Improving Performance. Derivatives Made Easy.

Loan Hedging Overview

VINING SPARKS
INTEREST RATE PRODUCTS, LLC

LIVE OAK BANK

Why Use SBA Loan Hedging?

Loan hedging provides *win/win* for bank and borrower

- Provides borrowers with products that meet their needs
- Improves profitability by increasing average life of loans
- Provides real time market pricing based on underlying loan characteristics
- Provides loan pricing and prepayment discipline
- Gives the bank tools to compete with traditional fixed rate lending

Why Use SBA Loan Hedging?

Commercial loan hedging allows community banks to create a *competitive advantage* by offering desirable products at low cost

New loans (offensive)

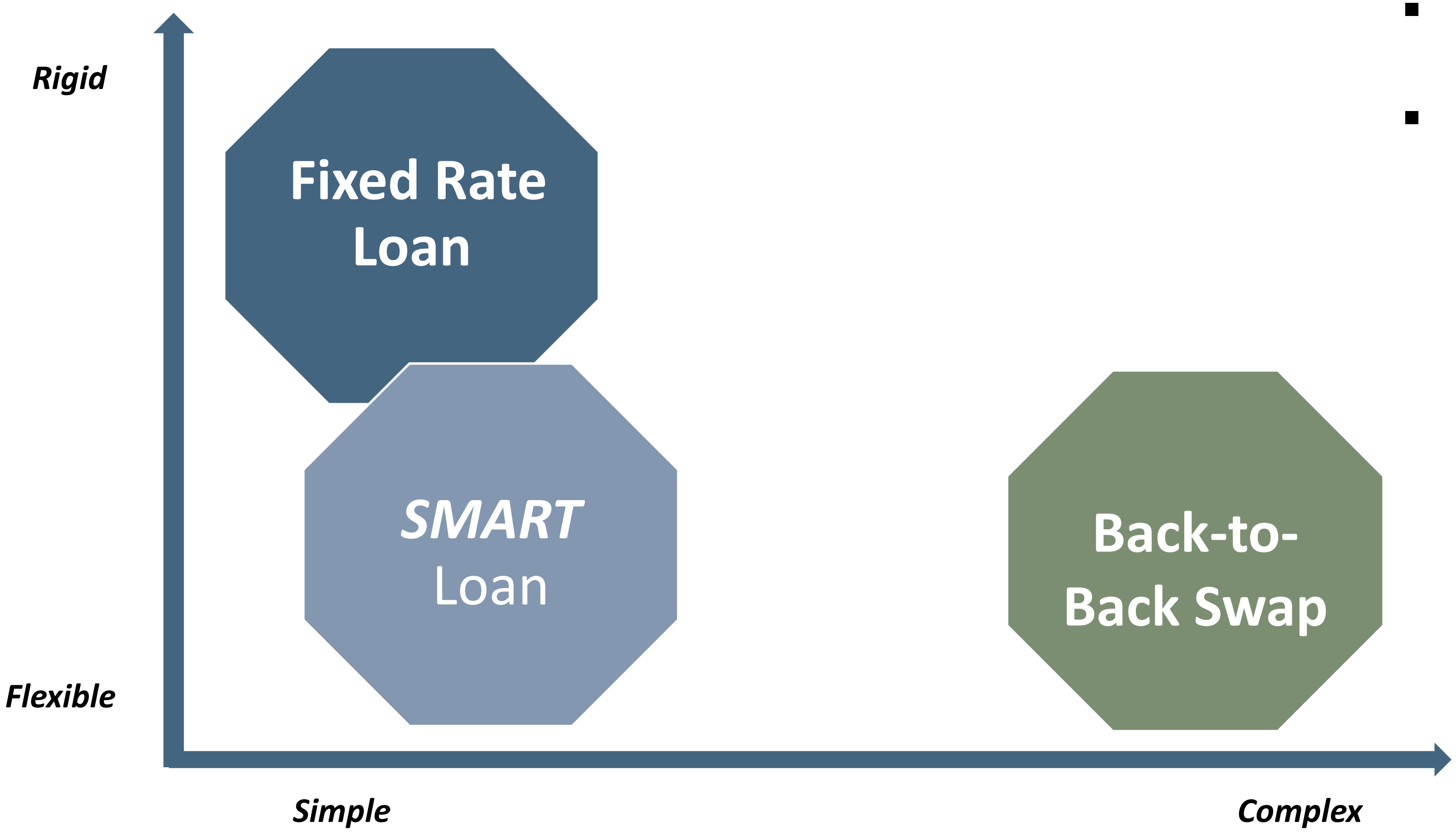
- Offer attractive long term fixed rates
- Compete with traditional lenders

