

May 28, 2010

Robert D. Pomeroy, Jr., Chief Executive Officer
Horizon Technology Finance Corporation
76 Batterson Park Road
Farmington, Connecticut 06032

RE: Horizon Technology Finance Corporation
File Nos.: 333-165570 and 814-00802

Dear Mr. Pomeroy:

On March 19, 2010, you filed a registration statement on Form N-2 under the Securities Act of 1933 (1933 Act”) on behalf of Horizon Technology Finance Corporation (“Fund”). We have used the captions and page numbers from the registration statement to indicate the sections of the registration statement to which our comments relate. However, you should consider a comment made with respect to one section to be applicable to similar disclosure elsewhere in the registration statement. We have the following comments.

Prospectus

Cover Pages

1. The disclosure on the front cover states that the Fund “intends to file an election to be regulated as a business development company. We suggest that this election be made, by filing Form N-54A, before the Fund’s registration is declared effective.
2. Please disclose in the third paragraph on the front cover that none of the proceeds of the “CHP” shares being registered for resale will go to the Fund.
3. Please make prominent the statement in the third paragraph that “this is our initial public offering, and there is no prior public market for our shares.” See Item 1.1.i. of Form N-2. Please also move the last sentence of the sixth paragraph to follow this sentence and disclose the amount of immediate dilution in net asset value per share that purchasers in the current offering will suffer, based on the initial offering price per share. In addition, please provide page citations to the dilution discussions, on pages 35 and 47, of the prospectus.

4. Also in the bolded paragraph, please revise the statement that “investing in our common stock involves risks...” to state that investments made in the Fund should be considered “highly speculative” and “involving a high degree of risk.” See Item 1.1.j. of Form N-2.
5. In the bolded paragraph, please delete the phrase “which are structured similarly to us” and substitute “including business development companies.”
6. Please add a statement to the paragraph immediately preceding the “Table of Contents” that the prospectus will be amended to reflect material changes
7. Please add the statement required by Rule 481(e) under the 1933 Act.
8. The Fund does not appear to have a minimum offering requirement. If not, please disclose the risk that the Fund may be undercapitalized.
9. Please explain in your response letter how the Fund will account for the offering expenses and sales load.
10. Where will the over-allotment shares come from?
11. Please disclose any “other consideration” paid to the underwriters. See Instruction 2. to Item 1.1.g. of Form N-2.

Prospectus Summary

1. In all of the Summary subsections, please include citations, including page numbers, where there are more detailed discussions in the body of the prospectus.
2. The subsection “Our Company” describes the “existing portfolio” as being invested only in loans and warrants. The disclosure about specific investments on pages 73-75, however, appears to indicate that the existing portfolio includes substantial investments in preferred shares. Please clarify the disclosure.
3. Please disclose, in the same subsection, that the loans in which the Fund invests will generally not be rated by any rating agency. If they were rated, they would be rated as below investment grade or “junk.” Indebtedness of below investment grade quality is regarded as having predominantly speculative characteristics with respect to the issuer’s capacity to pay interest and repay principal.
4. Please move the subsection, “Historical Performance of Our Advisor,” on page 3, to anywhere after the financial highlights table. In addition, please inform us what authority permits you to present the Advisor’s prior performance and how your presentation is consistent with that authority.

5. Please clarify the meaning of the phrases “fund raising history” and “investment mandate similar to ours.” Does the latter phrase mean that there are no material differences in the objectives, policies and investment strategies?

6. Please delete the three sentences that follow the phrase “investment mandate similar to ours.” (“In addition to the performance shown below...could also decrease the IRR of each fund presented below.”) They are irrelevant to a presentation of prior performance. Likewise, please delete the last paragraph of this subsection. It does not describe the historical performance of the advisor.

7. Any prior performance presentation that is presented may only be calculated using the SEC-mandated average annual total return formula for the 1-, 5-, and 10-year periods ended on the date of the most recent balance sheet included in the registration statement (or for the periods the funds have been in operation). Please delete all references to “IRR.”

8. The subsection “Our Strategy,” on page 3, states that the Fund’s investment objective is to “maximize our investment portfolio’s total return by generating current income from the loans we make.” The cover page states that the Fund’s investment objective is to “generate current income from the loans we make.” Please conform the disclosure.

9. The paragraph “Disciplined Underwriting, Diversification and Portfolio Management,” on page 4, states that the Fund seeks to “diversify” its investment portfolio. Because the Fund is non-diversified, please use another term.

10. With respect to the paragraph “Use of Leverage; SBA Debenture Program,” on page 5, what is the current status of the Fund’s application for an SBIC license and its related application for exemptive relief from the SEC.

