

Considering Derivatives?

By c. myers corporation

Credit unions purchase derivatives for interest rate risk (IRR) protection. As we consider the value that can be obtained from derivatives, it also makes sense to ask how that protection may change over time and if there are circumstances that might make the protection not as beneficial.

Many of our clients are using or considering derivatives as a tool for mitigating interest rate risk. While c. myers does not sell derivatives, we regularly model their impact on our clients' financial structures to show the risk and reward trade-offs. As we model and discuss these with our clients, we've made some observations and identified some questions that help bring a greater understanding to what a credit union might expect. We believe that introducing additional tools to help credit unions address interest rate risk is a very good thing and, as with any new tool, it's important to understand how it can be used and what risk and reward trade-offs it offers. For ease of communication, most of our focus will be on interest rate swaps.

10 Key Considerations...

1. [Derivatives can be another tool to build a cushion above, or bring risk profiles in line with, IRR policy limits.](#)
2. [NEV in the base and shock up environments will not show the potential costs of a swap.](#)
3. [The economic value of a swap can be positive, even while the credit union continues to have negative earnings \(negative cash flow\) from the swap.](#)
4. [Swaps require no immediate cash outlay, though it is important to understand that the cost of a swap is uncertain versus a cap which is fixed.](#)
5. [Understand how high rates would have to increase before a swap helps earnings.](#)
6. [Understand that an increasing forward rate curve may paint an overly optimistic picture of expected cash flows, earnings and economic value.](#)
7. [In most cases, the economic value of a swap will change over time even if rates don't change and, if rates don't change, the economic value of the swap will become negative.](#)
8. [Interest rate caps can be purchased for different levels of protection, which allow credit unions the flexibility to establish a strike rate that balances cost and desired protection.](#)
9. [Derivatives can provide the protection of a large \(notional\) balance without that balance residing on the balance sheet or affecting net worth calculations.](#)
10. [Once all of the necessary requirements \(policy, procedures, education, personnel, etc.\) are in place and a credit union is approved by the regulator, derivatives can be purchased quickly to provide immediate interest rate risk mitigation.](#)

It's important to understand that derivatives are priced and valued based upon assumptions about the future that may or may not come true. Effective risk management means contemplating things not going as planned. By carefully considering each of the 10 points above, management and board members can be better prepared for what to expect when making decisions on derivatives.

To understand the interest rate risk protection that derivatives can provide, consider the following credit union example:

EARNINGS	
Beginning Position ROA	0.92
First Negative ROA: Short-term rates at...	3%

NET WORTH RATIO	
Beginning Position Net Worth	10.20
Long-Term Net Worth At Risk (+500)	3.64
Long-Term Net Worth Not At Risk (+500)	6.56

NET ECONOMIC VALUE				
	NEV	\$ Change	% Change	NEV%
+500	34,039	(42,531)	(55.55%)	6.08%

The existing financial structure is poised to earn 92 basis points (bps) and has a beginning position net worth ratio of 10.20%. ALCO has decided it would be desirable to reduce interest rate risk and has established an internal goal of remaining Well Capitalized if rates increase by 500 bps and to maintain an NEV volatility of not greater than 40%. As shown in the example above, the credit union is not currently meeting these interest rate risk objectives.

Management is considering the purchase of an interest rate swap as one possible solution. Specifically, management is considering a swap with the following terms:

Notional Amount:	\$50 million
Term:	7 Years
Pay Fixed Rate:	2.00%
Receive Floating Rate:	3-Month LIBOR (24 bps) with quarterly reset

For seven years, the credit union will pay 2% on \$50 million and the counterparty will pay the credit union 3-month LIBOR on \$50 million. If, and when, the 3-month LIBOR exceeds 2%, the credit union will begin to receive positive cash flow.