Existing loans or renewals (defensive)

- Offers the opportunity to lock in at low interest rates
- Proactively approach your customers / keep competitors away

How Do You Want to Face Your Borrower?

Three flexible options for offering fixed rate financing to your borrowers



- Each provides identical economic characteristics
- Each uses an identical pay fixed swap to create
- Choose the one most appropriate for your borrower
  - **Fixed Rate Loan** – the traditional fixed rate loan…plus a prepayment penalty
  - ***SMART* Loan** – VSIRP's proprietary product. As simple as the fixed rate loan with additional fee income and accounting benefits
  - **Back-to-Back Swap** – The traditional method employed by the big banks. Provides greater flexibility, but with added complexity, compliance and reporting requirements

How Can You Fix the Rate for a SBA Floating Borrower?

Borrower

Floating Rate Note

Addendum to the Note (Hedge Agreement)

These are the two components of the SMART loan, which effectively allows the borrower to make one fixed payment

Pay Prime + 1.25%

Pay Fixed 6.45%

Receive Prime plus 1.25% floating

Bank

Floating Rate Loan

Hedge Agreement

Interest Rate Swap

Pay Fixed 6.45%

Receive Prime plus 1.25% floating

VINING SPARKS
INTEREST RATE PRODUCTS, LLC

Interest Rate Swap

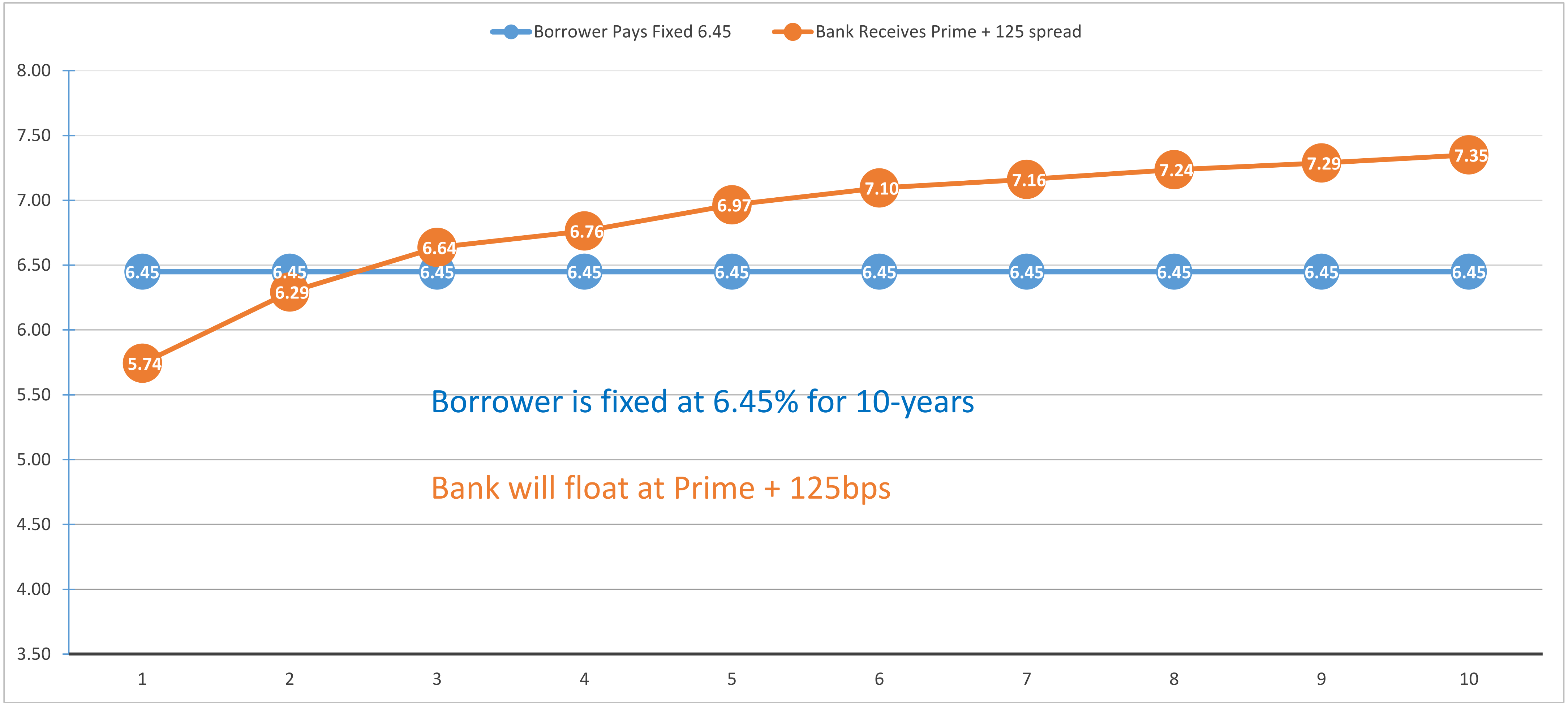
Institution's Cash Flows

Receive Fixed Cash Flow from Borrower	6.45%
Institution Pays Fixed (Vining Swap)	(6.45%)
Institution Receives Floating (Vining Swap)	Prime +1.25%
Net Floating Rate Received	**Prime + 1.25%**

