

Horizon Technology Finance Corp
Form 497
September 26, 2017

This preliminary prospectus supplement relates to an effective registration statement under the Securities Act of 1933, as amended, but the information in this preliminary prospectus supplement is not complete and may be changed. This preliminary prospectus supplement and the accompanying prospectus are not an offer to sell and are not soliciting an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.

Filed pursuant to Rule 497
Registration No. 333-201886

Subject to Completion Dated September 26, 2017

PRELIMINARY PROSPECTUS SUPPLEMENT **(to Prospectus dated August 1, 2017)**

\$30,000,000

Horizon Technology Finance Corporation

% Notes due 2022

We are a non-diversified closed-end management investment company that has elected to be regulated as a business development company (BDC) under the Investment Company Act of 1940 (the 1940 Act). We are externally managed by Horizon Technology Finance Management LLC, a registered investment adviser under the Investment Advisers Act of 1940 (the Advisers Act). Our investment objective is to maximize our investment portfolio s return by generating current income from the debt investments we make and capital appreciation from the warrants we receive when making such debt investments. We make secured debt investments to development-stage companies in the technology, life science, healthcare information and services and cleantech industries.

We are offering \$ in aggregate principal amount of % notes due 2022 (the Notes). The Notes will mature on September 15, 2022. We will pay interest on the Notes on March 15, June 15, September 15 and December 15 of each year, beginning on December 15, 2017. We may redeem the Notes in whole or in part at any time or from time to time on or after September 15, 2019 at our sole option at the redemption prices set forth under Specific Terms of the Notes and the Offering Optional redemption in this prospectus supplement. Holders of the Notes will not have the option to have the Notes repaid prior to the stated maturity. The Notes will be issued in minimum denominations of \$25 and integral multiples of \$25 in excess thereof.

The Notes will be our direct unsecured obligations and rank *pari passu* with all outstanding and future unsecured unsubordinated indebtedness.

We intend to list the Notes on The New York Stock Exchange (NYSE) and we expect trading in the Notes on the NYSE to begin within 30 days of the original issue date. The Notes are expected to trade flat, which means that purchasers will not pay, and sellers will not receive, any accrued and unpaid interest on the Notes that is not reflected in the trading price. Currently, there is no public market for the Notes.

Under the terms of this variable price reoffer, the underwriters have agreed to purchase the Notes from us at % of the aggregate principal amount of the Notes (resulting in \$ in aggregate proceeds to us, before deducting expenses payable by us). The underwriters propose to offer the Notes for sale, from time to time, in one or more negotiated transactions, at prices that may be different than par. These sales may occur at market prices prevailing at the time of sale, at prices related to such prevailing market prices or at negotiated prices.

The underwriters may also purchase up to an additional \$ aggregate principal amount of Notes offered hereby, within 30 days of the date of this prospectus supplement, to cover overallotments. If the underwriters exercise this overallotment option in full, the total aggregate proceeds to us, before deducting expenses payable by us, will be \$.

Investing in our securities is highly speculative and involves a high degree of risk, and you could lose your entire investment if any of the risks occur. For more information regarding these risks, please see Risk Factors beginning on page S-9 of this prospectus supplement and page 17 of the accompanying prospectus. The individual securities in which we invest will not be rated by any rating agency. If they were, they would be rated as below investment grade or junk. Indebtedness of below investment grade quality has predominantly speculative characteristics with respect to the issuer s capacity to pay interest and repay principal.

This prospectus supplement and the accompanying prospectus contain important information you should know before investing in the Notes. Please read it before you invest and keep it for future reference. We file annual, quarterly and current reports, proxy statements and other information about us with the Securities and Exchange Commission (the SEC). We maintain a website at www.horizontechfinance.com and make all of the foregoing information available, free of charge, on or through our website. This information is also available free of charge by contacting us at 312 Farmington Avenue, Farmington, Connecticut 06032, Attention: Investor Relations, or by calling us collect at (860) 676-8654. The SEC also maintains a website at <http://www.sec.gov> that contains such information.

Information contained on our website is not incorporated by reference into this prospectus supplement or the accompanying prospectus, and you should not consider information contained on our website to be part of this prospectus supplement or the accompanying prospectus.

Neither the SEC nor any state securities commission has approved or disapproved of these securities or passed upon the adequacy or accuracy of this prospectus supplement or the accompanying prospectus. Any representation to the contrary is a criminal offense.

The underwriters are offering the Notes as set forth in Underwriting. Delivery of the Notes in book-entry form through The Depository Trust Company (DTC) will be made on or about , 2017.

Sole Book-running Manager

Keefe, Bruyette & Woods *A Stifel Company*

Co-Managers

BB&T Capital Markets

William Blair

Janney Montgomery Scott

Oppenheimer & Co.

The date of this prospectus supplement is _____, 2017.

TABLE OF CONTENTS

ABOUT THIS PROSPECTUS SUPPLEMENT

You should rely only on the information contained in this prospectus supplement and the accompanying prospectus when considering whether to purchase the securities offered by this prospectus supplement. We have not, and the underwriters have not, authorized any other person to provide you with different information. We are not, and the underwriters are not, making an offer to sell the Notes in any jurisdiction where the offer or sale is not permitted. You should assume that the information appearing in this prospectus supplement and the accompanying prospectus is accurate only as of the date on the front cover of this prospectus supplement or the accompanying prospectus. Our business, financial condition, results of operations, cash flows and prospects may have changed since that date. We will update these documents to reflect material changes only as required by law. We are offering to sell and seeking offers to buy the Notes only in jurisdictions where offers are permitted.

This document is in two parts. The first part is this prospectus supplement, which describes the terms of this offering and the Notes and also adds to and updates information contained in the accompanying prospectus. The second part is the accompanying prospectus, which gives more general information and disclosure. To the extent the information contained in this prospectus supplement differs from the information contained in the accompanying prospectus, the information in this prospectus supplement shall control. You should read this prospectus supplement and the accompanying prospectus together with the additional information described under the heading, Available Information before investing in the Notes.

TABLE OF CONTENTS

TABLE OF CONTENTS

Prospectus Supplement

	Page
<u>Prospectus Supplement Summary</u>	<u>S-1</u>
<u>The Offering</u>	<u>S-6</u>
<u>Risk Factors</u>	<u>S-9</u>
<u>Cautionary Note Regarding Forward-Looking Statements</u>	<u>S-13</u>
<u>Selected Condensed Consolidated Financial and Other Data</u>	<u>S-15</u>
<u>Use of Proceeds</u>	<u>S-17</u>
<u>Ratio of Earnings to Fixed Charges</u>	<u>S-18</u>
<u>Capitalization</u>	<u>S-19</u>
<u>Management's Discussion and Analysis of Financial Condition and Results of Operations</u>	<u>S-20</u>
<u>Description of the Notes</u>	<u>S-35</u>
<u>United States Federal Income Tax Consequences</u>	<u>S-45</u>
<u>Underwriting</u>	<u>S-50</u>
<u>Legal Matters</u>	<u>S-53</u>
<u>Independent Registered Public Accounting Firm</u>	<u>S-53</u>
<u>Available Information</u>	<u>S-53</u>
<u>Index to Consolidated Financial Statements</u>	<u>SF-1</u>

