

Figure 1
Key Dates and Normal Retirement Age
In the 50 States and Washington, D.C., to Measure the Marital Portion of
Pension Rights Owned by Divorcing Couples

Cutoff or Classification Date	No. of States	Wis.	Ill.	Iowa	Mich.	Minn.
Date of separation	12					
Date divorce complaint was filed	15				Yes	
Date of trial, divorce, or divorce decree	24	Divorce (trial)	Dissolution	Trial		Dissolution
Valuation Date	No. of States	Wis.	Ill.	Iowa	Mich.	Minn.
Date of couple's separation	2					
Date divorce complaint was filed	15				Yes	
Date of trial, divorce, or divorce decree	34	Divorce (trial)	Dissolution	Trial		Dissolution
Normal Retirement Age	No. of States	Wis.	Ill.	Iowa	Mich.	Minn.
Earliest age plan member can retire with full benefits	37	Yes		Yes		
Earliest age plan member can retire with full benefits if he/she continues to work	7		Yes			
Most likely retirement age considering facts and testimony	7				Yes	Yes

Source: Pension Appraisers, Inc. (compiled from a detailed listing in Appendices A, B, and C of the document at www.divorcesource.com/webcarte/samplereport.shtml.)

Figure 2

Influence of Assumed Interest and Dividend Rates on the Present Value of Bob’s Accrued WRS Retirement Benefit

[Editor’s Note: The pension used in Figure 2 is Bob’s Wisconsin Retirement System (WRS) pension used in Examples 1 and 2 in the sidebar to this article.]

Table PV-65 shows the present values as of mid-2012 of Bob’s \$1,200 monthly accrued WRS formula benefit assuming different combinations of interest rate and WRS dividend rate. These are present values of Bob’s pension net of an estimated 20 percent income tax. The valuations use an actuarial method and the UP-94 mortality table projected to 2012. The variable dividend rates used in these tables are the rates explained in Figure 5. **Tables Int-65** and **Div-65** use ratios of present values in **Table PV-65** to measure the effect of the assumed interest rate and dividend rate on the present values of Bob’s formula benefit.

Table PV-65:

Present values of Bob’s accrued WRS pension (net of income tax) calculated using different combinations of interest and annual dividend rates. This assumes that Bob will retire at his normal retirement age 65 with an unreduced monthly pension of \$1,200.

Interest Rate Used	Assumed WRS Dividend Rate					
	0%	1%	2%	2.5%	3%	Variable
3%	\$84,759	\$93,130	\$102,785	\$108,168	\$113,966	\$96,620
4%	64,748	70,785	77,713	81,561	85,694	73,026
5%	49,817	54,205	59,217	61,990	64,962	55,636
6%	38,588	41,802	45,456	47,470	49,624	42,706

Table Int-65:

Ratios showing the effect of the assumed interest rate on the present value of Bob’s accrued pension. (Based on Table PV-65 using the 4% interest rate present values as the standard for comparison.)

Interest Rate Used	Assumed WRS Dividend Rate					
	0%	1%	2%	2.5%	3%	Variable
3%	1.309	1.316	1.323	1.326	1.330	1.323
4%	1.000	1.000	1.000	1.000	1.000	1.000
5%	0.769	0.766	0.762	0.760	0.758	0.762
6%	0.596	0.591	0.585	0.582	0.579	0.585

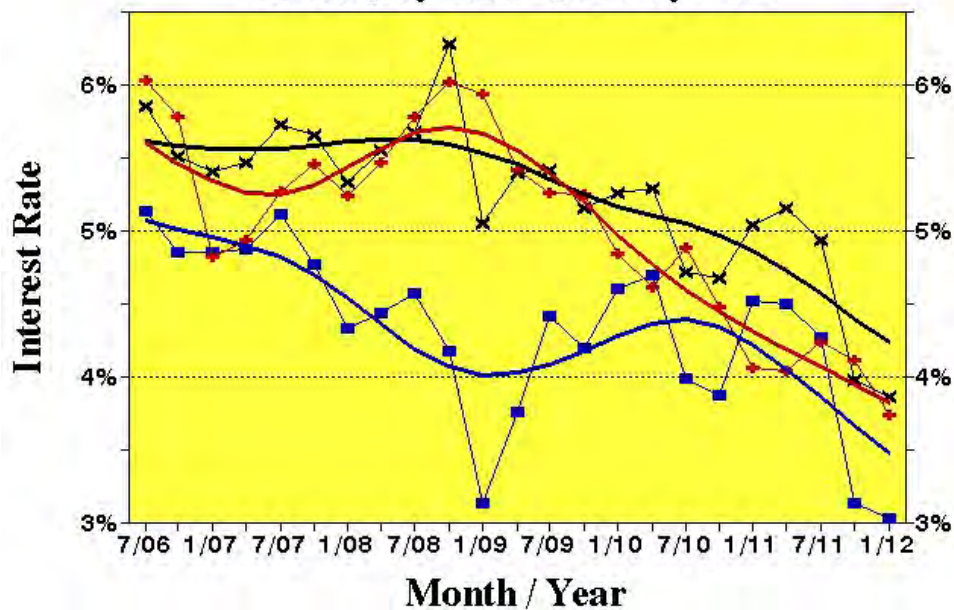
Table Div-65:

Ratios showing the effect of the assumed dividend rate on the present value of Bob’s accrued pension. (Based on Table PV-65 using the 0% dividend present values as the standard for comparison.)

