

Date: October 30, 2020

TO: MIAX PEARL Equities Members

FROM: MIAX PEARL Equities Listings Department

Re: Vanguard Funds - VNQ

MIAX PEARL, LLC ("Exchange") commenced trading of equity securities on September 25, 2020 followed by a security-by-security phase-in period. This Product Circular is being issued to advise you that the following security has been approved for trading pursuant to unlisted trading privileges ("UTP") on the Exchange as a UTP Derivative Security pursuant to Exchange Rule 2900, and will begin trading on MIAX PEARL during the phase-in period. See the Exchange's Website for the phase-in schedule.

Security (the "Fund") Symbol

Vanguard Real Estate Index Fund ETF VNQ

Issuer/Trust: Vanguard Funds

Issuer Website: https://investor.vanguard.com/

Primary Listing Exchange: NYSE Arca

The purpose of this Product Circular is to outline various rules and policies that will be applicable to trading in this new product pursuant to the Exchange's unlisted trading privileges, as well as to provide certain characteristics and features of the Shares. For a more complete description of the Issuer, the Shares and the underlying market instruments or indexes, visit the Issuer Website, consult the Prospectus available on the Issuer Website, examine the Issuer Registration Statement or review the most current information bulletin issued by the Primary Listing Exchange. The Issuer Website, the Prospectus, the Issuer Registration Statement and the Primary Exchange Circular are hereafter collectively referred to as the "Issuer Disclosure Materials."

Background Information on the Fund

The Fund employs an indexing investment approach designed to track the performance of the MSCI US Investable Market Real Estate 25/50 Index, an index that is made up of stocks of large, mid-size, and small U.S. companies within the real estate sector, as classified under the Global Industry Classification Standard (GICS). The GICS real estate sector is composed of equity real estate investment trusts (known as REITs), which include specialized REITs, and real estate management and development companies.

The Fund attempts to track the Index by investing all, or substantially all, of its assets—either directly or indirectly through a wholly owned subsidiary (the underlying fund), which is itself a registered

investment company—in the stocks that make up the Index, holding each stock in approximately the same proportion as its weighting in the Index. The Fund may invest a portion of its assets in the underlying fund.

You can buy and sell ETF Shares of the Fund through a brokerage firm. The price you pay or receive for ETF Shares will be the prevailing market price, which may be more or less than the NAV of the shares. The brokerage firm may charge you a commission to execute the transaction. Unless imposed by your brokerage firm, there is no minimum dollar amount you must invest and no minimum number of shares you must buy. ETF Shares of the Fund cannot be directly purchased from or redeemed with the Fund, except by certain authorized broker-dealers. These broker-dealers may purchase and redeem ETF Shares only in large blocks (Creation Units), typically in exchange for baskets of securities.

Principal Risks

Interested persons are referred to the discussion in the prospectus for the Fund of the principal risks of an investment in the Fund. These include tracking error risk (factors causing a Fund's performance to not match the performance of its underlying index), market trading risk (for example, trading halts, trading above or below net asset value), investment style risk, sector risk, investment approach risk, non-diversification risk, issuer-specific risk, management risk, concentration risk, equity securities risk, sector risk and passive investment risk.

Exchange Rules Applicable to Trading in the Shares

Trading in the Shares on MIAX PEARL is subject to MIAX PEARL trading rules.

Trading Hours

The value of the Index underlying the Shares will be disseminated to data vendors every 15 seconds during the Regular Trading Session.

The Shares will trade on MIAX PEARL between 9:30 a.m. and 4:00 p.m. Please note that trading in the Shares during the Exchange's Pre-Market and Post-Market Sessions ("Extended Market Sessions") may result in additional trading risks which include: (1) that the current underlying indicative value may not be updated during the Extended Market Sessions, (2) lower liquidity in the Extended Market Sessions may impact pricing, (3) higher volatility in the Extended Market Sessions may impact pricing, (4) wider spreads may occur in the Extended Markets Sessions, and (5) because the indicative value is not calculated or widely disseminated during the Extended Market Sessions, an investor who is unable to calculate an implied value for the Shares in those sessions may be at a disadvantage to market professionals.

Dissemination of Data

The Consolidated Tape Association will disseminate real time trade and quote information for the Shares to Tape B.

