Rule 22e-4 under the Investment Company Act of 1940, also called the Liquidity Rule, became partially effective on December 1, 2018.

One key requirement that became effective on December 1, 2018, was that an open-end mutual fund must not have more than 15% in "illiquid investments."

As defined by the Liquidity Rule, an "illiquid investment" is any investment that the fund reasonably expects cannot be sold or disposed of in current market conditions in seven calendar days or less without the sale or disposition significantly changing the market value of the investment as further defined by the rule.

The factors taken into account by Putnam portfolio managers include, but are not limited to, the following factors:

- The frequency of trades and quotations for the security
- The number of dealers making quotations to purchase or sell the security
- The number of other potential purchasers of the security
- The nature of the security (registered or unregistered) and the nature of the marketplace for the security
- Any applicable regulatory interpretation or position with respect to such type of securities

Under this new definition, the fund's illiquid investments represent approximately: 3.85% of fund assets (as of 12/31/18).

Putnam can make no guarantees regarding the results of actual trading activity in any market environment.