The proposed swap is layered onto the existing financial structure within the A/LM simulation and shows the following results:

Risk Snapshot Comparison

Before Base Case: Case 151B
After Base Case: 7Yr Pay 2% Swap (\$50M Notional)

	Before	After	Difference
EARNINGS			
Beginning Position ROA	0.92	0.78	(0.13)
First Negative ROA: Short-term rates at...	3%	3%	0%
NET WORTH RATIO			
Beginning Position Net Worth	10.20	10.20	0.00
Long-Term Net Worth At Risk (+500)	3.64	2.86	(0.78)
Long-Term Net Worth Not At Risk (+500)	6.56	7.34	0.78
Falls Below Well Capitalized: Short-term rates at...	5%	6%	1%

An interest rate swap is expected to provide protection, or insurance, against a rising rate environment. As noted above, the cost of this insurance in terms of annual ROA is 13 bps in the current environment. The asset size of this example is \$660 million, so the annual cost of \$880 thousand results in a reduction of 13 bps ROA. The benefit shown is the improvement in long-term net worth at risk. The simulation including the effects of the swap shows that:

- Current ROA is reduced by 13 bps
- Long-term net worth **not at risk** is improved by 78 bps to 7.34%
- The point at which the financial structure could fall below Well Capitalized has improved from short-term rates at 5% to short-term rates at 6%

The NEV results both with and without the impact of derivatives are shown below. Notice that the resulting NEV ratio after layering in the derivatives has improved in the +500 shock from 6.08% to 8.24%. Similarly, NEV volatility for that rate environment has been reduced from 55.55% to 38.31%.

NET ECONOMIC VALUE (+500)

Net Worth \$67,321 = 10.2%

	NEV	\$ Change	% Change	NEV %	Derivative NEV \$ Impact
Base Case: Excluding Derivatives Impact					
Current	76,570			11.66%	
+500	34,039	(42,531)	(55.55%)	6.08%	
Base Case: Including Derivatives Impact - 7 Year, Pay 2% Swap (\$50M Notional)					
Current	76,570			11.66%	
+500	47,234	(29,336)	(38.31%)	8.24%	13,195

Derivatives analytics provided by The Yield Book® Software.

The what-if shows that the ALCO could achieve the desired results with such a transaction. In this example, long-term risk to earnings, long-term risk to net worth, and net economic value are substantially improved if rates go up by 500 bps by adding the swap, with a projected cost of 13 bps annually if rates do not change. However, the variety of possible outcomes needs to be understood for ALCO to make an informed decision. Giving thought to the 10 considerations provided above, decision-makers can more completely understand the risk and reward trade-offs when contemplating an interest rate derivative instrument.

Understanding the details...

1. Derivatives can be another tool to build a cushion above, or bring risk profiles in line with, IRR policy limits.

One threat for many credit unions today is the potential pressure of rising interest rates on their financial structure. Many credit unions have a material position in long-term fixed-rate investments and mortgage loans funded primarily with adjustable-rate member deposits. These financial structures can result in credit unions exceeding their interest rate risk policy limits or could limit credit unions' strategies in different environments.

In response, credit unions can employ a variety of possible strategies to reduce interest rate risk. A credit union could identify the source of the underlying risk and seek to address it directly, though often other solutions may also be considered on a temporary or ongoing basis. Some solutions could include selling fixed-rate loans or investments, obtaining long-term fixed-rate member CDs or borrowings, investing in overnight funds or variable investments, generating floating rate loans, or purchasing a derivative, such as an interest rate swap or cap. Each solution offers unique trade-offs.

When, and if, rates rise above levels established within the derivative contract, swaps and caps can provide interest rate protection and allow the credit union an opportunity to participate in the benefits of a floating-rate income stream.

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2. NEV in the base and shock up environments will not show the potential costs of a swap.

If a credit union only looks at NEV, it will miss important information about how a derivative could impact earnings, including how much the derivative could hurt or help. Pay-fixed swaps will show an improved economic value in shocked up rate environments. It's important to understand what is happening to generate these economic values so that management can reasonably assess what those values will mean to the credit union.

