

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	[Student Name]														
2	Spreadsheet Problem 3: Bond Valuation														
3															
4	Here we compute the value of a bond that had an original 10-year maturity. Its value today is the PV of the par value to be received at maturity plus the PV of the stream of interest payments to be received.														
5	Because interest is paid semiannually, there were 20 scheduled interest payments originally. However, we assume that the bond may have been issued some number of years ago, such that its remaining life														
6	is likely to be less than 10 years. Each coupon interest payment is the par value times half of the coupon rate. The investor who holds the bond when it matures will receive the final coupon payment plus a														
7	return of the \$1,000 par value that was originally lent to the borrowing entity.														
8															
9	INPUT VALUES														
10	Par Value	\$1,000.00													
11	Coupon Rate	9.00%													
12	Effective Yield to Maturity	12.3600%													
13	Yrs. Until Maturity: Case A	8		Yrs. Until Mat.: Case B	4		Yrs. Until Mat.: Case C	2		Yrs. Until Mat.: Case D	1				
14															
15	WORKING AND OUTPUT VALUES														
16	Periodic Rate	6.00%													
17	Stated Annual Rate (APR)	12.00%													
18															
19	Case A			Case B			Case C			Case D					
20	Half-years remaining	16		Half-years remaining	8		Half-years remaining	4		Half-years remaining	2				
21															
22	<u>PV of Par Value to be Received at Maturity</u>			<u>PV of Par Value to be Received at Maturity</u>			<u>PV of Par Value to be Received at Maturity</u>			<u>PV of Par Value to be Received at Maturity</u>					
23	Par Value	PV Factor	PV of Par	Par Value	PV Factor	PV of Par	Par Value	PV Factor	PV of Par	Par Value	PV Factor	PV of Par			
24	\$1,000.00	0.393646284	\$393.65	\$1,000.00	0.62741	\$627.41	\$1,000.00	0.79209	\$792.09	\$1,000.00	0.89	\$890.00			
25															
26	<u>PV of Expected Interest Payments</u>			<u>PV of Expected Interest Payments</u>			<u>PV of Expected Interest Payments</u>			<u>PV of Expected Interest Payments</u>					
27	Period	Cash Flow	PV of CF	Period	Cash Flow	PV of CF	Period	Cash Flow	PV of CF	Period	Cash Flow	PV of CF			
28	1	\$45.00	\$42.45	1	\$45.00	\$42.45	1	\$45.00	\$42.45	1	\$45.00	\$42.45			
29	2	\$45.00	\$40.05	2	\$45.00	\$40.05	2	\$45.00	\$40.05	2	\$45.00	\$40.05			
30	3	\$45.00	\$37.78	3	\$45.00	\$37.78	3	\$45.00	\$37.78	3	\$45.00	\$37.78			
31	4	\$45.00	\$35.64	4	\$45.00	\$35.64	4	\$45.00	\$35.64	4	\$45.00	\$35.64			
32	5	\$45.00	\$33.63	5	\$45.00	\$33.63	5	\$45.00	\$33.63	5	\$45.00	\$33.63			
33	6	\$45.00	\$31.72	6	\$45.00	\$31.72	6	\$45.00	\$31.72	6	\$45.00	\$31.72			
34	7	\$45.00	\$29.93	7	\$45.00	\$29.93	7	\$45.00	\$29.93	7	\$45.00	\$29.93			
35	8	\$45.00	\$28.23	8	\$45.00	\$28.23	8	\$45.00	\$28.23	8	\$45.00	\$28.23			
36	9	\$45.00	\$26.64	9	\$45.00	\$26.64	9	\$45.00	\$26.64	9	\$45.00	\$26.64			
37	10	\$45.00	\$25.13	10	\$45.00	\$25.13	10	\$45.00	\$25.13	10	\$45.00	\$25.13			
38	11	\$45.00	\$23.71	11	\$45.00	\$23.71	11	\$45.00	\$23.71	11	\$45.00	\$23.71			
39	12	\$45.00	\$22.36	12	\$45.00	\$22.36	12	\$45.00	\$22.36	12	\$45.00	\$22.36			
40	13	\$45.00	\$21.10	13	\$45.00	\$21.10	13	\$45.00	\$21.10	13	\$45.00	\$21.10			
41	14	\$45.00	\$19.90	14	\$45.00	\$19.90	14	\$45.00	\$19.90	14	\$45.00	\$19.90			
42	15	\$45.00	\$18.78	15	\$45.00	\$18.78	15	\$45.00	\$18.78	15	\$45.00	\$18.78			
43	16	\$45.00	\$17.71	16	\$45.00	\$17.71	16	\$45.00	\$17.71	16	\$45.00	\$17.71			
44	17			17			17			17					
45	18			18			18			18					
46	19			19			19			19					
47	20			20			20			20					
48															
49	Bond Value		\$848.41	Bond Value		\$906.85	Bond Value		\$948.02	Bond Value		\$972.50			