11. In the “Investment Summary” subsection, on page 8, please clarify the following issues.

Are all of the listed investments assets of “Compass Horizon Funding Company LLC” and will they all become assets of the Fund?

Are all of the loans currently performing and not impaired?

12. With respect to the “Distribution and Share Exchange,” discussed on pages 9 and 39, please clarify the following issues:

What is the meaning of “prior to the completion of this offering”?

Will the “Share Exchange” be completed and all of the Fund shares to be issued to the owners of Compass Horizon be “in their hands” before the effectiveness of the registration statement?

Is the closing of the private placement contingent upon the closing of the IPO?

Will anyone, other than the current owners of Compass Horizon, be issued shares of the Fund before the effectiveness of the registration statement?

Will any of the current owners of Compass Horizon be issued additional Fund shares in exchange for cash, property, by means of a financing transaction before the effectiveness of the registration statement?

Will Compass borrow to make the cash distribution to CHP?

What is meant by “other loan income”?

Will the Share Exchange rely on Section 4(2) of the 1933 Act, through the Rule 506 safe harbor of Regulation D?

Will all of the restricted shares of the Fund be issued to accredited investors?

Are the selling shareholders described as parties to the underwriting in the underwriting agreement?

Will the selling shareholders be participating in the Share Exchange “with a view to” reselling their shares in the IPO, such that they may be deemed to be “underwriters,” as defined in Section 2(a)(11) of the 1933 Act? Please provide an analysis..

13. Please provide us with copies of the registration rights agreements between the Fund and the selling shareholders and a copy of the Fund’s private placement memorandum.

14. In the “Risk Factors” subsections, on pages 9, 22, and elsewhere in the registration statement, please make clear that, not only does the Advisor have no experience managing a business development company, but it also has no experience managing an investment company.

15. In the same subsection, please explain what is meant by the statement: “we may allocate the net proceeds from this offering in ways with which you may not agree.”

The Offering, page 11

1. Please fill in the blanks with respect to the amounts of shares being offered on pages 11 and 14.

2. The table at the top of page 11 appears to indicate that the “selling stockholder” will be selling in the offering. Likewise, the disclosure on page 14 states: “...the number of shares of our common stock to be outstanding immediately following the completion of this offering is based on the number of shares outstanding as of ____, 2010 and assumes the sale of ____ shares of our common stock by the selling stockholder...” The disclosure on pages 34 and 102, however, indicates that the shares issued to the “selling shareholder” will be subject to a 180-day contractual lock-up. Please explain this apparent discrepancy or revise the disclosure.

3. Is the selling stockholder an “affiliate” subject to the volume limitations and manner-of-sale requirements of Rule 144 under the 1933 Act disclose the amount of immediate dilution in net asset value per share that purchasers in the current offering will suffer, based on the initial offering price per share. In addition, please provide page citations to the dilution discussions, on pages 35 and 47, of the prospectus.

4. The disclosure on page 11 states that the proceeds of the offering may be used “for temporary repayment of debt.” Please explain this statement.

5. It appears from the disclosure that the Investment Management Agreement and the Administration Agreement may cover some of the same expenses. Please explain or revise the disclosure.

Fees and Expenses, page 15

1. Please relocate the fee table so that it immediately follows the prospectus summary.
2. Please provide the missing fee table information.
3. Please confirm that the amount of offering proceeds used in the calculation of net assets is the amount most likely to be raised in the offering.
4. In the line item “Estimated Annual Expenses (as a Percentage of Net Assets Attributable to Common Stock),” please delete the word “estimated.”
5. In the line item “Base Management Fees,” please delete the word “base” and make “fees” singular.
6. Please provide an “Acquired Fund Fees and Expenses” line item if any of the Fund’s assets will be invested in an “acquired fund,” including a money market fund. See Instruction 10 to Item 3.1. of Form N-2.
7. Please expand footnote “4” to indicate that the term “gross assets” includes those acquired using leverage.
8. At the end of the line item “Other Expenses,” please add the phrase “(estimated for the current fiscal year).”
9. Please move the examples of the calculation of the incentive fees from page 85 to immediately follow the Example.
10. In the fee table and throughout the registration statement, please provide financial information as of a date that is more recent than December 31, 2009.
11. Does the Fund intend to issue preferred shares within a year of the effective date of the registration statement?
12. Please delete the phrase, “our only debt outstanding is \$64.2 million under our Credit Facility and” from the narrative to the “Example.”