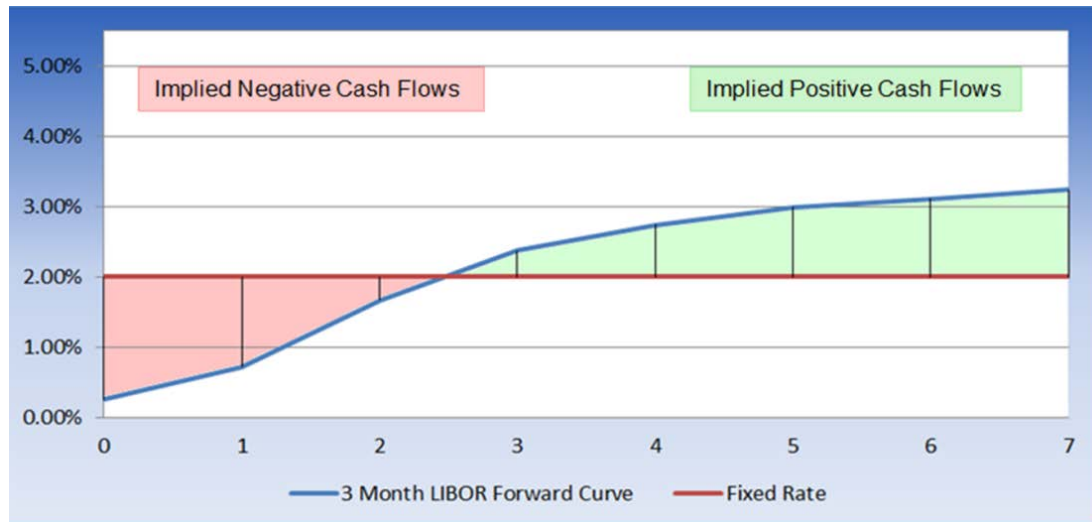
Using the example swap above, let's look at the economic value of the swap on day 1 of its purchase. Remember, NEV assumes an instantaneous rate increase to the levels shown.

Economic Value						
	Base	+100	+200	+300	+400	+500
Day 1	0	3,055	5,885	8,509	10,941	13,195

Notes: Derivatives analytics provided by The Yield Book® Software | \$s in 000s

On day 1 of a swap transaction in the base environment, the swap's economic value will be zero, meaning the economic value will not reflect a gain or loss in the current rate environment.

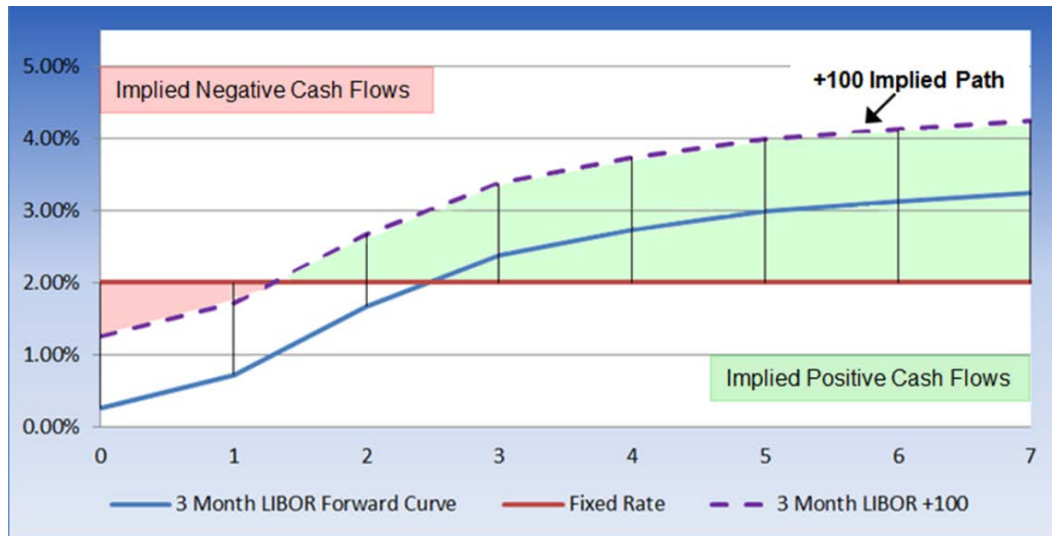
Why is the beginning base economic value zero? The present value of expected cash flows over the seven years for both the fixed-rate party and the floating-rate party are assumed to be equal. The party paying fixed starts with a large negative cash flow. In order for the present value of cash flows to be equal, the pay-fixed side would need to have positive cash flows at some point in the future. For the example swap (pay fixed 2%), the math indicates that short-term rates would need to go up about 300 bps over the seven years before the swap matures in order to offset the present value of the initial negative cash flow (shown below).



Note: Derivatives analytics provided by The Yield Book® Software

The expectation that rates go up needs to be understood since the results for the credit union would be quite different if the implied rate path does not come true.