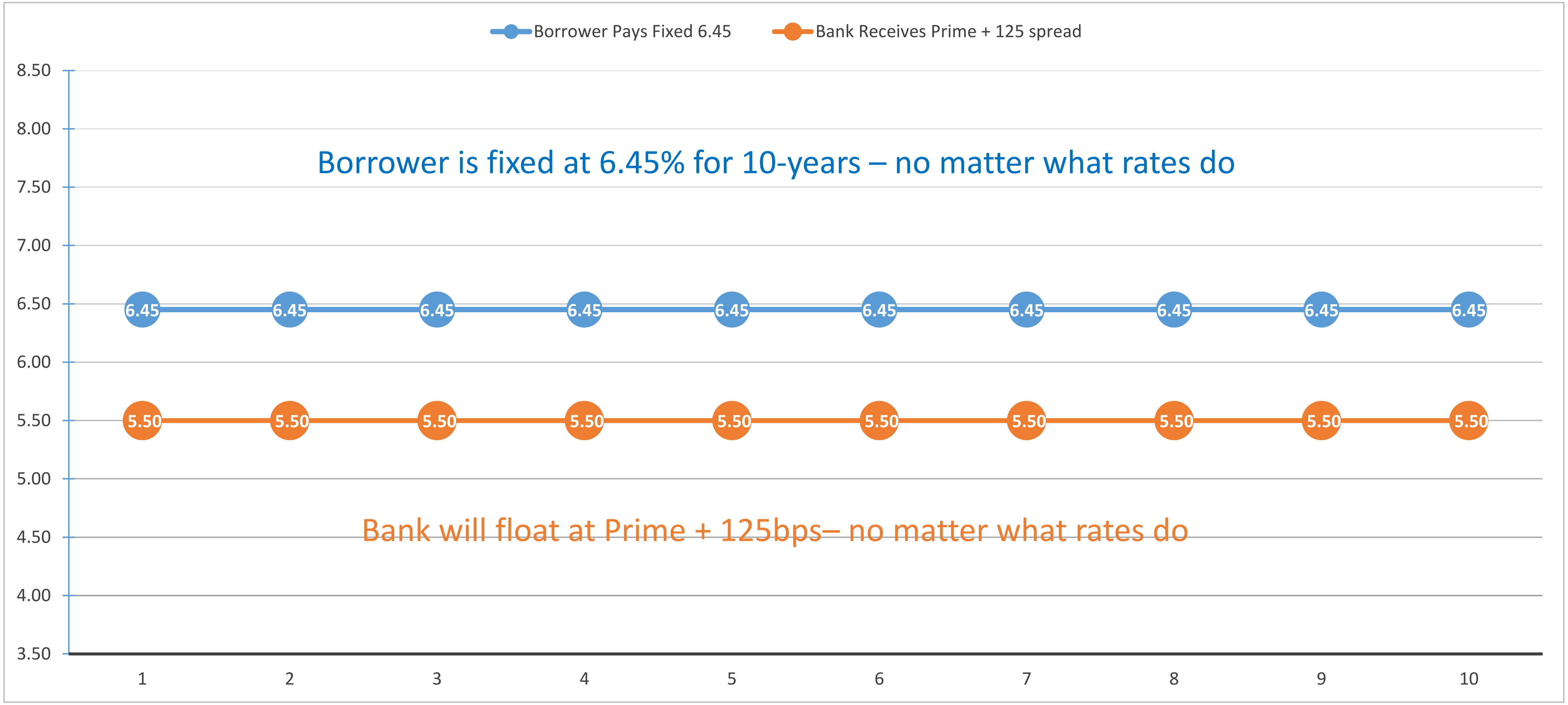
Commercial Loan Hedging Solutions

	Hedged Solutions		
	Back to Back	*SMART Loan*	Fixed Rate Loan Hedge
Note Type	Floating Rate	Floating Rate + Modification	Fixed Rate
Does Borrower Have a DFA "Swap"?	Yes, separate contract	No, derivative embedded in Loan	No
Documentation	ISDA Master+ GMEI +ECP	Addendum to Note	Fixed Rate Note w/prepay provision
Reported to SDR?	**Yes**	**No**	No
Must Borrower be Eligible Contract Participant?	**Yes**	**No**	No
Reduces Rate Risk?	**Yes**	**Yes**	Yes
Fee Income Potential?	**Yes**	**Yes**	No
Borrower Has Gain Potential?	**Yes**	**Yes**	Yes
Option to Prepay Without Penalty?	**Yes**	**Yes**	Yes
Allows funding flexibility?	**Yes**	**Yes**	Yes
Fixed to Float Structure?	**Yes**	**Yes**	Yes
Accounting Treatment	**Mark-to-Market**	**Mark-to-Market**	Hedge Accounting

