

Special Analysis

Impact of unemployment rate on deposit interest rates

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Implications

- The unemployment rate is a significant predictor of deposit interest rates.
- There is a very high probability that deposit interest rates will not go up until the unemployment rate will go down.
- For every 1% increase in the unemployment rate expect a 49 bps drop in the national average APY for deposits
- Although there may be other factors that impact deposit interest rates, such as inflation, these factors did not play a major role in impacting deposit interest rates in the last five years.

Purpose

The purpose of this analysis is to examine the linear relationship (regression) between the unemployment rate and the national average of deposit interest rate to determine if the unemployment rate impacts the level of deposit interest rates.

Analysis

- We established the unemployment rate as the independent variable (IV).
- We established the national average deposit APY as the dependent available (DV).
- We analyzed the linear relationship between the IV and the DV over a period of five years (January 2005 to September 2009).
- We obtained the unemployment rate from the U.S. Bureau of Labor Statistics (Table 4)
- We obtained the national average APY for deposit from Market Rates Insight, and based the analysis on a sample of 1,300 institutions as was determined by a-priori, two-tailed test. The t-Test was based on the following parameters: Alpha=0.05; Power=0.95; Effect size=0.20.

Findings

- We found that that 79.1% of the variance in the national APY for deposit products can be explained by the variance in the unemployment rate (Table 1).

- We found the analysis of variance (ANOVA) is very significant (Alpha < 0.01) See table 2.
- We found a strong negative linear relationship between the unemployment rate and the national average deposits APY (Beta -.889), and very significant (Alpha < 0.01). See Table 3.
- For every 1% increases in the unemployment rate expect a 49 bps drop in the national average APY for deposits (Table 3).

Discussion

The unemployment rate is a barometer of economic activity. In times of slowing economic activity, as we are experiencing now, less jobs are created, and more jobs are eliminated. When economic activity slows, there is less credit and lending activities, which now days, is magnified by the tightening of the credit market. When there is less lending activities, lending institutions require less deposits to fund lending. Although lending institutions will never refuse deposits, they lower the interest rate on these deposits to the lowest possible level. Hence, when unemployment goes up, deposit interest rates go down.

Table 1

R Square of the unemployment rate and national average deposit APY

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.889 ^a	.791	.787	.40490

a. Predictors: (Constant), Unemployment rate

Table 2

ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	34.081	1	34.081	207.882	.000 ^a
	Residual	9.017	55	.164		
	Total	43.098	56			