Prospectus

	Page
<u>About this Prospectus</u>	<u>ii</u>
<u>Prospectus Summary</u>	<u>1</u>
<u>Offerings</u>	<u>7</u>
<u>Fees and Expenses</u>	<u>12</u>
<u>Selected Consolidated Financial and Other Data</u>	<u>15</u>
<u>Selected Quarterly Financial Data</u>	<u>16</u>
<u>Risk Factors</u>	<u>17</u>
<u>Cautionary Note Regarding Forward-Looking Statements</u>	<u>47</u>
<u>Use of Proceeds</u>	<u>48</u>
<u>Price Range of Common Stock and Distributions</u>	<u>49</u>
<u>Ratio of Earnings to Fixed Charges</u>	<u>52</u>
<u>Management's Discussion and Analysis of Financial Condition and Results of Operations</u>	<u>53</u>
<u>Senior Securities</u>	<u>70</u>
<u>Business</u>	<u>72</u>
<u>Portfolio Companies</u>	<u>83</u>
<u>Management</u>	<u>91</u>
<u>Certain Relationships and Related Transactions</u>	<u>99</u>
<u>Our Advisor</u>	<u>100</u>

TABLE OF CONTENTS

	Page
<u>Investment Management and Administration Agreements</u>	<u>101</u>
<u>Control Persons and Principal Stockholders</u>	<u>109</u>
<u>Determination of Net Asset Value</u>	<u>111</u>
<u>Dividend Reinvestment Plan</u>	<u>113</u>
<u>Description of Our Securities</u>	<u>115</u>
<u>Description of Common Stock That We May Issue</u>	<u>116</u>
<u>Description of Preferred Stock That We May Issue</u>	<u>121</u>
<u>Description of Subscription Rights That We May Issue</u>	<u>123</u>
<u>Description of Debt Securities That We May Issue</u>	<u>124</u>
<u>Description of Warrants That We May Issue</u>	<u>135</u>
<u>Selling Stockholder</u>	<u>137</u>
<u>Regulation</u>	<u>139</u>
<u>Brokerage Allocations and Other Practices</u>	<u>144</u>
<u>Plan of Distribution</u>	<u>145</u>
<u>Material U.S. Federal Income Tax Considerations</u>	<u>148</u>
<u>Custodian, Transfer Agent, Dividend Paying Agent and Registrar</u>	<u>156</u>
<u>Legal Matters</u>	<u>156</u>
<u>Independent Registered Public Accounting Firm</u>	<u>156</u>
<u>Where You Can Find More Information</u>	<u>157</u>
<u>Index to Consolidated Financial Statements</u>	<u>F-1</u>

S-ii

TABLE OF CONTENTS

PROSPECTUS SUPPLEMENT SUMMARY

This summary highlights some of the information in this prospectus supplement and the accompanying prospectus. It is not complete and may not contain all of the information that you may want to consider before investing in the Notes. You should read the accompanying prospectus and this prospectus supplement carefully, including Risk Factors, Selected Consolidated Financial and Other Data, Management's Discussion and Analysis of Financial Condition and Results of Operations and the financial statements contained in this prospectus supplement and/or the accompanying prospectus.

Except where the context suggests otherwise, the terms we, us, our and Company refer to our predecessor Compass Horizon Funding Company, LLC and its consolidated subsidiary prior to our IPO and to Horizon Technology Finance Corporation and its consolidated subsidiaries after the IPO. The terms our Advisor and our Administrator refer to Horizon Technology Finance Management, LLC, a Delaware limited liability company, and, where the context requires, Horizon Technology Finance, LLC, our Advisor's predecessor.

Our company

We are a specialty finance company that lends to and invests in development-stage companies in the technology, life science, healthcare information and services and cleantech industries, which we refer to collectively as our Target Industries. Our investment objective is to maximize our investment portfolio's total return by generating current income from the debt investments we make and capital appreciation from the warrants we receive when making such debt investments. We are focused on making secured debt investments, which we refer to as Venture Loans, to venture capital backed companies in our Target Industries, which we refer to as Venture Lending. We also selectively provide Venture Loans to publicly traded companies in our Target Industries. Our debt investments are typically secured by first liens or first liens behind a secured revolving line of credit, or Senior Term Loans. Venture Lending is typically characterized by (1) the making of a secured debt investment after a venture capital or equity investment in the portfolio company has been made, which investment provides a source of cash to fund the portfolio company's debt service obligations under the Venture Loan, (2) the senior priority of the Venture Loan which requires repayment of the Venture Loan prior to the equity investors realizing a return on their capital, (3) the relatively rapid amortization of the Venture Loan and (4) the lender's receipt of warrants or other success fees with the making of the Venture Loan.

We are an externally managed, closed-end, non-diversified management investment company that has elected to be regulated as a BDC under the 1940 Act. In addition, for U.S. federal income tax purposes, we have elected to be treated as a regulated investment company, or RIC, under Subchapter M of the Internal Revenue Code of 1986, as amended, or the Code. As a BDC, we are required to comply with regulatory requirements, including limitations on our use of debt. We are permitted to, and expect to, finance a portion of our investments through borrowings. However, as a BDC, we are only generally allowed to borrow amounts such that our asset coverage, as defined in the 1940 Act, equals at least 200% after such borrowing. The amount of leverage that we employ depends on our assessment of market conditions and other factors at the time of any proposed borrowing. As a RIC, we generally do not have to pay corporate-level federal income taxes on our investment company taxable income and our net capital gain that we distribute to our stockholders as long as we meet certain source-of-income, distribution, asset diversification and other requirements.

We are externally managed and advised by our Advisor. Our Advisor manages our day-to-day operations and also

provides all administrative services necessary for us to operate.

Our advisor

Our investment activities are managed by our Advisor, and we expect to continue to benefit from our Advisor's ability to identify attractive investment opportunities, conduct diligence on and value prospective investments, negotiate investments and manage our portfolio of investments. In addition to the experience gained from the years that they have worked together both at our Advisor and prior to the formation of our Advisor, the members of our investment team have broad lending backgrounds, with substantial experience at a variety of commercial finance companies, technology banks and private debt funds, and have developed a

S-1

TABLE OF CONTENTS

broad network of contacts within the venture capital and private equity community. This network of contacts provides a principal source of investment opportunities.

Our Advisor is led by five senior managers including Robert D. Pomeroy, Jr., our Chief Executive Officer, Gerald A. Michaud, our President, Daniel R. Trolio, our Senior Vice President and Chief Financial Officer, John C. Bombara, our Senior Vice President, General Counsel and Chief Compliance Officer, and Daniel S. Devorsetz, our Senior Vice President and Chief Investment Officer.

Our strategy

Our investment objective is to maximize our investment portfolio's total return by generating current income from the loans we make and capital appreciation from the warrants we receive when making such debt investments. To further implement our business strategy, we expect our Advisor to continue to employ the following core strategies:

Structured investments in the venture capital and private and public equity markets. We make loans to development-stage companies within our Target Industries typically in the form of secured loans. The secured debt structure provides a lower risk strategy, as compared to equity or unsecured debt investments, to participate in the emerging technology markets because the debt structures we typically utilize provide collateral against the downside risk of loss, provide return of capital in a much shorter timeframe through current-pay interest and amortization of principal and have a senior position to equity and unsecured debt in the borrower's capital structure in the case of insolvency, wind down or bankruptcy. Unlike venture capital and private equity investments, our investment returns and return of our capital do not require equity investment exits such as mergers and acquisitions or initial public offerings. Instead, we receive returns on our debt investments primarily through regularly scheduled payments of principal and interest and, if necessary, liquidation of the collateral supporting the debt investment upon a default. Only the potential gains from warrants depend upon equity investment exits.

Enterprise value lending. We and our Advisor take an enterprise value approach to structuring and underwriting loans. Enterprise value includes the implied valuation based upon recent equity capital invested as well as the intrinsic value of the applicable portfolio company's particular technology, service or customer base. We secure our lien position against the enterprise value of each portfolio company.