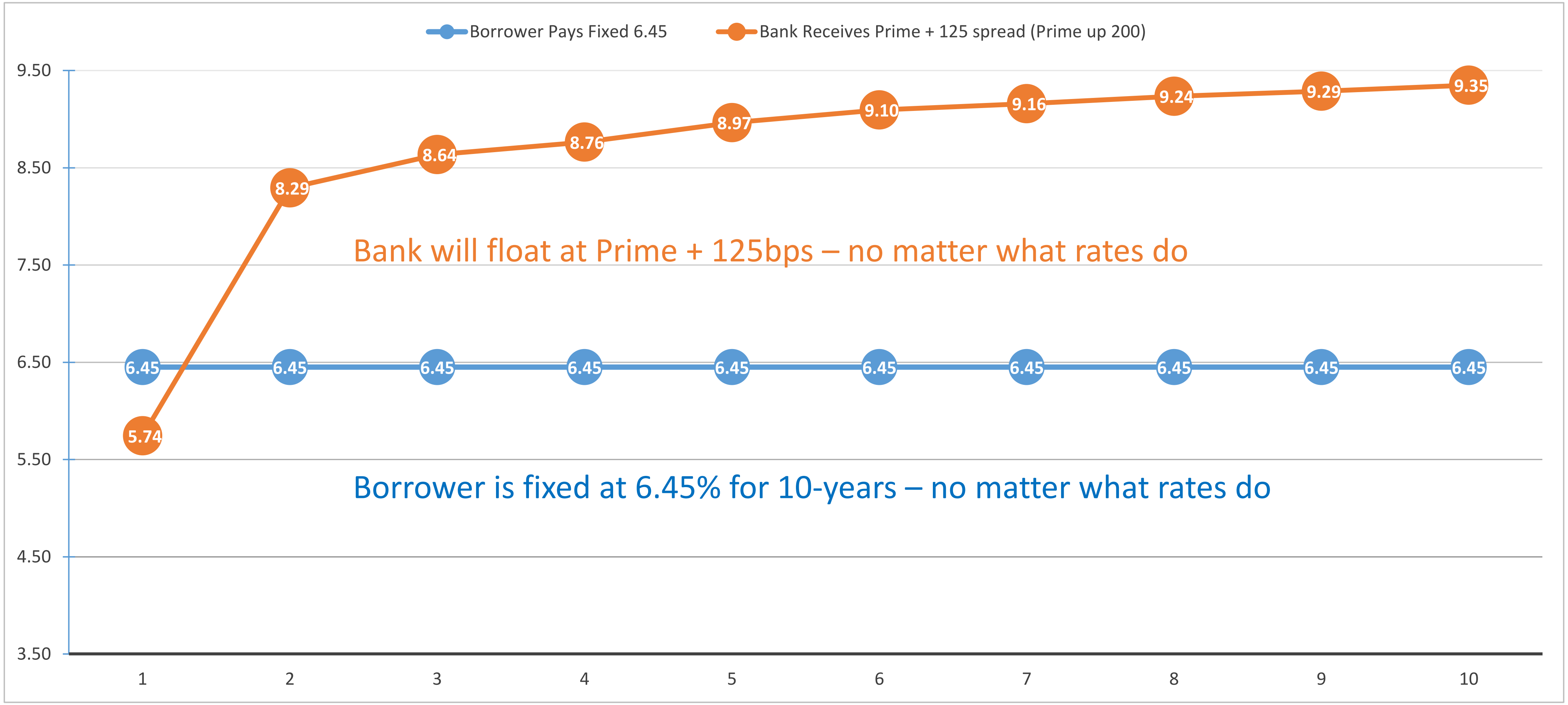
How Does a Loan Hedging Swap Work?



How Does the Loan Hedging Swap Work?



How Does the Loan Hedging Swap Work?



FAQ

- **What size loan can be hedged?**
  - Loan amounts greater than $500,000
- **What terms can the borrower lock in?**
  - Terms up to 15-years
- **When is the borrower’s fixed rate locked?**
  - Typically, at closing
  - The rate can be locked prior to closing with an Advanced Rate Lock Agreement
- **Can the borrower prepay the loan?**
  - ONLY at market
  - Even partial prepayment will trigger a market unwind
- **Does the SBA guarantee an losses on the hedge?**
  - No
  - The hedge document must note that this loss is not guaranteed

