

SILICON VALLEY BANCSHARES

Form 424B3

January 24, 2005

[QuickLinks](#) -- Click here to rapidly navigate through this document

Filed Pursuant to Rule 424(b)(3)

Registration No. 333-107994

**PROSPECTUS SUPPLEMENT DATED JANUARY 24, 2005
(To Prospectus Dated September 30, 2003)**

SILICON VALLEY BANCSHARES

\$150,000,000

(aggregate principal amount)

**Zero Coupon Convertible Subordinated Notes due June 15, 2008 and the Common Stock Issuable
Upon Conversion of the Notes**

This Prospectus Supplement, together with the Prospectus listed above, is to be used by certain holders of the above-referenced securities or by their transferees, pledgees, donees or their successors in connection with the offer and sale of the above referenced securities.

The table captioned "Selling Securityholders" commencing on page 38 of the Prospectus is hereby amended to delete the selling securityholders, "Waterstone Market Neutral Fund, L.P." and "Waterstone Market Neutral Offshore Fund, Ltd.," and to add the following selling securityholder and related information:

Name	Principal Amount at Maturity of Notes Beneficially Owned That May Be Sold	Percentage of Notes Outstanding	Number of Shares of Common Stock That May Be Sold(1)	Percentage of Common Stock Outstanding(2)
Waterstone Market Neutral Master Fund, Ltd.	\$3,465,000	2.3%	103,040	0.3%

(1) Assumes conversion of all of the holder's notes at a conversion price of approximately \$33.6277 per share of common stock. However, this conversion price will be subject to adjustment as described under "Description of Notes Conversion Rights." As a result, the amount of common stock issuable upon conversion of the notes may increase or decrease in the future.

(2) Calculated based on Rule 13d-3(d)(1) of the Exchange Act using 35,970,095 shares of common stock outstanding as of December 31, 2004. In calculating this amount, we treated as outstanding the number of shares of common stock issuable upon conversion of all of that particular holder's notes. However, we did not assume the conversion of any other holder's notes.

QuickLinks

[PROSPECTUS SUPPLEMENT DATED JANUARY 24, 2005 \(To Prospectus Dated September 30, 2003\)](#)