Creative products with attractive risk-adjusted pricing. Each of our existing and prospective portfolio companies has its own unique funding needs for the capital provided from the proceeds of our Venture Loans. These funding needs include funds for additional development runways, funds to hire or retain sales staff or funds to invest in research and development in order to reach important technical milestones in advance of raising additional equity. Our loans include current-pay interest, commitment fees, end-of-term payments, or ETPs, pre-payment fees, success fees and non-utilization fees. We believe we have developed pricing tools, structuring techniques and valuation metrics that satisfy our portfolio companies' financing requirements while mitigating risk and maximizing returns on our investments.

Opportunity for enhanced returns. To enhance our debt investment portfolio returns, in addition to interest and fees, we frequently obtain warrants to purchase the equity of our portfolio companies as additional consideration for making debt investments. The warrants we obtain generally include a cashless exercise provision to allow us to exercise these rights without requiring us to make any additional cash investment. Obtaining warrants in our portfolio companies has allowed us to participate in the equity appreciation of our portfolio companies, which we expect will enable us to generate higher returns for our investors.

Direct origination. We originate transactions directly with technology, life science, healthcare information and services and cleantech companies. These transactions are referred to our Advisor from a number of sources, including referrals from, or direct solicitation of, venture capital and

S-2

TABLE OF CONTENTS

private equity firms, portfolio company management teams, legal firms, accounting firms, investment banks and other lenders that represent companies within our Target Industries. Our Advisor has been the sole or lead originator in substantially all transactions in which the funds it manages have invested.

Disciplined and balanced underwriting and portfolio management. We use a disciplined underwriting process that includes obtaining information validation from multiple sources, extensive knowledge of our Target Industries, comparable industry valuation metrics and sophisticated financial analysis related to development-stage companies. Our Advisor’s due diligence on investment prospects includes obtaining and evaluating information on the prospective portfolio company’s technology, market opportunity, management team, fund raising history, investor support, valuation considerations, financial condition and projections. We seek to balance our investment portfolio to reduce the risk of down market cycles associated with any particular industry or sector, development-stage or geographic area by quarterly reviewing each criteria and, in the event there is an overconcentration, seeking investment opportunities to reduce such overconcentration. Our Advisor employs a hands on approach to portfolio management requiring private portfolio companies to provide monthly financial information and to participate in regular updates on performance and future plans. For public companies, our Advisor typically relies on publicly reported quarterly financials.

Use of leverage. We use leverage to increase returns on equity through our credit facility, or the Key Facility, provided by KeyBank National Association, or Key, and our 7.375% senior notes due 2019, or the 2019 Notes (which we intend to redeem with the proceeds of this offering). See Management’s Discussion and Analysis of Financial Condition and Results of Operations – Liquidity and capital resources for additional information about our use of leverage. In addition, we may issue additional debt securities or preferred stock in one or more series in the future, the specific terms of which will be described in the particular prospectus supplement relating to that series.

Market opportunity

We focus our investments primarily in four key industries of the emerging technology market: technology, life science, healthcare information and services and cleantech. The technology sectors we focus on include communications, networking, data storage, software, cloud computing, semiconductor, internet and media and consumer-related technologies. The life science sectors we focus on include biotechnology, drug discovery, drug delivery, bioinformatics and medical devices. The healthcare information and services sectors we focus on include diagnostics, electronic medical record services and software and other healthcare related services and technologies that improve efficiency and quality of administered healthcare. The cleantech sectors we focus on include alternative energy, power management, energy efficiency, green building materials and waste recycling. We refer to all of these companies as technology-related companies because the companies are developing or offering goods and services to businesses and consumers which utilize scientific knowledge, including techniques, skills, methods, devices and processes, to solve problems. We intend, under normal market conditions, to invest at least 80% of the value of our total assets in such companies.

We believe that Venture Lending has the potential to achieve enhanced returns that are attractive notwithstanding the high degree of risk associated with lending to development-stage companies. Potential benefits include:

- interest rates that typically exceed rates that would be available to portfolio companies if they could borrow in traditional commercial financing transactions;
- the debt investment support provided by cash proceeds from equity capital invested by venture capital and private equity firms or access to public equity markets to access capital;
- relatively rapid amortization of principal;
- senior ranking to equity and collateralization of debt investments to minimize potential loss of capital; and

TABLE OF CONTENTS

potential equity appreciation through warrants.

We believe that Venture Lending also provides an attractive financing source for portfolio companies, their management teams and their equity capital investors, as it:

is typically less dilutive to the equity holders than additional equity financing;
extends the time period during which a portfolio company can operate before seeking additional equity capital or pursuing a sale transaction or other liquidity event; and

allows portfolio companies to better match cash sources with uses.

Competitive strengths

We believe that we, together with our Advisor, possess significant competitive strengths, which include the following:

Consistently execute commitments and close transactions. Our Advisor and its senior management and investment professionals have an extensive track record of originating, underwriting and managing Venture Loans. Our Advisor and its predecessor have directly originated, underwritten and managed Venture Loans with an aggregate original principal amount over \$1.3 billion to more than 210 companies since operations commenced in 2004.

Robust direct origination capabilities. Our Advisor has significant experience originating Venture Loans in our Target Industries. This experience has given our Advisor a deep knowledge of our Target Industries and an extensive base of transaction sources and references.

Highly experienced and cohesive management team. Our Advisor's senior management team of experienced professionals has been together since our inception. This consistency allows companies, their management teams and their investors to rely on consistent and predictable service, loan products and terms and underwriting standards.

Relationships with venture capital and private equity investors. Our Advisor has developed strong relationships with venture capital and private equity firms and their partners.

Well-known brand name. Our Advisor has originated Venture Loans to more than 210 companies in our Target Industries under the Horizon Technology Finance brand.

Our portfolio

From the commencement of operations of our predecessor on March 4, 2008 through June 30, 2017, we funded 151 portfolio companies and invested \$887.5 million in debt investments. As of June 30, 2017, our debt investment portfolio consisted of 37 debt investments with an aggregate fair value of \$164.9 million. As of June 30, 2017, 99.0%, or \$163.2 million, of our debt investment portfolio at fair value consisted of Senior Term Loans. As of June 30, 2017, our net assets were \$136.8 million, and all of our debt investments were secured by all or a portion of the tangible and intangible assets of the applicable portfolio company. The debt investments in our portfolio are generally not rated by any rating agency. If the individual debt investments in our portfolio were rated, they would be rated below investment grade. Debt investments that are unrated or rated below investment grade are sometimes referred to as junk bonds and have predominantly speculative characteristics with respect to the issuer's capacity to pay interest and repay principal.

For the six months ended June 30, 2017, our debt investment portfolio had a dollar-weighted annualized yield of 15.1% (excluding any yield from warrants), and our investment portfolio (including non-income producing investments) had an overall total return of 14.1%. We calculate the yield on dollar-weighted average debt investments for any period measured as (1) total investment income during the period divided by (2) the average of the fair value of debt investments outstanding on (a) the last day of the calendar month immediately preceding the first day of the period and (b) the last day of each calendar month during the period. We calculate the yield on dollar-weighted

average investments for any period measured as (1) total investment income during the period divided by (2) the average of the fair value of all investments outstanding on (a) the last day of the calendar month immediately preceding the first day of the period and (b) the last day of each calendar month during the period. The dollar-weighted annualized yield represents the

S-4

TABLE OF CONTENTS

portfolio yield and will be higher than what investors will realize because it does not reflect our expenses or any sales load paid by investors. As of June 30, 2017, our debt investments had a dollar-weighted average term of 47 months from inception and a dollar-weighted average remaining term of 32 months. As of June 30, 2017, substantially all of our debt investments had an original committed principal amount of between \$3 million and \$20 million, repayment terms of between 23 and 60 months and bore current pay interest at annual interest rates of between 8% and 13%.