Underwrite Credit Risk - Definition

- Interest rate swaps have an explicit market value (much like a bond) that is determined by market interest rates and reflected on the bank's books
- Early termination of an interest rate swap will result in either a gain or loss
  - If the swap replacement rate is higher than the existing swap rate, early termination results in a gain
  - If the swap replacement rate is lower than the existing swap rate, early termination results in a loss
- With commercial loan hedging, if the borrower defaults, the offsetting hedge must be terminated at market which could result in a loss to the bank if the swap replacement rate is lower than the existing swap rate
- It is extremely difficult to predict the path rates will follow, and whether the hedge termination will result in a gain or loss
- We can, however, estimate, with a 95% degree of certainty (or higher if preferred), what an institution's maximum loss could be
- To capture the potential "worst case loss scenario", we recommend underwriting additional credit risk equal to 1.5% per year of the beginning hedged balance

Credit Risk - Example

- This incremental credit risk is not direct exposure, as you are not lending additional money to the borrower
  - Should not impact Debt Service Coverage ratios
- Per Dodd-Frank Act, this exposure must be included in the bank's exposure to one borrower and legal lending limit
- Exposure should be calculated, approved and monitored on a deal by deal basis
- This exposure is not guaranteed by the SBA
- The following calculation illustrates the "worst case loss" with a 95% confidence interval - assuming a precipitous drop in market interest rates and the borrower defaulting at the worst possible time in the life cycle of the swap:
  - $1,000,000, 10-year term loan, 8.45 year average life
  - $1,000,000 X 1.5% X 8.45 year average life
  - Exposure = $127,900 of additional credit exposure

What Happens at Early Termination?

- The borrower is provided a disclosure describing the prepayment provision
- Most importantly, the borrower must understand the potential early termination **costs**
- The disclosure provides an estimate of the unwind cost/benefit
- Below is an example of the information provided to borrowers

Estimated Sensitivity of Unwinding
a 10-Year $1,000,000 Amortizing Collar Prior to Maturity

	Replacement Rate Difference					
Remaining Term Years:	-1.00%	-0.50%	-0.25%	0.25%	0.50%	1.00%
10 Years	(85,244)	(45,452)	(26,216)	10,987	28,974	63,767
9 Years	(74,516)	(39,616)	(22,817)	9,534	25,104	55,083
8 Years	(64,308)	(34,091)	(19,606)	8,168	21,476	46,983
7 Years	(54,604)	(28,864)	(16,576)	6,886	18,079	39,435
6 Years	(45,394)	(23,929)	(13,722)	5,684	14,902	32,413
5 Years	(36,669)	(19,276)	(11,039)	4,560	11,938	25,891
4 Years	(28,418)	(14,898)	(8,520)	3,510	9,176	19,846
3 Years	(20,635)	(10,789)	(6,162)	2,531	6,609	14,256
2 Years	(13,309)	(6,940)	(3,958)	1,622	4,229	9,098
1 Years	(6,433)	(3,346)	(1,906)	779	2,029	4,353

Borrower Documentation and Disclosures

- For the ***SMART*** Loan, the following documentation is required:
  - Standard floating rate promissory note – prepared by loan operations, indicate the request is a ***SMART*** loan
  - Addendum to promissory note – prepared by VSIRP, we will provide a copy of this prior to closing, and update the fixed rate on the day of closing
  - Borrower disclosure – an overview of the transaction, this includes a prepayment sensitivity analysis for the borrower
  - Borrower disclosure must include the below language:
    - The Small Business Administration is not a party to this contract and does not guarantee it. In the event SBA is called upon to honor it's guaranty to the lender, the borrower's debt will be determined by the terms of the Note, including the variable rate provision.