Risk Factors, page 17

1. The disclosure, on page 19, states that “in lieu of a security interest in the intellectual property we may sometimes only obtain a commitment by the portfolio company not to grant liens to any other creditor on the company’s intellectual property. In these cases, we may have additional difficulty recovering our principal in the event of a foreclosure.” This statement contradicts the investment

strategy described on the cover of, and elsewhere in, the prospectus that the Fund makes only secured loans. Please explain this discrepancy or revise the disclosure.

2. Please make the subsection “Risks Related to our Business and Structure” the first one in the Risk section.

3. With respect to the disclosure on page 24, please address the following issues.

What is “Horizon Credit I LLC” and why is it a party to the Credit Facility with WestLB AG? Is Horizon Credit I a financing subsidiary of the Fund set up to hold Fund assets that serve as collateral for loans made under the credit facility? Will such assets remain consolidated on the Fund’s balance sheet and count for the Fund’s asset coverage requirements under the Investment Company Act of 1940 (“1940 Act”)?

Please identify the “certain of our subsidiaries” referred to throughout this subsection. Why are they also parties to the Credit Facility arrangement? Why are they required to “comply with various financial covenants”?

Please define the term “certain change of control events.”

Please explain what is meant by a “breach of certain of the covenants or restrictions would result in a default under the Credit Facility that would permit the lender to declare all amounts outstanding to be due and payable.” In the event of a default, would the lender have contractual rights to seize Horizon Credit I assets without adjudication?

Please explain the statement: “an event of default or an acceleration under the Credit Facility could also cause a cross-default or cross-acceleration of another debt instrument or contractual obligation.”

Please furnish us with copies of the Credit and Security Agreement.

4. On page 27, the disclosure states that the board of directors “will value these investments on a quarterly basis in accordance with our valuation policy consistent with generally accepted accounting principles.” Please revise this to state that the board will determine fair value quarterly, or more frequently, as circumstances require. Please explain what is meant by “consistent with generally accepted accounting principles.” Is the valuation policy written and has it been formally adopted by the board.

5. The same subsection states that “our board of directors will employ an independent third-party valuation firm to assist the board in arriving at the fair value of our investments.” The section “Determination of Net Asset Value,” on page 94, states, however, that a third-party valuation firm will be engaged by the board only to conduct “selected investment independent appraisals” for “investments for which market quotations are not readily available or for which no indicative prices from pricing services or brokers or dealers.” If it is not the Fund’s policy to engage an independent third-party valuation firm for every such investment, this represents a significant risk that should be prominently disclosed.

6. Page 29 indicates that the Fund may make investments in original issue discount instruments. Page 31 indicates that Advisor will have an incentive to invest in instruments that have a “deferred interest feature.” What percentage of the Fund’s income is anticipated to be OID? Is there a limit on the OID

investments that the Fund can make? If the Fund's OID investments will be significant, please provide summary risk disclosure about the fact that such investments will require the Fund to pay incentive fees and taxes on accrued income that will not be collectible until maturity of the instrument and, ultimately, may not be collected.

7. With respect to the conflicts of interest disclosure on page 30, does the Advisor have a written policy for handling conflicts of interest?

8. In the same conflict of interest disclosure on page 30, raises the issue of whether the Fund may be making co-investments that require exemptive relief under Section 17(d) of the 1940 Act. Please provide us with more information about the joint transactions referred to in this subsection. Please inform us whether the board of directors will approve every co-investment made the Fund.

9. On page 31, please state how much advance notice the Fund will give shareholders if it changes investment objective or policies.

10. The disclosure on pages 32-33 may create an impression that compliance with "Sarbanes-Oxley" creates risks for the Fund. In fact, such compliance may reveal risks that can then be eliminated by the Fund. Please clarify this point.

11. Please revise the subsection heading on page 34, as follows: "Subsequent sales in the public market of substantial amounts of our common stock issued to insiders may have an adverse effect on the market price of our common stock.

12. In the same subsection, please disclose the following information.

What is the number of Fund shares to be issued to officers, directors and existing stockholders? The disclosure says that all of the shares issued to the officers, directors and existing stockholders are subject to contractual "lock-ups," but the Selling Shareholder's shares included in the current resale registration are obviously not. Please clarify the disclosure. What portion of the shares issued to the Selling Shareholder is included in the resale registration?

What is the expected ratio of the number of restricted Fund shares subject to lock-up compared to the number of publicly issued following completion of the offering?

If the "overhang" is significant, please disclose prominently that the Fund's share price may be negatively impacted by insider sales following the expiration of the lock-up.