The base economic value of zero is assumed to increase to \$3.1 million for a +100 shock. In the example below, the dashed line shows the implied path to arrive at the \$3.1 million value.



Notes: Derivatives analytics provided by The Yield Book® Software

Note that the rate shocks are layered on top of the “implied rate path” that was used to establish the pricing of the swap on day 1.

If rates were to instantly increase 100 bps, the credit union’s initial cash flows are still negative. Meaning, even if the market value increases, it does not necessarily indicate that the credit union will experience positive cash flows. The reason the value increases is due to the implied path. The implied (base) path already assumes that rates will increase. Then, the rate shock shifts the entire implied rate path up 100 bps. Note, if the 3-month LIBOR increases 100 bps and stays at that new level, then the cash flows would remain negative for the entire time frame.

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The example above is for a 100 bp increase; if larger shocks are tested, the same methodology is applied, creating larger values. The shape of the implied curve remains constant such that the resulting economic value is based on the expectation that rates will continue to increase from the shocked position.

Absent further analysis, the initial economic values reveal only positive potential outcomes because they are based upon an assumption about an increasing forward curve. To better understand swaps as a financial strategy for interest rate risk management, consider what could happen if that future rate path does not come true. Consider the possibility that rates do not change or that they might move down, not up. (See the discussion for Consideration #4 for additional comments regarding potential cash flow and cost impacts.)

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3. **The economic value of a swap can be positive even while the credit union continues to have negative earnings (negative cash flow) from the swap.**

Economic Value						
	Base	+100	+200	+300	+400	+500
Day 1	0	3,055	5,885	8,509	10,941	13,195

Notes: Derivatives analytics provided by The Yield Book® Software | \$s in 000s

Using the swap example discussed previously, remember that the credit union is paying a fixed rate of 2% and receiving 3-month LIBOR (initially 0.24%). On the day of purchase, the +100 shocked economic value is \$3.1 million. Recognize that there is no assurance that a swap will achieve positive cash flow for the credit union. If 3-month LIBOR increases, but never rises above the fixed-pay rate, cash flows will remain negative for the entire time frame. As shown below, with an instant rate change of +100 bps, if rates remain at that level thereafter, the credit union would ultimately pay \$2.8 million. Similarly, if rates instantaneously changed by +200 bps (putting the swap “in the money”) but remained flat thereafter, rather than the \$5.9 million economic value shown above, the credit union would receive only about \$590 thousand.

Cumulative Cash Flows with Qtrly Reset (Instant Rate Change)						
	Base	+100	+200	+300	+400	+500
Year 1	(880)	(505)	(130)	245	620	995
Year 2	(1,760)	(885)	(10)	865	1,740	2,615
Year 3	(2,640)	(1,265)	110	1,485	2,860	4,235
Year 4	(3,520)	(1,645)	230	2,105	3,980	5,855
Year 5	(4,400)	(2,025)	350	2,725	5,100	7,475
Year 6	(5,280)	(2,405)	470	3,345	6,220	9,095
Year 7	(6,160)	(2,785)	590	3,965	7,340	10,715

Note: \$s in 000s

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4. **Swaps require no immediate cash outlay, though it is important to understand that the cost of a swap is uncertain versus a cap which is fixed.**

The cost of a cap can vary based upon the strike rate and term (maturity), allowing the credit union to select the amount of protection desired. This selection is made at the time a cap is purchased, and the cost of the cap is paid up front. Therefore, the exposure to the credit union is never larger than the initial cost, which is known and paid at the outset.

Conversely, the cost of the swap is determined over its life. The basic workings of the swap are pretty straightforward. Using the example swap at the beginning of the article, if rates do not change, the swap will be a hit to earnings because the credit union will pay a higher fixed rate (i.e., 2%) than the variable rate it will receive (0.24%). However, if LIBOR increases above 2%, the credit union would begin to receive net cash flow.

Management should be comfortable answering the following questions:

- Over the life of the swap, how much could the swap cost if rates don't change?
- How much could that cost increase if rates moved down?
- How high would rates have to increase before the swap creates positive cash flows (i.e., before it helps)?
- How high would rates have to go before the swap produces cumulative total positive cash flow?
- How high would rates have to go before the credit union could have enough cumulative positive cash flow to offset the negative cash flows if rates don't change?