- Closing is typically done simultaneous to loan closing

- Forward starting rate locks available subject to approval

Risk Considerations

Risk	Definition	Mitigation Technique
Upstream Counterparty Exposure (Hedging Counterparty)	Hedging counterparty defaults owing you money (i.e., swap market value is positive to the bank).	Limits on unsecured counterparty exposure, counterparty diversification and ongoing credit review, margin requirements (collateral).
Downstream Counterparty Exposure (Borrowers)	Borrower defaults owing you money (i.e., swap or ***SMART*** loan market value is positive to the bank)	Underwriting standards that reflect potential credit exposure, adequate collateral for both principal and swap potential credit exposure and ongoing credit reviews.
Operational/Reputational	Inadequate/insufficient disclosure to borrowers (i.e., borrower does not understand prepayment provision). Documentation and settlements not handled properly.	Best practice is to maintain appropriate systems, controls and policies. Ensure appropriate borrower disclosures are provided. Maintain/utilize DFA checklist.
Accounting/Regulatory	Accounting standards change or are re-interpreted. Books and records do not contain appropriate financial information. Non-compliance with DFA.	Best practices are to maintain internal controls, follow current GAAP and stay abreast of accounting developments. Ensure compliance with DFA reporting and clearing requirements.

Transaction Timeline

- **Transaction Proposal / Negotiation**
  - VSIRP prepares rate indication(s)
  - VSIRP can provide term sheets / Commitment letter language
  - VSIRP provides borrower disclosure
  - VSIRP continuously update rates
- **Credit / Transaction Approval**
  - Include SMART loan exposure in underwriting package
- **Transaction Closing**
  - VSIRP will review all promissory notes, whether internal or attorney prepared
  - VSIRP will provide the ***SMART*** loan addendum and borrower disclosure
  - Rate is refreshed the morning of closing
  - Immediately contact VSIRP and management upon execution – email copy of signed docs to evidence closing

Obtaining Rate Indication

- Lender contacts VSIRP for an indication
- Multiple ways to get quote
  - Call
  - Email
  - Online via Quick Quote
- Example information provided to VSIRP includes:
  - Loan Amount: $1,000,000
  - Fixed term: 10-Years
  - Amortization Period: 20-Years
  - Floating rate Index: Prime
  - Spread to Index: 1.25%
  - Fee Income: None

Rate Indication Content

Notional: $1,000,000.00 amortizing over 240 months
Commencement: 11/27/2017
Maturity: 10-Year
Customer Locks in Fixed
Bank Yields Prime + 125bps, act/365

10-Year Maturity:
6.45% is the customer's indicative fixed rate; this includes no profit to Bank; each basis point you increase the fixed rate will generate $791.84 in fee income

Potential credit risk is $127,899.62

Implementation

- Establish business need(s)
- Get buy in from board and executive management
- Implement appropriate board policies/resolutions
    - Derivative products policy
    - Loan hedging credit policy
    - Resolution exempting bank from mandatory clearing
    - Counterparty approvals
- Develop product parameters (borrower ratings, loan size, maximum and minimum terms, qualified lenders, etc.)
- Develop or outsource derivative support function for lenders, finance/accounting/treasury and operations
- Train appropriate constituencies (lenders, operations and accounting)
- Assign approval authorities for credit approval and trade execution
- Establish counterparty relationships
- Establish collateral management process to meet swap margin requirements

VSIRP

- **Acts as counterparty or strategic partner in interest rate derivative transactions**
- **Provides interest rate hedging products, strategies, trading, accounting, operations and Dodd-Frank regulatory support to middle market and community financial institutions**
- **Staffed by seasoned team of interest rate derivative professionals**
  - Highly experienced team who spent their careers working for, and with, depository institutions
  - Each professional has managed/traded extensive derivative positions
- **Includes complete suite of services**
  - Turn-key front to back implementation support
  - Balance sheet performance and hedging strategy development
  - Macro hedging
  - Direct Commercial loan hedging
  - Training and policy development (board, executives, accounting, lenders, operations)
  - Pricing and execution
  - ASC-815 accounting support and Dodd-Frank regulatory compliance support
- **Utilizes state-of-the-art infrastructure**
  - State of-the-art front, middle and back-office derivative platform
  - SOC 1 & 2 valuation compliant

Thank You!

VSIRP

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