

Northfield Bancorp, Inc.
Form 424B3
December 21, 2012

PROSPECTUS SUPPLEMENT
(To Prospectus Dated November 8, 2012)

Filed Pursuant to Rule 424(b)(3)
Registration Statement No. 333-181995

(Proposed Holding Company for Northfield Bank)
Up to 41,975,000 Shares of Common Stock

This supplements the prospectus of Northfield Bancorp, Inc., a Delaware corporation, dated November 8, 2012. This prospectus supplement should be read together with the prospectus.

We are increasing the number of shares that you may purchase in the offering.

To complete the offering of our common stock, we must sell at least 31,025,000 shares (\$310,250,000) of common stock, which is the minimum of our offering range. Based on preliminary figures, we received orders for approximately 29 million shares of common stock, or \$290 million, in the subscription and community offering. To facilitate the sale of additional shares, we have increased the amount of stock that may be purchased in the offering. The ability to increase the amount of stock you wish to purchase will be limited to persons who previously ordered the maximum number of shares in the subscription and community offering. You, either as an individual or together with any associates or persons who may be acting in concert with you (as defined in the prospectus), may purchase up to 600,000 shares (\$6.0 million) of common stock. The ownership limitations for current stockholders of Northfield Bancorp, Inc., a federal corporation, disclosed in the prospectus remain unchanged.

We intend to provide those persons who, either alone or together with associates and persons acting in concert, submitted orders in the subscription offering for the previous maximum purchase limit of 300,000 shares (\$3.0 million) of common stock, either as an individual or with their associates and groups of persons acting in concert, an opportunity to increase their order. We may also provide the same opportunity to those persons who, either alone or together with associates and persons acting in concert, submitted orders in the community offering for the previous maximum purchase limit of 300,000 shares (\$3.0 million) of common stock. You may increase your order by up to an additional 300,000 shares (\$3.0 million) by submitting the enclosed stock order form, with full payment for the additional shares ordered at a purchase price of \$10.00 per share.

Completed stock order forms, together with full payment for the additional shares ordered, must be received by us (not postmarked) by 5:00 p.m. Eastern Time, on January 4, 2013.

Completion of the conversion and offering is subject to certain conditions.

Completion of the conversion and offering remains subject to (1) approval of our plan of conversion and reorganization by stockholders of Northfield Bancorp, Inc., a federal corporation, and members of Northfield Bancorp, MHC, (2) receipt of final regulatory approvals and (3) the sale of at least 31,025,000 shares of common stock, which is the minimum of our offering range. To the extent that shares remain available for sale after existing purchasers have had the opportunity to increase their orders, we may extend the community offering and solicit additional purchasers. The community offering, if extended, may be terminated at any time in our sole discretion, and we retain the right to accept or reject, in whole or in part, any order received in the community offering. We expect to close the offering at approximately the midpoint of the offering range.

This investment involves a degree of risk, including the possible loss of principal. Please read "Risk Factors" beginning on page 17 of the prospectus.

These securities are not deposits or accounts and are not insured or guaranteed by the Federal Deposit Insurance Corporation or any other government agency. Neither the Securities and Exchange Commission, the Board of Governors of the Federal Reserve System, the Office of the Comptroller of the Currency, nor any state securities regulator has approved or disapproved of these securities or determined if the prospectus or this prospectus supplement is accurate or complete. Any representation to the contrary is a criminal offense.

SANDLER O'NEILL + PARTNERS, L.P.

For assistance, please contact the Stock Information Center, toll-free, at (877) 651-9234. The date of this prospectus supplement is December 21, 2012.