For the six months ended June 30, 2017, our total return based on market value was 13.3%. Total return based on market value is calculated as (x) the sum of (i) the closing sales price of our common stock on the last day of the period plus (ii) the aggregated amount of distributions paid per share during the period, less (iii) the closing sales price of our common stock on the first day of the period, divided by (y) the closing sales price of our common stock on the first day of the period.

In addition to our debt investments, as of June 30, 2017, we held warrants to purchase stock, predominantly preferred stock, in 72 portfolio companies, equity positions in five portfolio companies and success fee arrangements in 10 portfolio companies.

Company information

Our administrative and executive offices and those of our Advisor are located at 312 Farmington Avenue, Farmington, Connecticut 06032, and our telephone number is (860) 676-8654. Our corporate website is located at www.horizontechfinance.com. Information contained on our website is not incorporated by reference into this prospectus supplement or the accompanying prospectus, and you should not consider information contained on our website to be part of this prospectus supplement or the accompanying prospectus.

Recent developments

From June 30, 2017 through the date of this prospectus supplement, the Company repurchased 5,923 shares of its common stock pursuant to its stock repurchase program at an average price of \$9.97 on the open market at a total cost of approximately \$59,000.

S-5

TABLE OF CONTENTS

THE OFFERING

This section summarizes the principal legal and financial terms of the Notes. You should read this section together with the more detailed description of the Notes in this prospectus supplement under the heading "Description of Notes" and the more general description found in the accompanying prospectus under the heading "Description of Debt Securities That We May Issue" before investing in the Notes. Capitalized terms used in this prospectus supplement and not otherwise defined shall have the meanings ascribed to them in the accompanying prospectus or the indenture governing the Notes.

Issuer

Horizon Technology Finance Corporation, a Delaware corporation

Title of the securities

% Notes due 2022

Initial aggregate principal amount being offered

\$

Overallotment option

The underwriters may also purchase from us up to an additional \$ aggregate principal amount of Notes to cover overallotments, if any, within 30 days of the date of this prospectus supplement.

Issue price

Variable Price Re-offer. The underwriters propose to offer the Notes for sale, from time to time, in one or more negotiated transactions, at prices that may be different than par. These sales may occur at market prices prevailing at the time of sale, at prices related to such prevailing market prices or at negotiated prices.

Listing

We intend to list the Notes on the NYSE within 30 days of the original issue date.

Interest rate

% per year

Stated maturity date

September 15, 2022, unless redeemed prior to maturity.

Interest payment dates

Each March 15, June 15, September 15, and December 15, commencing December 15, 2017. If an interest payment date falls on a non-business day, the applicable interest payment will be made on the next business day and no additional interest will accrue as a result of such delayed payment.

Ranking of Notes

The Notes will be our direct unsecured obligations and will rank:

pari passu with our current and future unsecured, unsubordinated indebtedness, including the 2019 Notes (which we intend to redeem with the proceeds from this offering);

senior to any of our future indebtedness that expressly provides it is subordinated to the Notes;

effectively subordinated to all of our existing and future secured indebtedness (including indebtedness that is initially unsecured to which we subsequently grant security), to the extent of the value of the assets securing such

indebtedness; and
S-6

TABLE OF CONTENTS

structurally subordinated to all existing and future indebtedness and other obligations of any of our subsidiaries, financing vehicles or similar facilities, including debt outstanding under the Key Facility.

Denominations

We will issue the Notes in denominations of \$25 and integral multiples of \$25 in excess thereof.

Use of Proceeds

We estimate that the net proceeds from the sale of the Notes in this offering will be approximately \$ (or approximately \$ if the underwriters fully exercise their overallotment option), after deducting the underwriting discounts and commissions and estimated offering expenses. We intend to use the net proceeds from the sale of the Notes to redeem the 2019 Notes. See the Use of Proceeds section of this prospectus supplement.

Optional redemption

The Notes may be redeemed in whole or in part at any time or from time to time at our option on or after September 15, 2019, upon not less than 30 days nor more than 60 days written notice by mail prior to the date fixed for redemption thereof, at a redemption price of \$25 per Note plus accrued and unpaid interest payments otherwise payable for the then-current quarterly interest period accrued to but not including the date fixed for redemption.

Repayment at option of Holders

Holders will not have the option to have the Notes repaid prior to the stated maturity date.

Governing Law

New York

Trustee, Paying Agent, Registrar and Transfer Agent

U.S. Bank National Association

Investment Company Act covenants

We agree that, for the period of time during which the Notes are outstanding, we will not violate Section 18(a)(1)(A) as modified by Section 61(a)(1) of the 1940 Act or any successor provisions.

We agree that, for the period of time during which the Notes are outstanding, we will not violate Section 18(a)(1)(B) as modified by (i) Section 61(a)(1) of the 1940 Act, the definitional provisions of the 1940 Act or any successor provisions and after giving effect to any exemptive relief granted to us by the SEC and (ii) the two other exceptions set forth below. These statutory provisions of the 1940 Act are not currently applicable to us and will not be applicable to us as a result of this offering. However, if Section 18(a)(1)(B) as modified by Section 61(a)(1) of the 1940 Act were currently applicable to us in connection with this offering, these provisions would generally prohibit us from declaring any cash dividend or distribution upon any class of our capital stock, or purchasing any such capital stock if our asset coverage, as defined for purposes of Section 18(a)(1)(B) in the 1940 Act, were below 200% at the time of the

S-7

TABLE OF CONTENTS

declaration of the dividend or distribution or purchase and after deducting the amount of such dividend, distribution, or purchase. Under the covenant, we will be permitted to declare a cash dividend or distribution notwithstanding the prohibition contained in Section 18(a)(1)(B) as modified by Section 61(a)(1) of the 1940 Act, but only up to such amount as is necessary for us to maintain our status as a RIC under Subchapter M of the Code. Furthermore, the covenant will not be triggered unless and until such time as our asset coverage has not been in compliance with the minimum asset coverage required by Section 18(a)(1)(B) as modified by Section 61(a)(1) of the 1940 Act (after giving effect to any exemptive relief granted to us by the SEC) for more than six consecutive months.

See the Description of the Notes section of this prospectus supplement for certain other covenants applicable to the Notes.

Risk factors

See Risk Factors beginning on page S-9 of this prospectus supplement and beginning on page 17 of the accompanying prospectus for a discussion of risks you should carefully consider before deciding to invest in the Notes.

S-8

TABLE OF CONTENTS

RISK FACTORS

Investing in the Notes involves a number of significant risks. Before you invest in the Notes, you should be aware of various risks, including those described below and those set forth in the accompanying prospectus. You should carefully consider these risk factors, together with all of the other information included in this prospectus supplement and the accompanying prospectus, before you decide whether to make an investment in the Notes. The risks set out below are not the only risks we face. Additional risks and uncertainties not presently known to us or not presently deemed material by us may also impair our operations and performance. If any of the following events occur, our business, financial condition, results of operations and cash flows could be materially and adversely affected. In such case, you may lose all or part of your investment. The risk factors described below, together with those set forth in the accompanying prospectus, are the principal risk factors associated with an investment in the Notes as well as those factors generally associated with an investment company with investment objectives, investment policies, capital structure or trading markets similar to ours.

The Notes will be unsecured and therefore will be effectively subordinated to any secured indebtedness we have currently incurred or may incur in the future.

The Notes will not be secured by any of our assets or any of the assets of our subsidiaries. As a result, the Notes are effectively subordinated to any secured indebtedness we or our subsidiaries have currently incurred or may incur in the future (or any indebtedness that is initially unsecured to which we subsequently grant security) to the extent of the value of the assets securing such indebtedness. In any liquidation, dissolution, bankruptcy or other similar proceeding, the holders of any of our existing or future secured indebtedness and the secured indebtedness of our subsidiaries may assert rights against the assets pledged to secure that indebtedness in order to receive full payment of their indebtedness before the assets may be used to pay other creditors, including the holders of the Notes.