The table below shows cash flows that would occur if rates remained the same (base) or changed instantly to the levels noted, and stayed there for the 7 years until maturity. It shows that, if interest rates do not change, the credit union will pay out \$880 thousand per year, or \$6.2 million over the term of the swap. For some credit unions, this can be expensive insurance. The table indicates positive cash flow occurs in the +200 bp environment, as LIBOR would then be 2.24% (LIBOR at 0.24% + 2%) while the fixed payment remains at 2%. Note that it would take rates increasing by more than 300 bps before the net benefit to the credit union in year 7 would offset the potential cost of \$6.2 million.

Note that in this example, while rates change instantly, the earnings lag the initial year due to the quarterly reset.

Cumulative Cash Flows with Qtrly Reset (Instant Rate Change)						
	Base	+100	+200	+300	+400	+500
Year 1	(880)	(505)	(130)	245	620	995
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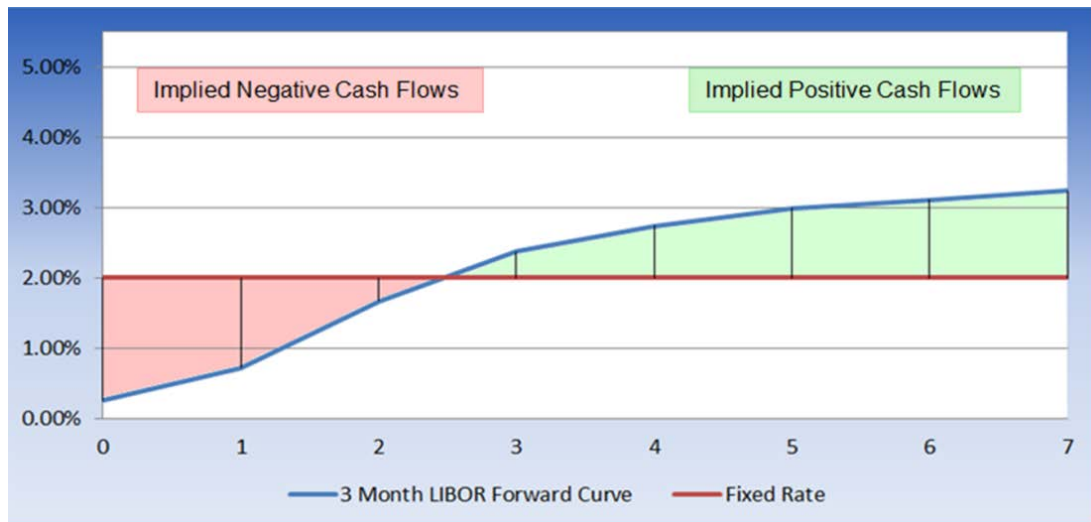
It's also important to consider that in today's exceptionally low rate environment, the chart above does not show the impact in a -100, -200, etc. environment. At 24 bps, the 3-month LIBOR rate could still conceivably drop and cause additional negative cash flow beyond the \$6.2 million. Of course, this risk of rates going down becomes greater as the 3-month LIBOR increases such that purchasing a new swap when the rate is, say, 1.75% would entail more potential downside risk than at the present time.

A key takeaway is to understand that the cost of interest rate protection when using a swap is uncertain. Management needs to understand the extent of the cash flow possibilities and make its own assessment of the likely range of expectations. Depending on the downside possibilities, management can then ask the question of whether the possible costs are worth the potential benefits.

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5. Understand how high rates would have to increase before a swap helps earnings.

As noted above, the present value of expected cash flows over the seven years for both parties (the fixed-pay and the floating-pay) to a swap are initially projected to be equal. The party paying fixed starts with a large negative cash flow. In order for the present value of cash flows to be equal, the pay-fixed side would need to have positive cash flows at some point in the future. For the example swap (pay fixed 2%), the math indicates that short-term rates would need to go up about 300 bps over the seven years before the swap matures in order to offset the present value of the initial negative cash flow.