What percentage of the restricted shares is expected to be sold following the end of the lock-up period?

Will the Fund pay the costs of the resale registrations of the Rule 144 stock of its officers, directors and existing stockholders?

Will the board make a good faith determination with respect to the payment by the Fund of the expenses of the current and future resale registrations?

13. In the subsection describing the risks of “immediate dilution,” on page 35, please clarify why the price of the Fund’s stock issued to the owners of Compass Horizon is based on Compass Horizon’s net asset value at December 31, 2009.

14. Please include the risks in the “immediate dilution” subsection in the “Summary” section.

15. With respect to the disclosure in the same subsection, will the Compass Horizon Owners and the purchasers in the public offering pay the same price for their shares in the Fund? Will any of the Fund shares be issued to the owners of Compass Horizon for services? Will the Fund shares issued to the Compass Horizon Owners be sold at net asset value per share? Your response should be framed in terms of the analysis in the “Big Apple Capital Corp. No-Action Letter” (publicly available May 6, 1982). How will the net asset value of the Fund be determined? Will an independent third-party valuation service be used?

16. Please furnish us with a representation that the Fund will disclose estimates of the tax characteristics of its quarterly distributions in its semi-annual reports, even though its tax numbers cannot be finalized until its fiscal year-end. Estimates of the tax characterizations of the Fund’s distributions in its semi-annual reports will alert shareholders to potential year-end tax consequences.

17. Please inform us whether the Fund intends to report a distribution yield. If the Fund intends to report a distribution yield at any point prior to finalizing its tax figures, it should disclose the components of the distribution yield. In addition, any reports containing distribution yields should be accompanied by the SEC total return and/or yield and the Fund should also disclose that the distribution yield does not represent its performance.

Directors Qualifications and Review of Director Nominees, page 81

For the current members and each person that is appointed to the board, please disclose why the person's *particular* and *specific* experience, qualifications, attributes or skills led the board to conclude that such person should serve as a director of the Fund, in light of the Fund’s business and structure, at the time that a filing containing the disclosure is made. See Item 18. 17. of Form N-2, (added by Investment Company Act Release No. 29092 (Dec. 16, 2009)).

Other

1. Please explain to us why the registration statement does not include a statement of additional information.

2. Does the prospectus describe all of the fundamental policies of the Fund with respect to the activities listed in Item 17. 2. of Form N-2 and any other policy that the Fund deems fundamental? Does the Fund reserve freedom of action with respect to any of these activities?

3. Does the prospectus describe fully all significant investment policies of the Fund that are not deemed fundamental and that may be changed without the approval of the holders of a majority of the voting securities?
4. Does the prospectus disclose the extent to which the Fund may engage in its fundamental and non-fundamental policies and the risks inherent in such policies?
5. Please inform us whether the officers, directors, and beneficial owners of more than 10% of the Fund's securities will file the ownership reports (Forms 3, 4, and 5) required by Section 16(a) of the Securities Exchange Act of 1934.
6. Please state in your response letter whether the FINRA has reviewed the terms and arrangements of the underwriting.

* * *

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filings reviewed by the staff to be certain that they have provided all information investors require for an informed decision. Since the Fund and its management are in possession of all facts relating to the Fund's disclosure, they are responsible for the accuracy and adequacy of the disclosures they have made.

Notwithstanding our comments, please furnish a letter acknowledging that:

- should the Commission or the staff, acting pursuant to delegated authority, declare the filing effective, it does not foreclose the Commission from taking any action with respect to the filing;
- the action of the Commission or the staff, acting pursuant to delegated authority, in declaring the filing effective, does not relieve the Fund from its full responsibility for the adequacy and accuracy of the disclosure in the filing; and
- The Fund may not assert this action as defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

In addition, please be advised that the Division of Enforcement has access to all information you provide to the staff of the Division of Investment Management in connection with our review of your filing or in response to our comments on your filing.

We will consider a written request for acceleration of the effective date of the registration statement as a confirmation of the fact that those requesting acceleration are aware of their respective responsibilities. We will act on the request and, pursuant to delegated authority, grant acceleration of the effective date.

* * *

Robert D. Pomeroy, Jr.

May 28, 2010

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You should respond to this letter in the form of a pre-effective amendment filed under Rule 472 of the 1933 Act. Please provide written responses to all comments. Where no changes will be made in response to a comment, please so state in your letter and also state the basis for your position. We may have further comments after reviewing your responses.

If you have any questions about these comments, please call me at 202-551-6943 or e-mail me at o'connorj@sec.gov.

Very truly,

James E. O'Connor
Attorney/Advisor