The Notes will be structurally subordinated to the indebtedness and other liabilities of our subsidiaries.

The Notes are obligations exclusively of Horizon Technology Finance Corporation, and not of any of our subsidiaries. None of our subsidiaries is a guarantor of the Notes, and the Notes are not required to be guaranteed by any subsidiaries we may acquire or create in the future. The assets of such subsidiaries are not directly available to satisfy the claims of our creditors, including the holders of the Notes.

Except to the extent we are a creditor with recognized claims against our subsidiaries, all claims of creditors (including trade creditors) and holders of preferred stock, if any, of our subsidiaries have priority over our equity interests in such subsidiaries (and therefore the claims of our creditors, including holders of the Notes) with respect to the assets of such subsidiaries. Even if we are recognized as a creditor of one or more of our subsidiaries, our claims are effectively subordinated to any security interests in the assets of any such subsidiary and to any indebtedness or other liabilities of any such subsidiary senior to our claims. Consequently, the Notes will be structurally subordinated to all indebtedness and other liabilities (including trade payables) of any of our subsidiaries and any subsidiaries that we may in the future acquire or establish as financing vehicles or otherwise.

In addition, our subsidiaries may incur substantial additional indebtedness in the future, all of which would be structurally senior to the Notes.

The indenture under which the Notes will be issued contains limited protection for holders of the Notes.

The indenture under which the Notes will be issued offers limited protection to holders of the Notes. The terms of the indenture and the Notes do not restrict our or any of our subsidiaries' ability to engage in, or otherwise be a party to, a variety of corporate transactions, circumstances or events that could have a material adverse impact on investments in the Notes. In particular, the terms of the indenture and the Notes will not place any restrictions on our or our subsidiaries' ability to:

issue securities or otherwise incur additional indebtedness or other obligations, including (1) any indebtedness or other obligations that would be equal in right of payment to the Notes, (2) any indebtedness or other obligations that would be secured and therefore rank effectively senior in right of payment to the Notes to the extent of the values of the assets securing such debt, (3) indebtedness

S-9

TABLE OF CONTENTS

of ours that is guaranteed by one or more of our subsidiaries and which therefore is structurally senior to the Notes and (4) securities, indebtedness or obligations issued or incurred by our subsidiaries that would be senior to our equity interests in our subsidiaries and therefore rank structurally senior to the Notes with respect to the assets of our subsidiaries in each case other than an incurrence of indebtedness or other obligation that would cause a violation of Section 18(a)(1)(A) of the 1940 Act as modified by Section 61(a)(1) of the 1940 Act or any successor provisions, whether or not we continue to be subject to such provisions of the 1940 Act, (these provisions generally prohibit us from making additional borrowings, including through the issuance of additional debt or the sale of additional debt securities, unless our asset coverage, as defined in the 1940 Act, equals at least 200% after such borrowings); pay dividends on, or purchase or redeem or make any payments in respect of capital stock or other securities ranking junior in right of payment to the Notes, including subordinated indebtedness, in each case other than dividends, purchases, redemptions or payments that would cause a violation of Section 18(a)(1)(B) of the 1940 Act as modified by Section 61(a)(1) and the definitional provisions of the 1940 Act or any successor provisions giving effect to any exemptive relief granted to us by the SEC (these provisions generally prohibit us from declaring any cash dividend or distribution upon any class of our capital stock, or purchasing any such capital stock unless our asset coverage, as defined for purposes of Section 18(a)(1)(B) the 1940 Act, equals at least 200% at the time of the declaration of the dividend or distribution or the purchase and after deducting the amount of such dividend, distribution or purchase), unless the payment of such dividend is necessary to maintain our status as a RIC under subchapter M of the code; sell assets (other than certain limited restrictions on our ability to consolidate, merge or sell all or substantially all of our assets);

enter into transactions with affiliates;

create liens (including liens on the shares of our subsidiaries) or enter into sale and leaseback transactions;

make investments; or

create restrictions on the payment of dividends or other amounts to us from our subsidiaries.

In addition, the indenture does not require us to offer to purchase the Notes in connection with a change of control or any other event. Furthermore, the terms of the indenture and the Notes do not protect holders of the Notes in the event that we experience changes (including significant adverse changes) in our financial condition, results of operations or credit ratings, as they do not require that we or our subsidiaries adhere to any financial tests or ratios or specified levels of net worth, revenues, income, cash flow, or liquidity.

Our ability to recapitalize, incur additional debt and take a number of other actions that are not limited by the terms of the Notes may have important consequences for holders of the Notes, including making it more difficult for us to satisfy our obligations with respect to the Notes or negatively affecting the trading value of the Notes.

Certain of our current debt instruments include more protections for their holders than the indenture and the Notes. See Risk Factors. If we are unable to comply with the covenants or restrictions in the Key Facility or make payments when due thereunder, our business could be materially adversely affected in the accompanying prospectus. In addition, other debt we issue or incur in the future could contain more protections for its holders than the indenture and the Notes, including additional covenants and events of default. The issuance or incurrence of any such debt with incremental protections could affect the market for and trading levels and prices of the Notes.

TABLE OF CONTENTS

An active trading market for the Notes may not exist, which could limit a holder's ability to sell the Notes or affect the market price of the Notes. Moreover, the Notes are not expected to be rated which may subject them to greater price volatility than rated notes and particularly similar securities with an investment grade rating.

The Notes are a new issue of debt securities for which there currently is no trading market. We intend to list the Notes on the NYSE within 30 days of the original issue date. Although we expect the Notes to be listed on the NYSE, we cannot provide any assurances that we will successfully list the Notes, that an active trading market will develop for the Notes or that you will be able to sell your Notes. If the Notes are traded after their initial issuance, they may trade at a discount from their initial offering price depending on prevailing interest rates, the market for similar securities, our credit ratings, the time remaining to the maturity of the Notes, the outstanding principal amount of debt securities with terms identical to the Notes, the supply of debt securities trading in the secondary market, if any, the redemption or repayment features, if any, of the Notes, general economic conditions, our financial condition, performance, prospects and other factors. The Notes are not currently expected to be rated, which we expect will impact their trading and subject them to greater price volatility. To the extent they are rated and received a non-investment grade rating, their price and trading activity could be negatively impacted. Moreover, if a rating agency assigns the Notes a non-investment grade rating, the Notes may be subject to greater price volatility than securities of similar maturity without such a non-investment grade rating. Certain of the underwriters have advised us that they intend to make a market in the Notes, but they are not obligated to do so. Such underwriters may discontinue any market-making in the Notes at any time at their sole discretion. Accordingly, we cannot assure you that a liquid trading market will develop for the Notes, that you will be able to sell your Notes at a particular time or that the price you receive when you sell will be favorable. To the extent an active trading market does not develop, the liquidity and trading price for the Notes may be harmed. Accordingly, you may be required to bear the financial risk of an investment in the Notes for an indefinite period of time.

The optional redemption provision may materially adversely affect your return on the Notes.

The Notes are redeemable in whole or in part at any time or from time to time on or after September 15, 2019 at our sole option at the redemption price set forth under the caption "Specific Terms of the Notes and the Offering - Optional redemption" in this prospectus supplement. We may choose to redeem the Notes at times when prevailing interest rates are lower than the interest rate paid on the Notes. In this circumstance, you may not be able to reinvest the redemption proceeds in a comparable security at an effective interest rate as high as the Notes being redeemed.