Note: Derivatives analytics provided by The Yield Book® Software

The timing of rate changes plays an important role as well. Often, models will use an instantaneous rate shock to demonstrate impacts. With derivatives, though, this can be an optimistic view of results. If actual rates increase slower than modeled or if rates increase slower than the implied path suggests, the credit union may achieve less favorable results. Consider that if the actual rates increase, but lag behind the implied curve materially, then future rates would need to increase by some greater amount than the implied curve in order to “catch up.”

Understanding the role of this implied path, then, becomes important in assessing the variety of potential outcomes when

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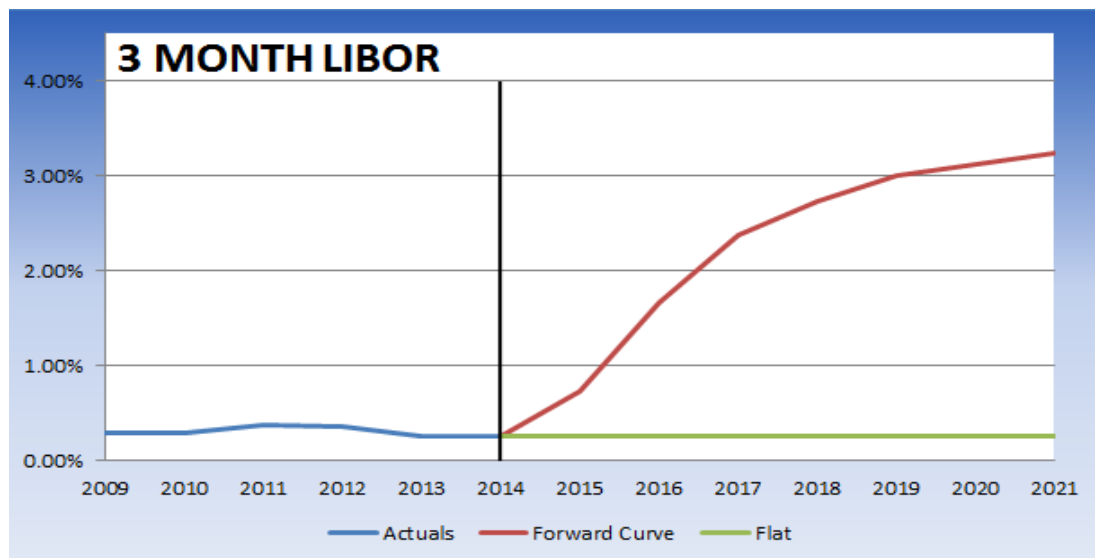
purchasing a swap. What if rates don't follow the implied path as shown? The most recent six years of low rates certainly suggests the possibility that rates could remain low. If rates don't begin to increase for another year, or several years, then how high would rates need to go to catch up to the original implied path?

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6. Understand that an increasing forward rate curve may paint an overly optimistic picture of expected cash flows, earnings and economic value.

We have discussed the relationship between rate shocks and changes in value. An analysis of the economic value of a derivative typically assumes that rate shocks are added to an already increasing implied rate path. Understanding the optimistic bias of this assumption is important because improvements in economic value don't guarantee cash flows will be positive in the future.

The economic value analysis is typically limited to assuming an implied path. However, when performing cash flow tests (earnings), this limitation is not necessary or warranted. Since there are virtually an unlimited number of paths that can occur, consider paths that could expose risk. Recent history (as shown below) has demonstrated that the risk of rates remaining flat should not be ignored.



Note: Forward curve analytics provided by The Yield Book® Software

For each rate environment, communicating the potential of rates going to that level and staying there can often expose potentials that won't be seen from the economic value. Note that in the example below, while rates change instantly, the earnings lag the initial year due to the quarterly reset.

Cumulative Cash Flows with Qtrly Reset (Instant Rate Change)						
	Base	+100	+200	+300	+400	+500
Year 1	(880)	(505)	(130)	245	620	995
Year 2	(1,760)	(885)	(10)	865	1,740	2,615
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Year 6	(5,280)	(2,405)	470	3,345	6,220	9,095
Year 7	(6,160)	(2,785)	590	3,965	7,340	10,715

Note: \$\$s in 000s

It can also be beneficial to understand the impact of rates changing over time. Consider the difference if rates changed gradually over a 12-month period.