Interest Rate Used	Assumed WRS Dividend Rate					
	0%	1%	2%	2.5%	3%	Variable
3%	1.000	1.099	1.213	1.276	1.345	1.140
4%	1.000	1.093	1.200	1.260	1.324	1.128
5%	1.000	1.088	1.189	1.244	1.304	1.117
6%	1.000	1.083	1.178	1.230	1.286	1.107

Figure 3

ASOP 34 Approved Interest Rates for the Period July 2006 - January 2012



Key to Chart:
Blue squares and curve = 30-year U.S. Treasury Bond rates.
Black X's and curve = Moody AAA-rated corporate bond rates.
Red "+" signs and curve = PBGC rates for insured annuities.

Month	Yield for 30-year U.S. Treasury bonds		Yield for Moody AAA rated corporate bonds		PBGC rate for pricing insured annuities ⁽²⁾	
	Actual	Smoothed ⁽¹⁾	Actual	Smoothed ⁽¹⁾	Actual	Smoothed ⁽¹⁾
July 2006	5.13%	5.07%	5.85%	5.61%	6.03%	5.60%
Jan. 2007	4.85	4.95	5.40	5.56	4.82	5.33
July 2007	5.11	4.81	5.73	5.56	5.27	5.25
Jan. 2008	4.33	4.54	5.33	5.61	5.24	5.43
July 2008	4.57	4.19	5.67	5.62	5.78	5.67
Jan. 2009	3.13	4.01	5.05	5.53	5.93	5.67
July 2009	4.41	4.08	5.41	5.35	5.26	5.39
Jan. 2010	4.60	4.28	5.26	5.17	4.84	4.97
July 2010	3.99	4.39	4.72	5.04	4.88	4.59
Jan. 2011	4.52	4.21	5.04	4.86	4.06	4.31
July 2011	4.27	3.86	4.93	4.57	4.23	4.06
Jan. 2012	3.03	3.48	3.85	4.23	3.73	3.82
Means:	4.31%	4.33%	5.19%	5.24%	5.03%	5.01%

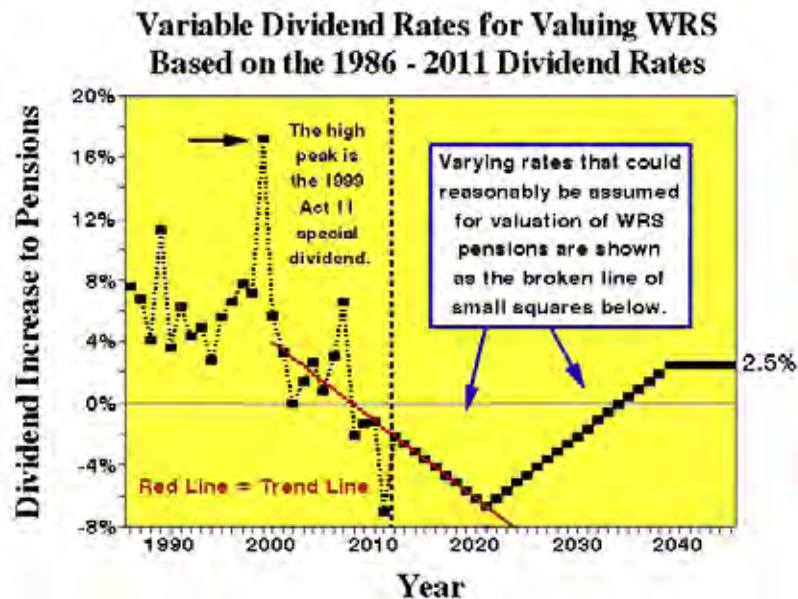
(1) This column is the result of smoothing the "Actual" interest rates by a simple averaging method.
 (2) This is the single interest rate that would give a life annuity sold to someone at ages 35-45 the same price that most insurance companies would charge for it, according to the PBGC.

Figure 4

Average Retirement Ages Experienced by the Wisconsin Retirement System Since 2003

Employee Category	2003-2005 Experience Study		2006-2008 study and changes since 2003-2005 study	
	Males	Females	Males	Females
General	62.18	63.68	63.08 (+0.90)	64.15 (+0.47)
Public School Teachers	58.92	60.34	60.63 (+1.71)	61.44 (+1.10)
University of Wisconsin	63.81	62.95	64.31 (+0.50)	63.59 (+0.64)
Police (both sexes combined)	55.81		57.13 (+1.32)	

Figure 5



The 26 WRS dividends for years 1986–2011 appear as points to the left of the chart’s dashed line. The 1999 dividend rate was inflated by 1999 Act 11, which gave a large special dividend to WRS retirees. To avoid this distortion, the trend line in the chart is based only on the 12 years 2000–2011. It is the “Median-Median” line fitting the data for those years. This trend line can be used as the basis for a model of future dividends that takes today’s poor economic outlook into account and gives present values of WRS pensions that are arguably more realistic than if one would assume a constant dividend rate that would lead to overstated values.

Dividends for years 2008–2011 were negative. The trend line’s slope is -0.5% , implying that dividends are currently declining by 0.5% per year on the average. (For example a dividend of -1% one year would decline to about -1.5% the following year.)

Given the longevity and strength of this decline in dividends, it seems unlikely that the WRS will see a regular pattern of healthy dividends for the next decade or so.

Based on this, I suggest that the model of projected dividends shown in the chart at the right of the dashed line – or some similar model – would be reasonable to use as a dividend assumption for WRS valuations in the near future. The projected rates shown at the right of the chart’s dashed line are based on assuming that dividends will generally decrease through 2021 at the trend line’s rate (0.5% per year), then begin to recover and increase at this same rate, until they reach a level of 2.5% in 2040 – and that they will remain at a 2.5% level thereafter.

Alternative dividend models for the WRS could be developed that are more sophisticated and perhaps more credible than this one. This model is offered only as an illustration.