a. Predictors: (Constant), Unemployment rate

b. Dependent Variable: National Average APY

Table 3

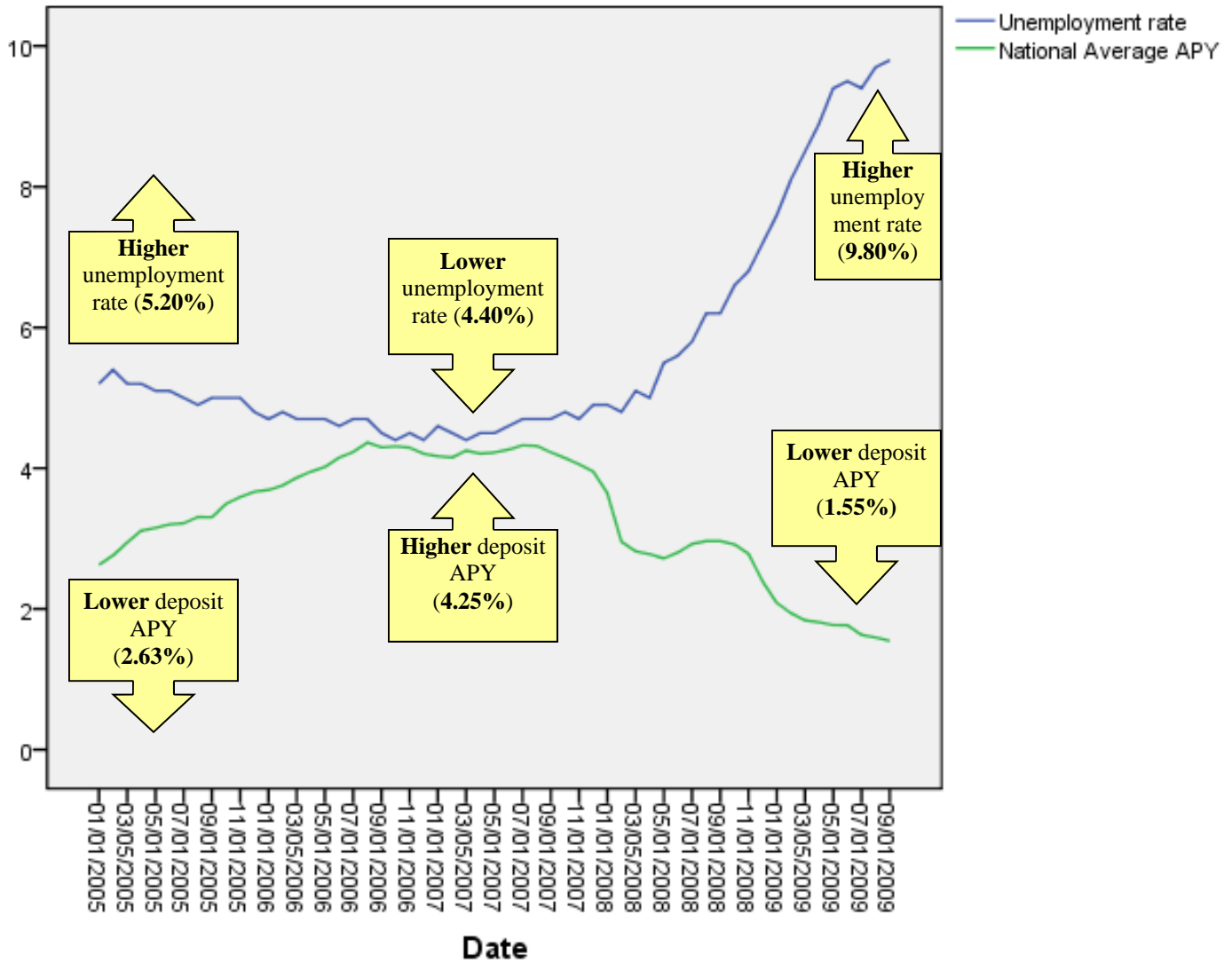
Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	6.076	.199		30.467	.000
	Unemployment rate	-.489	.034	-.889	-14.418	.000

a. Dependent Variable: National Average APY

Figure 1

Strong and significant negative relationship between unemployment and average APY



- In January 2005, the unemployment rate was 5.20% and the national average APY was 2.63%.
- In March of 2007, the unemployment rate declined to 4.20%, and the national average APY increased to 4.25%.
- In September of 2009, the unemployment rate increased to 9.80%, and the national average APY declined to 1.55%.

Source: U.S. Bureau of Labor Statistics and Market Rates Insight.

Table 4
Unemployment rate 1999 to September 2009

Series Id:	LNS14000000											
Seasonal Adjusted												
Series title:	(Seas) Unemployment Rate											
Labor force status:	Unemployment rate											
Type of data:	Percent											
Age:	16 years and over											
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1999	4.3	4.4	4.2	4.3	4.2	4.3	4.3	4.2	4.2	4.1	4.1	4.0
2000	4.0	4.1	4.0	3.8	4.0	4.0	4.0	4.1	3.9	3.9	3.9	3.9
2001	4.2	4.2	4.3	4.4	4.3	4.5	4.6	4.9	5.0	5.3	5.5	5.7
2002	5.7	5.7	5.7	5.9	5.8	5.8	5.8	5.7	5.7	5.7	5.9	6.0
2003	5.8	5.9	5.9	6.0	6.1	6.3	6.2	6.1	6.1	6.0	5.8	5.7
2004	5.7	5.6	5.8	5.6	5.6	5.6	5.5	5.4	5.4	5.5	5.4	5.4
2005	5.2	5.4	5.2	5.2	5.1	5.1	5.0	4.9	5.0	5.0	5.0	4.8
2006	4.7	4.8	4.7	4.7	4.7	4.6	4.7	4.7	4.5	4.4	4.5	4.4
2007	4.6	4.5	4.4	4.5	4.5	4.6	4.7	4.7	4.7	4.8	4.7	4.9
2008	4.9	4.8	5.1	5.0	5.5	5.6	5.8	6.2	6.2	6.6	6.8	7.2
2009	7.6	8.1	8.5	8.9	9.4	9.5	9.4	9.7	9.8			

Source: U.S. Bureau of Labor Statistics.