Name	Listing Market	Trading Symbol	IOPV Symbol	NAV Symbol
Vanguard Real Estate Index Fund ETF	NYSE Arca	VNQ	VNQ.IV	VNQ.NV

Delivery of a Prospectus

MIAX PEARL Equity Members should be mindful of applicable prospectus delivery requirements under the federal securities laws with respect to transactions in the Fund. Prospectuses may be obtained through the Fund's website. The prospectus for the Fund does not contain all of the information set forth in the Fund's Registration Statement (including the exhibits to the Registration Statement), parts of which have been omitted in accordance with the rules and regulations of the SEC. For further information about the Fund, please refer to its Registration Statement.

In the event that the Fund relies upon an order by the SEC exempting the Shares from certain prospectus delivery requirements under Section 24(d) of the Investment Company Act of 1940 and in the future make available a written product description, MIAX PEARL Rules requires that MIAX PEARL Equity Members provide to all purchasers of Shares a written description of the terms and characteristics of such securities, in a form prepared by the Issuer of the Fund, no later than the time a confirmation of the first transaction in the Shares is delivered to such purchaser. In addition, MIAX PEARL Equity Members shall include such a written description with any sales material relating to the Shares that is provided to customers or the public. Any other written materials provided by an MIAX PEARL Equity Member to customers or the public making specific reference to the Shares as an investment vehicle must include a statement in substantially the following form: "A circular describing the terms and characteristics of [the UTP Exchange Traded Products] has been prepared by the [open-ended management investment company name] and is available from your broker. It is recommended that you obtain and review such circular before purchasing [the UTP Exchange Traded Products]."

A MIAX PEARL Equity Member carrying an omnibus account for a non-member broker-dealer is required to inform such non-member that execution of an order to purchase Shares for such omnibus account will be deemed to constitute agreement by the non-member to make such written description available to its customers on the same terms as are directly applicable to MIAX PEARL Equity Member under this rule.

Upon request of a customer, MIAX PEARL Members also shall provide a copy of the Prospectus.

Suitability

Trading in the securities on the Exchange will be subject to the provisions of MIAX PEARL Rule 2107 and other applicable suitability rules. Equity Members recommending transactions in the securities to customers should make a determination that the recommendation is suitable for the customer.

Trading Halts

MIAX PEARL will halt trading in the Shares of a security in accordance with MIAX PEARL Rules. The grounds for a halt under MIAX PEARL Rules include a halt by the primary market because the intraday indicative value of the security and/or the value of its underlying index are not being disseminated as required, or a halt for other regulatory reasons. In addition, MIAX PEARL will stop trading the Shares of a security if the primary market de-lists the security.

Exemptive, Interpretive and No-Action Relief Under Federal Securities Regulations

The Securities and Exchange Commission (the "SEC") has issued letters granting exemptive, interpretive and no-action relief from certain provisions of rules under the Securities Exchange Act of 1934 for exchange-traded securities listed and traded on a registered national securities exchange that meet certain criteria.

AS WHAT FOLLOWS IS ONLY A SUMMARY OF THE RELIEF OUTLINED IN THE NO-ACTION LETTERS REFERENCED ABOVE, THE EXCHANGE ADVISES INTERESTED PARTIES TO CONSULT THE NO- ACTION LETTERS FOR MORE COMPLETE INFORMATION REGARDING THE MATTERS COVERED THEREIN AND THE APPLICABILITY OF THE RELIEF GRANTED IN RESPECT OF TRADING IN SECURITIES. INTERESTED PARTIES SHOULD ALSO CONSULT THEIR PROFESSIONAL ADVISORS.

Regulation M Exemptions

Generally, Rules 101 and 102 of Regulation M prohibit any "distribution participant" and its "affiliated purchasers" from bidding for, purchasing, or attempting to induce any person to bid for or purchase any security which is the subject of a distribution until after the applicable restricted period, except as specifically permitted in Regulation M. The provisions of the Rules apply to underwriters, prospective underwriters, brokers, dealers, and other persons who have agreed to participate or are participating in a distribution of securities.