If we default on our obligations to pay our other indebtedness, we may not be able to make payments on the Notes.

Any default under the agreements governing our indebtedness, including a default under the Key Facility or other indebtedness to which we may be a party that is not waived by the required lenders or holders thereunder, and the remedies sought by the holders of such indebtedness could make us unable to pay principal, premium, if any, and

An active trading market for the Notes may not exist, which could limit a holder's ability to sell the Notes and affect th

interest on the Notes and substantially decrease the market value of the Notes. If we are unable to generate sufficient cash flow and are otherwise unable to obtain funds necessary to meet required payments of principal, premium, if any, and interest on our indebtedness, or if we otherwise fail to comply with the various covenants, including financial and operating covenants, in the instruments governing our indebtedness, we could be in default under the terms of the agreements governing such indebtedness. In the event of such default, the holders of such indebtedness could elect to declare all the funds borrowed thereunder to be due and payable, together with accrued and unpaid interest, the lenders under the Key Facility or other debt we may incur in the future could elect to terminate their commitments, cease making further loans and institute foreclosure proceedings against our assets, and we could be forced into bankruptcy or liquidation. If our operating performance declines, we may in the future need to seek to obtain waivers from the required lenders under the Key Facility or other debt that we may incur in the future to avoid being in default. If we breach our covenants under the Key Facility or other debt and seek a waiver, we may not be able to obtain a waiver from the required lenders or holders. If this occurs, we would be in default and our lenders or debt holders could exercise their rights as described above, and we could be forced into bankruptcy or liquidation. If we are unable to repay debt, lenders having secured obligations, including the lenders under

S-11

TABLE OF CONTENTS

the Key Facility, could proceed against the collateral securing the debt. Because the Key Facility has, and any future credit facilities will likely have, customary cross-default provisions, if the indebtedness thereunder or under any future credit facility is accelerated, we may be unable to repay or finance the amounts due.

Our shares of common stock have traded at a discount from net asset value and may continue to do so, which could limit our ability to raise additional equity capital.

Shares of closed-end investment companies frequently trade at a market price that is less than the net asset value that is attributable to those shares. This characteristic of closed-end investment companies is separate and distinct from the risk that our net asset value per share may decline. It is not possible to predict whether shares of our common stock will trade at, above or below net asset value. In addition, in recent periods, the shares of BDCs as an industry traded below net asset value. When our common stock is trading below its net asset value per share, as is currently the case, we will generally not be able to issue additional shares of our common stock at its market price without first obtaining approval for such issuance from our stockholders and our independent directors. We do not have stockholder approval to sell shares of our common stock at a price below our net asset value per share.

FATCA withholding may apply to payments to certain foreign entities.

Payments made under the Notes to a foreign financial institution, or FFI, or non-financial foreign entity, or NFFE (including such an institution or entity acting as an intermediary), may be subject to a U.S. withholding tax of 30% under U.S. Foreign Account Tax Compliance Act provisions of the Code (commonly referred to as FATCA). This withholding tax may apply to payments of interest on the Notes as well as, after December 31, 2018, to payments made upon maturity, redemption, or sale of the Notes, unless the FFI or NFFE complies with certain information reporting, withholding, identification, certification and related requirements imposed by FATCA. Depending upon the status of a holder and the status of an intermediary through which any Notes are held, the holder could be subject to this 30% withholding tax in respect of any interest paid on the Notes as well as any proceeds from the sale or other disposition of the Notes. You should consult your own tax advisors regarding FATCA and how it may affect your investment in the Notes. See *United States Federal Income Tax Consequences Taxation of Note Holders FATCA Withholding on Payments to Certain Foreign Entities* in this prospectus supplement for more information.

TABLE OF CONTENTS

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

In addition to factors previously identified elsewhere in this prospectus supplement and the accompanying prospectus, including the Risk Factors section of the accompanying prospectus, the following factors, among others, could cause actual results to differ materially from forward-looking statements or historical performance:

- our future operating results, including the performance of our existing debt investments and warrants;
- the introduction, withdrawal, success and timing of business initiatives and strategies;
- changes in political, economic or industry conditions, the interest rate environment or financial and capital markets, which could result in changes in the value of our assets;
- the relative and absolute investment performance and operations of our Advisor;
- the impact of increased competition;
- the impact of investments we intend to make and future acquisitions and divestitures;
- the unfavorable resolution of legal proceedings;
- our business prospects and the prospects of our portfolio companies;
- the impact, extent and timing of technological changes and the adequacy of intellectual property protection;
- our regulatory structure and tax status;
- our ability to qualify and maintain qualification as a RIC and as a BDC;
- the adequacy of our cash resources and working capital;
- the timing of cash flows, if any, from the operations of our portfolio companies;
- the impact of interest rate volatility on our results, particularly if we use leverage as part of our investment strategy;
- the ability of our portfolio companies to achieve their objectives;
- the impact of legislative and regulatory actions and reforms and regulatory, supervisory or enforcement actions of government agencies relating to us or our Advisor;
- our contractual arrangements and relationships with third parties;
- our ability to access capital and any future financings by us;
- the ability of our Advisor to attract and retain highly talented professionals; and
- the impact of changes to tax legislation and, generally, our tax position.

This prospectus supplement, the accompanying prospectus and other statements that we may make, may contain forward-looking statements with respect to future financial or business performance, strategies or expectations.

Forward-looking statements are typically identified by words or phrases such as trend, opportunity, pipeline, believe, comfortable, expect, anticipate, current, intention, estimate, position, assume, plan, potential, pr, continue, remain, maintain, sustain, seek, achieve and similar expressions, or future or conditional verbs such as would, should, could, may or similar expressions.

S-13

TABLE OF CONTENTS

Forward-looking statements are subject to numerous assumptions, risks and uncertainties, which change over time. Forward-looking statements speak only as of the date they are made, and we assume no duty to and do not undertake to update forward-looking statements. These forward-looking statements do not meet the safe harbor for forward-looking statements pursuant to Section 27A of the Securities Act of 1933, as amended, or the Securities Act, or Section 21E of the Securities Exchange Act of 1934, as amended, or the Exchange Act. Actual results could differ materially from those anticipated in forward-looking statements and future results could differ materially from historical performance. You should understand that, under Sections 27A(b)(2)(B) of the Securities Act and Section 21E(b)(2)(B) of the Exchange Act, the safe harbor provisions of the Private Securities Litigation Reform Act of 1995 do not apply to statements made in connection with any offering of securities pursuant to this prospectus supplement, the accompanying prospectus or in periodic reports we file under the Exchange Act.

S-14

TABLE OF CONTENTS**SELECTED CONSOLIDATED FINANCIAL AND OTHER DATA**

The selected consolidated financial data of Horizon Technology Finance Corporation as of December 31, 2016, 2015, 2014, 2013, and 2012, and for the years ended December 31, 2016, 2015, 2014, 2013, and 2012 are derived from the consolidated financial statements that have been audited by RSM US LLP, an independent registered public accounting firm. Interim financial information as of and for the six months ended June 30, 2017 and 2016 is derived from our unaudited consolidated financial statements, and in the opinion of management, reflects all adjustments (consisting of only normal recurring adjustments) that are necessary to present fairly the results of such interim periods. These selected financial data should be read in conjunction with our financial statements and related notes thereto and Management's Discussion and Analysis of Financial Condition and Results of Operations.