Cumulative Cash Flows with Qtrly Reset (12Mo Rate Change)						
	Base	+100	+200	+300	+400	+500
Year 1	(880)	(710)	(539)	(369)	(198)	(28)
Year 2	(1,760)	(1,090)	(419)	251	922	1,592
Year 3	(2,640)	(1,470)	(299)	871	2,042	3,212
Year 4	(3,520)	(1,850)	(179)	1,491	3,162	4,832
Year 5	(4,400)	(2,230)	(59)	2,111	4,282	6,452
Year 6	(5,280)	(2,610)	61	2,731	5,402	8,072
Year 7	(6,160)	(2,990)	181	3,351	6,522	9,692

Note: \$\$s in 000s

Note in this example that, if rates ramp up 200 bps over 12 months and stay at that level, the credit union earnings from the derivative do not break even until the 6th year. This is three years longer than was indicated by the instantaneous rate change.

In order to reduce the risk of being blindsided from an earnings perspective, institutions should review the earnings potential of rate shifts that hold steady at the simulated level. Institutions should also understand the potential impact of slower rate changes and recognize that, when evaluating derivatives, an instantaneous rate shock up is optimistic.

Compare the earnings results to the economic value in which there is no hurt in the current environment and there are material gains in the other environments.

Economic Value						
	Base	+100	+200	+300	+400	+500
Day 1	0	3,055	5,885	8,509	10,941	13,195

Notes: Derivatives analytics provided by The Yield Book® Software | \$\$s in 000s

If decision-makers are expected to rely on an economic value analysis, which uses the forward curve, it would be appropriate to ask how effective the forward curve has been historically.

Consider the following data:

Forward Curve Back on...	Said on 10/31/14 3M LIBOR Would Be ...
10/31/13	0.40%
10/31/12	0.55%
10/31/11	1.51%
10/31/10	2.60%
10/31/09	4.34%
10/31/07	5.37%

Note: Forward curve analytics provided by The Yield Book® Software

Note that the actual 3-month LIBOR rate rounded to 0.24% on October 31, 2014. If we went back one year, the forward curve indicated that 3-month LIBOR on October 31, 2014 would be 0.40%, or a difference of about 16 bps. In 2007, the curve indicated 3-month LIBOR would be 5.37%! As we might expect, projections can be fallible and tend to be less accurate the further out they go.

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- 7. In most cases, the economic value of a swap will change over time even if rates don't change and, if rates don't change, the economic value of the swap will become negative.**

Credit unions purchase derivatives to receive interest rate risk protection. Over its life, derivative economic value is impacted by several forces, two of which are:

- Changing rate environments – which can increase or decrease economic value
- Time – which continuously decreases economic value gains

We have already discussed the impact of changing rate environments on economic value. Regardless of the rate environment, economic value of a derivative will converge to zero at maturity. The value of the protection diminishes as the remaining time to maturity becomes less. Using our prior example of the 7-year swap, the chart below shows the economic value on day 1 and each year thereafter:

Economic Value						
	Base	+100	+200	+300	+400	+500
Day 1	0	3,055	5,885	8,509	10,941	13,195
Year 1	(293)	2,368	4,858	7,188	9,369	11,411
Year 2	(625)	1,622	3,745	5,752	7,647	9,439
Year 3	(1,044)	766	2,493	4,140	5,713	7,214
Year 4	(1,307)	44	1,345	2,598	3,806	4,970
Year 5	(1,292)	(421)	426	1,250	2,052	2,832
Year 6	(836)	(362)	(96)	265	618	966
Year 7	0	0	0	0	0	0

Notes: Derivatives analytics provided by The Yield Book® Software | \$s in 000s

The chart demonstrates the economic values for the various rate shocks as the time until maturity shortens. In the highest shocked environment shown, +500, the initial value of \$13.2 million decreases 1 year later to \$11.4 million. The year 1 value is materially lower because the swap offers 6 remaining years of protection versus the original 7 years. Independent of the rate environment, by the end of year 7 the swap value is zero since it matures.

Why is this important? If the swap was originally purchased to address a volatility issue in the credit union's financial structure and that volatility persists, then over time the credit union will need to either adjust the underlying structure or will need to purchase additional swaps to maintain the same level of protection. Decision-makers should be clear about the objectives of the derivatives. Is the purchase designed to offset an existing risk and buy time until the root interest rate risk can be addressed? Or, is the intent to have a business model that carries more interest rate risk and moderates a portion of that risk through the continuous use of derivatives?