The SEC has granted an exemption from Rule 101 under Regulation M to permit persons participating in a distribution of shares of the above-mentioned Fund to engage in secondary market transactions in such shares during their participation in such a distribution. In addition, the SEC has granted relief under Regulation M to permit persons who may be deemed to be participating in the distribution of Shares of the above-mentioned Fund (i) to purchase securities for the purpose of purchasing Creation Unit Aggregations of Fund Shares and (ii) to tender securities for redemption in Creation Unit Aggregations. Further, the SEC has clarified that the tender of Fund Shares to the Fund for redemption does not constitute a bid for or purchase of any of the Fund's securities during the restricted period of Rule 101. The SEC has also granted an exemption pursuant to paragraph (e) of Rule 102 under Regulation M to allow the redemption of Fund Shares in Creation Unit Aggregations during the continuous offering of Shares.

Rule 10b-10 (Customer Confirmations for Creation or Redemption of Fund Shares)

Broker-dealers who handle purchases or redemptions of Fund Shares in Creation Unit size for customers will be permitted to provide such customers with a statement of the number of Creation Unit Aggregations created or redeemed without providing a statement of the identity, number and price of shares of the individual securities tendered to the Fund for purposes of purchasing Creation Unit Aggregations ("Deposit Securities") or the identity, number and price of shares to be delivered by the

Trust for the Fund to the redeeming holder ("Redemption Securities"). The composition of the securities required to be tendered to the Fund for creation purposes and of the securities to be delivered on redemption will be disseminated each business day and will be applicable to requests for creations or redemption, as the case may be, on that day. This exemptive relief under Rule 10b-10 with respect to creations and redemption is subject to the following conditions:

- 1) Confirmations to customers engaging in creations or redemptions must state that all information required by Rule 10b-10 will be provided upon request;
- 2) Any such request by a customer for information required by Rule 10b-10 will be filed in a timely manner, in accordance with Rule 10b-10(c); and
- 3) Except for the identity, number, and price of shares of the component securities of the Deposit Securities and Redemption Securities, as described above, confirmations to customers must disclose all other information required by Rule 10b-10(a).

Rule 10b-17 (Untimely Announcement of Record Dates)

The SEC has granted an exemption from the requirements of Rule 10b-17 that will cover transactions in the Shares.

Section 11(d)(1); Rule 11d1-2 (Customer Margin)

The SEC has taken a no-action position under Section 11(d)(1) that will permit broker-dealers that do not create Shares but engage in both proprietary and customer transactions in such Shares exclusively in the secondary market to extend or maintain or arrange for the extension or maintenance of credit on the Shares, in connection with such secondary market transactions. For broker-dealers that engage in the creation of Shares, the SEC has also taken a no-action position under Rule 11d1-2 that will cover the extension or maintenance or the arrangement for the extension or maintenance of credit on the Shares that have been owned by the persons to whom credit is provided for more than 30 days.

Rule 14e-5

An exemption from Rule 14e-5 has been granted to permit any person acting as a dealer-manager of a tender offer for a component security of the Fund (1) to redeem Fund Shares in Creation Unit Aggregations from the issuer that may include a security subject to such tender offer and (2) to purchase Fund Shares during such tender offer. In addition, a no-action position has been taken under Rule 14e-5 if a broker-dealer acting as a dealer-manager of a tender offer for a security of the Fund purchases or arranges to purchase such securities in the secondary market for the purpose of tendering such securities to purchase one or more Creation Unit Aggregations of Shares, if made in conformance with the following:

such bids or purchases are effected in the ordinary course of business, in connection with a
basket of 20 or more securities in which any security that is the subject of a distribution, or
any reference security, does not comprise more than 5% of the value of the basket purchase;
or

- 2) purchases are effected as adjustments to such basket in the ordinary course of business as a result of a change in the composition of the underlying index; and
- 3) such bids or purchases are not effected for the purpose of facilitating such tender offer.

SEC Rule 15c1-5 and 15c1-6 (Disclosure of Control and Interest in Distributions)

The SEC has taken a no-action position under Rule 15c1-5 that will permit a broker-dealer to execute transactions in Shares without disclosing any control relationship with an issuer of a component security. In addition, the SEC has taken a no-action position under Rule 15c1-6 that will permit a broker dealer to execute transactions in the Shares without disclosing its participation or interest in a primary or secondary distribution of a component security.

This Product Circular is not a statutory prospectus. MIAX PEARL Equity Members should consult the prospectus for a security and the security's website for relevant information.

Please direct product listing questions to MIAX PEARL Equities Listings at <u>Listings@MIAXOptions.com</u> or (609) 897-7308.

Please direct regulatory questions to the MIAX PEARL Regulatory Department at Regulatory@MIAXOptions.com or (609) 897-7309.