(In thousands, except per share data)	As of and for the Six Months Ended June 30,		As of and for the Years Ended December 31,				
	2017	2016	2016	2015	2014	2013	2012
Statement of Operations Data:							
Total investment income	\$12,841	\$18,389	\$32,984	\$31,110	\$31,254	\$33,643	\$26,664
Base management fee	1,862	2,531	4,727	4,747	4,648	5,353	4,208
Performance based incentive fee	836	2,126	2,126	3,501	2,112	3,318	2,847
All other expenses	4,022	4,908	9,119	9,212	13,962	11,605	7,382
Base management and performance based incentive fees waived				(346)	(345)	(144)	
Net investment income before excise tax	6,121	8,824	17,012	13,996	10,877	13,511	12,227
(Credit) provision for excise tax		(85)	(87)		160	240	231
Net investment income	6,121	8,909	17,099	13,996	10,717	13,271	11,996
Net realized (loss) gain on investments	(10,670)	(2,862)	(7,776)	(1,650)	(3,576)	(7,509)	108
Net unrealized appreciation (depreciation) on investments	8,934	(4,728)	(14,236)	(490)	8,289	(2,254)	(8,113)
Net increase (decrease) in net assets resulting from operations	4,385	1,319	(4,913)	11,856	15,430	3,508	3,991
Dollar amount of distributions declared	\$6,911	\$7,966	\$15,403	\$15,793	\$13,282	\$13,236	\$18,777
Per Share Data:							
Net asset value	\$11.87	\$13.27	\$12.09	\$13.85	\$14.36	\$14.14	\$15.15
Net investment income	0.53	0.77	1.48	1.25	1.11	1.38	1.41
Net realized (loss) gain on investments	(0.93)	(0.25)	(0.67)	(0.15)	(0.37)	(0.78)	0.01

Edgar Filing: Horizon Technology Finance Corp - Form 497

Net change in unrealized appreciation (depreciation) on investments	0.78	(0.41)	(1.24)	(0.04)	0.86	(0.23)	(0.95)
Net increase (decrease) in net assets resulting from operations	0.38	0.11	(0.43)	1.06	1.60	0.37	0.47
Per share distributions declared	0.60	0.69	1.335	\$1.38	\$1.38	\$1.38	\$2.15

Statement of Assets and Liabilities Data at Period

End:

Investments, at fair value	\$179,084	\$233,266	\$194,003	\$250,267	\$205,101	\$221,284	\$228,613
Other assets	18,033	26,653	45,249	30,629	20,095	42,453	11,045
Total assets	197,117	259,919	239,252	280,896	225,196	263,737	239,658
Borrowings	55,691	100,502	95,597	114,954	81,753	122,343	89,020
Total liabilities	60,355	106,689	100,060	121,145	86,948	127,902	94,686
Total net assets	\$136,762	\$153,230	\$139,192	\$159,751	\$138,248	\$135,835	\$144,972

S-15

TABLE OF CONTENTS

(In thousands, except per share data)	As of and for the						
	As of and for the Six Months Ended June 30,	As of and for the Years Ended December 31,					
	2017	2016	2016	2015	2014	2013	2012
Other data:							
Weighted annualized yield on income producing investments at fair value	15.1 %	15.5 %	14.9 %	14.2 %	15.3 %	14.4 %	14.2 %
Weighted annualized yield on all portfolio investments at fair value	14.1 %	15.1 %	14.4 %	13.7 %	14.8 %	14.1 %	13.9 %
Number of portfolio companies at period end:							
Debt investments	37	49	44	52	50	49	45
Warrants investments	72	80	78	83	75	73	62
Equity investments	5	5	5	6	4	4	2

S-16

TABLE OF CONTENTS

USE OF PROCEEDS

We estimate that net proceeds we will receive from the sale of the Notes in this offering will be approximately \$ (or approximately \$ if the underwriters fully exercise their overallotment option), based on the underwriters purchasing the Notes from us at % of the aggregate principal amount and after deducting estimated offering expenses of approximately \$250,000 (including certain expenses of the underwriters that we will reimburse the underwriters for) payable by us.

We intend to use the net proceeds from the sale of the Notes along with cash on hand or additional borrowing under the Key Facility to redeem the outstanding 2019 Notes which are redeemable upon 30 days notice. The 2019 Notes bear interest at a rate of 7.375% per year and would otherwise mature on March 15, 2019. Pending such use, we may use the net proceeds to temporarily repay borrowings under the Key Facility or may invest the net proceeds of this offering primarily in cash, cash equivalents, U.S. Government securities and high-quality debt investments that mature in one year or less from the date of investment. The Key Facility bears interest at a rate of the one-month London Interbank Offered Rate (LIBOR) plus 3.25% per annum (or 4.30% as of June 30, 2017) and matures on August 12, 2020. The temporary investments described above may have lower yields than our other investments and accordingly, may result in lower distributions, if any, during such period. See Regulation Temporary Investments in the accompanying prospectus for additional information about temporary investments we may make.

S-17

TABLE OF CONTENTS**RATIO OF EARNINGS TO FIXED CHARGES**

For the six months ended June 30, 2017 and the years ended December 31, 2016, 2015, 2014, 2013 and 2012, our ratios of earnings to fixed charges, computed as set forth below, were as follows:

	For the Six Months Ended June 30, 2017	For the Year Ended December 31,				
		2016	2015	2014	2013	2012
Earnings to Fixed Charges ⁽¹⁾	2.8	0.1	3.1	2.8	1.5	2.0

For purposes of computing the ratios of earnings to fixed charges, earnings represent net increase in net assets resulting from operations plus (or minus) income tax expense (benefit) including excise tax expense and fixed charges. Fixed charges include interest expense, which includes amortization of debt issuance costs and non-use fees.

(1) Earnings include net realized and unrealized gains or losses. Net realized and unrealized gains or losses can vary substantially from period to period.

Excluding the net unrealized gains or losses, the earnings to fixed charges ratio would be (0.9) for the six months ended June 30, 2017, 2.6 for the year ended December 31, 2016, 3.1 for the year ended December 31, 2015, 1.8 for the year ended December 31, 2014, 1.7 for the year ended December 31, 2013 and 3.9 for the year ended December 31, 2012.

Excluding the net realized and unrealized gains or losses, the earnings to fixed charges ratio would be 3.5 for the six months ended June 30, 2017, 3.9 for the year ended December 31, 2016, 3.4 for the year ended December 31, 2015, 2.2 for the year ended December 31, 2014, 2.7 for the year ended December 31, 2013, and 3.9 for the year ended December 31, 2012.

S-18

TABLE OF CONTENTS**CAPITALIZATION**

The following table sets forth:

our actual capitalization as of June 30, 2017; and our capitalization on an as-adjusted basis giving effect to the sale of \$ aggregate principal amount of Notes in this offering purchased from us by the underwriters at % of such aggregate principal amount and after deducting estimated offering expenses of approximately \$250,000 payable by us and the redemption of our 2019 Notes. This table should be read in conjunction with Use of Proceeds, Management's Discussion and Analysis of Financial Condition and Results of Operations and our financial statements and notes thereto included in this prospectus supplement and the accompanying prospectus.

	As of June 30, 2017	
	Actual	As-Adjusted
	(dollars in thousands)	
Cash and investment in money market funds	\$12,273	\$
Total assets	\$197,117	\$
Borrowings	23,000	23,000
2019 Notes	33,000	
Notes		
Other liabilities	4,355	
Total liabilities	\$60,355	\$
Net assets:		
Preferred stock, par value \$0.001 per share; 1,000,000 shares authorized, no shares issued and outstanding		
Common stock, par value \$0.001 per share; 100,000,000 shares authorized, 11,680,722 shares issued and 11,519,180 shares outstanding	12	12
Paid-in capital in excess of par	179,647	179,647
Distributions in excess of net investment income	(1,187)	(1,187)
Net unrealized depreciation on investments	(10,529)	(10,529)
Net realized loss on investments	(31,181)	(31,181)
Total net assets	\$136,762	\$163,762

S-19

TABLE OF CONTENTS

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

In this section, except where the context suggests otherwise, the terms we, us, our and Horizon Technology Finance refer to Horizon Technology Finance Corporation and its consolidated subsidiaries. The information contained in this section should be read in conjunction with our consolidated financial statements and related notes thereto appearing elsewhere in this prospectus supplement. Amounts are stated in thousands, except shares and per share data and where otherwise noted.

