term Capital Gains</b>	<b>Return of Capital</b>	<b>Total Per Share</b>
\$0.4555	\$0.0000	\$0.0000	\$0.2045	\$0.6600	69.02%	00.00%	00.00%	30.98%	100.00%

Principal Real Estate Income Fund Additional Information

*April 30, 2018 (Unaudited)*

UNAUDITED TAX INFORMATION

The Fund designated 2.87% of the income dividends distributed between January 1, 2017 and December 31, 2017, as qualified dividend income (“QDI”) as defined in Section 1(h)(11) of the Code.

In early 2018, if applicable, shareholders of record should have received this information for the distributions paid to them by the Fund during the calendar year 2017 via Form 1099. The Fund will notify shareholders in early 2019 of amounts paid to them by the Fund, if any, during the calendar year 2018.

DATA PRIVACY POLICIES AND PROCEDURES

**Policy Statement:** The Principle Real Estate Income Fund (the “Fund”) has in effect the following policy with respect to nonpublic personal information about its customers:

Only such information received from customers, through application forms or otherwise, and information about customers’ Fund transactions will be collected.

None of such information about customers (or former customers) will be disclosed to anyone, except as permitted by law (which includes disclosure to employees necessary to service your account).

Policies and procedures (including physical, electronic and procedural safeguards) are in place and designed to protect the confidentiality and properly disposal of such information.

The Fund does not currently obtain consumer information. If the Fund were to obtain consumer information at any time in the future, it would employ appropriate procedural safeguards that comply with federal standards to protect against unauthorized access to and properly dispose of consumer information.

CUSTODIAN AND TRANSFER AGENT

State Street Bank and Trust Company, located at State Street Financial Center, One Lincoln Street, Boston, MA 02111, serves as the Fund's custodian and will maintain custody of the securities and cash of the Fund.

DST Systems, Inc., located at 333 West 11th Street, 5th Floor, Kansas City, Missouri 64105, serves as the Fund's transfer agent and registrar.

LEGAL COUNSEL

Dechert LLP, located at 1095 Avenue of the Americas, New York, New York 10036, serves as legal counsel to the Trust.

INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Cohen & Company, Ltd. is the independent registered public accounting firm for the Fund.

38 [www.principalcef.com](http://www.principalcef.com)

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**Item 2.**

**Code of Ethics.**

Not applicable to semi-annual report.

**Item 3.**

**Audit Committee Financial Expert.**

Not applicable to semi-annual report.

**Item 4.**

**Principal Accountant Fees and Services.**

Not applicable to semi-annual report.

**Item 5.**

**Audit Committee of Listed Registrants.**

Not applicable.

**Item 6.**

**Schedule of Investments.**

(a) Schedule of Investments is included as part of the Report to Stockholders filed under Item 1 of this form.

(b) Not applicable to the Registrant.

**Item 7. Disclosure of Proxy Voting Policies and Procedures for Closed-End Management Investment Companies.**

Not applicable to semi-annual report.

**Item 8.**

**Portfolio Managers of Closed-End Management Investment Companies.**

(a) Not applicable to semi-annual report.



(b)

Not applicable.

**Item 9. Purchases of Equity Securities by Closed-End Management Company and Affiliated Purchasers.**

Not applicable.

**Item 10. Submission of Matters to a Vote of Security Holders.**

There have been no material changes to the procedures by which shareholders may recommend nominees to the Board of Trustees.

**Item 11. Controls and Procedures.**

(a) The Registrant's principal executive officer and principal financial officer have concluded that the Registrant's disclosure controls and procedures (as defined in Rule 30a-3(c) under the Investment Company Act of 1940, as amended) are effective based on their evaluation of these controls and procedures as of a date within 90 days of the filing date of this document.

(b) There was no change in the Registrant's internal control over financial reporting (as defined in Rule 30a-3(d) under the Investment Company Act of 1940, as amended) period covered by this report that has materially affected, or is reasonably likely to materially affect, the Registrant's internal control over financial reporting.

**Item 12. Disclosure of Securities Lending Activities for Closed-End Management Investment Companies.**

(a) Not applicable to semi-annual report.

(b) Not applicable to semi-annual report.

**Item 13. Exhibits.**

(a)(1) Not applicable to semi-annual report

(a)(2) The certifications required by Rule 30a-2(a) of the Investment Company Act of 1940, as amended, and Section 302 of the Sarbanes-Oxley Act of 2002 are attached hereto as Ex-99.Cert.

(a)(3) Not applicable.

(a)(4) Not applicable

(b) A certification for the Registrant's Principal Executive Officer and Principal Financial Officer, as required by Rule 30a-2(b) of the Investment Company Act of 1940, as amended, and Section 906 of the Sarbanes-Oxley Act of 2002 are attached hereto as Ex-99.906Cert.

(c) Pursuant to the Securities and Exchange Commission's Order granting relief from Section 19(b) of the Investment Company Act of 1940 dated November 12, 2014, the 19(a) Notice to Beneficial Owners is attached hereto as Exhibit 13(c).

**SIGNATURES**

Pursuant to the requirements of the Securities Exchange Act of 1934 and the Investment Company Act of 1940, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

**PRINCIPAL REAL ESTATE INCOME FUND**

By: /s/ Jeremy Held  
Jeremy Held  
President (Principal Executive Officer)

Date: July 6, 2018

Pursuant to the requirements of the Securities Exchange Act of 1934 and the Investment Company Act of 1940, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

By: /s/ Jeremy Held  
Jeremy Held  
President (Principal Executive Officer)

Date: July 6, 2018

By: /s/ Jeremy O. May  
Jeremy O. May  
Treasurer (Principal Financial Officer)

Date: July 6, 2018