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8. Interest rate caps can be purchased for different levels of protection, which allow credit unions the flexibility to establish a strike rate that balances cost and desired protection.

The purchase of an interest rate cap requires an immediate cash outlay by the credit union. In return, until maturity of the cap contract, the credit union will collect interest payments for any period in which the index exceeds a self-selected rate (the "strike rate"). For example, a cap based on 3-month LIBOR can have a 2% strike rate, a 3% strike rate, or a 5.75% strike rate. Like insurance, if you're willing to accept a higher deductible, you can pay a lower premium. The 5.75% strike rate would cost less for the credit union than the 2% strike rate, but would only begin to receive cash flow if 3-month LIBOR exceeds 5.75%. Keep in mind, that receiving cash flow doesn't necessarily mean that you will recover your initial cost. Being able to establish different strike rates creates some flexibility that does not exist with an interest rate swap.

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9. Derivatives can provide the protection of a large (notional) balance without that balance residing on the balance sheet or affecting net worth calculations.

A notional balance is used with derivatives to calculate interest cash flows. The notional works like a principal balance in calculating interest payments. However, unlike principal, it is never exchanged between the parties and it never exists on the credit union's balance sheet. Therefore, as an off-balance sheet solution, the derivative notional amount does not impact a credit union's net worth ratio.

Let's compare the net worth ratio impact of derivatives, as an off-balance sheet solution, to another possible option that would be an on-balance sheet solution. Consider a credit union with \$500 million in assets seeking to protect a portion of its funding costs over the next five years and reviewing two different options: (1) obtain a \$50 million, 5-year fixed-rate borrowing, or (2) purchase a 5-year, \$50 million swap. If the credit union's net worth ratio was 10% before the transaction, the borrowing would reduce the net worth to 9.09%. Conversely, the swap notional of \$50 million would have no impact leaving the net worth ratio at 10%.

Of course, it's important to acknowledge that there are other trade-offs between the two options that must be considered. With the borrowing, for example, what are the immediate and longer-term uses for the \$50 million? What are the liquidity implications for each? For the derivative, it may be that the infrastructure and ongoing monitoring requirements discussed below in Consideration #10 or the additional uncertainty about the ultimate costs are a determining factor.

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10. Once all of the necessary requirements (policy, procedures, education, personnel, etc.) are in place and a credit union is approved by the regulator, derivatives can be purchased quickly to provide immediate interest rate risk mitigation.

Credit unions interested in using derivatives may find the required investment in infrastructure costly, or even prohibitive. For example, for federal credit unions, the NCUA requires:

- a. Greater than \$250 million in assets (unless exception granted)
- b. CAMEL of 3 or better with a Management score of 2 or better
- c. Annual derivatives training for the Board
- d. Qualified derivatives personnel and competent understanding by Senior Executive Officers providing oversight
- e. Financial statement audits
- f. Written policies and procedures, flow charts/organization charts, etc.
- g. Monthly reporting to ALCO, including monthly NEV analysis
- h. Quarterly reporting to Board

This list is not exhaustive, and a full understanding of the NCUA requirements can be found within the regulation (12 CFR Parts 703, 715, and 741). With the

necessary infrastructure put in place and regulatory approval received, a credit union can then purchase derivatives subject to regulatory limits.

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Conclusion

Derivatives can be a valuable tool for credit unions to consider within their interest rate risk management strategy. When deciding whether to use derivatives, it is important to understand both the expected interest rate risk protection, as well as the potential costs within a range of rate environments. It also makes sense to ask how the protection may change over time and whether there are circumstances that might make the protection not as valuable. Using the 10 Key Considerations above, credit unions can be better prepared to make informed decisions about how derivatives may or may not fit within their IRR strategy.

About c. myers

Since 1991, we have partnered exclusively with credit unions. Our philosophy is based on helping our clients ask the right, and often tough, questions in order to create a solid foundation that links strategy and desired financial performance. We have the experience of working with over 500 credit unions, including 50% of those over \$1 billion in assets and about 25% over \$100 million, providing strategic planning, process improvement, project management, A/LM, interest rate risk and budgeting services. 