Overview

We are a specialty finance company that lends to and invests in development-stage companies in our Target Industries. Our investment objective is to maximize our investment portfolio's total return by generating current income from the debt investments we make and capital appreciation from the warrants we receive when making such debt investments. We are focused on making Venture Loans to venture capital backed companies in our Target Industries. We also selectively provide Venture Loans to publicly traded companies in our Target Industries. Our debt investments are typically Senior Term Loans. As of June 30, 2017, 99.0%, or \$163.2 million, of our debt investment portfolio at fair value consisted of Senior Term Loans. Venture Lending is typically characterized by (1) the making of a secured debt investment after a venture capital or equity investment in the portfolio company has been made, which investment provides a source of cash to fund the portfolio company's debt service obligations under the Venture Loan, (2) the senior priority of the Venture Loan which requires repayment of the Venture Loan prior to the equity investors realizing a return on their capital, (3) the relatively rapid amortization of the Venture Loan and (4) the lender's receipt of warrants or other success fees with the making of the Venture Loan.

We are an externally managed, closed-end, non-diversified management investment company that has elected to be regulated as a BDC under the 1940 Act. In addition, for U.S. federal income tax purposes, we have elected to be treated as a RIC under Subchapter M of the Code. As a BDC, we are required to comply with regulatory requirements, including limitations on our use of debt. We are permitted to, and expect to, finance our investments through borrowings. However, as a BDC, we are only generally allowed to borrow amounts such that our asset coverage, as defined in the 1940 Act, equals at least 200% after such borrowing. The amount of leverage that we employ depends on our assessment of market conditions and other factors at the time of any proposed borrowing. As a RIC, we generally are not subject to corporate-level income taxes on our investment company taxable income, determined without regard to any deductions for dividends paid, and our net capital gain that we distribute as distributions for U.S. federal income tax purposes to our stockholders as long as we meet certain source-of-income, distribution, asset diversification and other requirements.

Compass Horizon Funding Company LLC, or Compass Horizon, our predecessor company, commenced operations in March 2008. We were formed in March 2010 for the purpose of acquiring Compass Horizon and continuing its business as a public entity.

Our investment activities, and our day-to-day operations, are managed by our Advisor and supervised by our Board, of which a majority of the members are independent of us. Under the Investment Management Agreement, we have agreed to pay our Advisor a base management fee and an incentive fee for its advisory services to us. We have also entered the Administration Agreement, with our Advisor under which we have agreed to reimburse our Advisor for

our allocable portion of overhead and other expenses incurred by our Advisor in performing its obligations under the Administration Agreement.

S-20

TABLE OF CONTENTS**Portfolio composition and investment activity**

The following table shows our portfolio by type of investment as of June 30, 2017 and December 31, 2016:

	June 30, 2017		Percentage of Total Portfolio		December 31, 2016		Percentage of Total Portfolio
	Number of Investments	Fair Value			Number of Investments	Fair Value	
	(Dollars in thousands)						
Term loans	37	\$ 164,895	92.1 %		44	\$ 186,186	96.0 %
Warrants	72	7,341	4.1		78	6,362	3.3
Other investments	3	5,900	3.3		2	600	0.3
Equity	5	948	0.5		5	855	0.4
Total		\$ 179,084	100.0 %			\$ 194,033	100.0 %

The following table shows total portfolio investment activity as of and for the three and six months ended June 30, 2017 and 2016:

	For the Three Months Ended June 30, 2017		For the Six Months Ended June 30, 2016	
	2017	2016	2017	2016
	(In thousands)			
Beginning portfolio	\$180,114	\$245,035	\$194,003	\$250,267
New debt investments	22,074	15,187	47,990	31,687
Principal payments received on investments	(8,441)	(13,800)	(20,332)	(23,786)
Early pay-offs	(12,308)	(8,632)	(39,517)	(16,729)
Accretion of debt investment fees	433	379	938	741
New debt investment fees	(420)	(230)	(690)	(519)
New equity		11		56
Proceeds from sale of investments	(346)	(99)	(1,572)	(935)
Net realized gain (loss) on investments	175	(871)	(10,670)	(2,788)
Net unrealized (depreciation) appreciation on investments	(2,197)	(3,714)	8,934	(4,728)
Ending portfolio	\$179,084	\$233,266	\$179,084	\$233,266

We receive payments on our debt investments based on scheduled amortization of the outstanding balances. In addition, we receive repayments of some of our debt investments prior to their scheduled maturity date. The frequency or volume of these repayments may fluctuate significantly from period to period.

The following table shows our debt investments by industry sector as of June 30, 2017 and December 31, 2016:

	June 30, 2017		December 31, 2016	
	Debt Investments at Fair Value	Percentage of Total Portfolio	Debt Investments at Fair Value	Percentage of Total Portfolio

Edgar Filing: Horizon Technology Finance Corp - Form 497

(Dollars in thousands)

Life Science					
Biotechnology	\$ 26,752	16.2	%	\$ 40,612	21.8
Medical Device	8,703	5.3		13,003	7.0
Technology					
Communications	7,788	4.7		76	0.1
Consumer-Related	18,620	11.3		20,631	11.1
Internet and Media	30,941	18.8		7,933	4.2
Materials	9,898	6.0		9,874	5.3

S-21

TABLE OF CONTENTS

	June 30, 2017		December 31, 2016	
	Debt Investments at Fair Value	Percentage of Total Portfolio	Debt Investments at Fair Value	Percentage of Total Portfolio
	(Dollars in thousands)			
Networking			3,306	1.8
Power Management	1,727	1.1	2,220	1.2
Semiconductors	1,880	1.1	7,528	4.0
Software	41,222	25.0	53,349	28.7
Cleantech				
Energy Efficiency			1,942	1.0
Waste Recycling	5,984	3.6	5,964	3.2
Healthcare Information and Services				
Diagnostics	3,000	1.8	4,081	2.2
Other	3,606	2.2	5,770	3.1
Software	4,774	2.9	9,897	5.3
Total	\$ 164,895	100.0 %	\$ 186,186	100.0 %

The largest debt investments in our portfolio may vary from year to year as new debt investments are originated and existing debt investments are repaid. Our five largest debt investments represented 29% and 24% of total debt investments outstanding as of June 30, 2017 and December 31, 2016, respectively. No single debt investment represented more than 10% of our total debt investments as of June 30, 2017 and December 31, 2016.

Debt investment asset quality

We use an internal credit rating system which rates each debt investment on a scale of 4 to 1, with 4 being the highest credit quality rating and 3 being the rating for a standard level of risk. A rating of 2 represents an increased level of risk and, while no loss is currently anticipated for a 2-rated debt investment, there is potential for future loss of principal. A rating of 1 represents a deteriorating credit quality and a high degree of risk of loss of principal. Our internal credit rating system is not a national credit rating system. As of June 30, 2017 and December 31, 2016, our debt investments had a weighted average credit rating of 3.0. The following table shows the classification of our debt investment portfolio by credit rating as of June 30, 2017 and December 31, 2016:

Credit Rating	June 30, 2017			December 31, 2016		
	Number of Investments	Debt Investments at Fair Value (Dollars in thousands)	Percentage of Debt Investments	Number of Investments	Debt Investments at Fair Value	Percentage of Debt Investments
4	8	\$ 26,132	15.8 %	6	\$	