

财金之旅(影印版)

Financial Management

Principles and Practice

财务管理

原理与实务

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TABLE I Future Value Interest Factors, FVIF, Compounded at k Percent for n Periods: $FVIF_{k,n} = (1 + k)^n$

Number of Periods, n	Interest Rate, k																						
	0%	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	12%	14%	16%	18%	20%	25%	30%	35%	40%	45%	50%	
0	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
1	1.0000	1.0100	1.0200	1.0300	1.0400	1.0500	1.0600	1.0700	1.0800	1.0900	1.1000	1.1200	1.1400	1.1600	1.1800	1.2000	1.2500	1.3000	1.3500	1.4000	1.4500	1.5000	1.5000
2	1.0000	1.0201	1.0404	1.0609	1.0816	1.1025	1.1236	1.1449	1.1664	1.1881	1.2100	1.2544	1.2996	1.3456	1.3924	1.4400	1.5625	1.6900	1.8225	1.9600	2.1025	2.2500	2.2500
3	1.0000	1.0303	1.0612	1.0927	1.1249	1.1576	1.1910	1.2250	1.2597	1.2950	1.3310	1.4049	1.4815	1.5609	1.6430	1.7280	1.9531	2.1970	2.4604	2.7440	3.0486	3.3750	3.3750
4	1.0000	1.0406	1.0824	1.1255	1.1699	1.2155	1.2625	1.3108	1.3605	1.4116	1.4641	1.5735	1.6890	1.8106	1.9388	2.0736	2.4414	2.8561	3.3215	3.8416	4.4205	5.0625	5.0625
5	1.0000	1.0510	1.1041	1.1593	1.2167	1.2763	1.3382	1.4026	1.4693	1.5386	1.6105	1.7623	1.9254	2.1003	2.2878	2.4883	3.0518	3.7129	4.4840	5.3782	6.4097	7.5838	7.5838
6	1.0000	1.0615	1.1282	1.1941	1.2653	1.3401	1.4185	1.5007	1.5869	1.6771	1.7716	1.9738	2.1950	2.4364	2.6996	2.9860	3.8147	4.8268	6.0534	7.5295	9.2941	11.3906	11.3906
7	1.0000	1.0721	1.1487	1.2299	1.3159	1.4071	1.5036	1.6058	1.7138	1.8280	1.9487	2.2107	2.5023	2.8262	3.1855	3.5832	4.7684	6.2749	8.1722	10.5414	13.4765	17.0859	17.0859
8	1.0000	1.0829	1.1711	1.2668	1.3686	1.4775	1.5938	1.7182	1.8509	1.9926	2.1436	2.4760	2.8526	3.2784	3.7589	4.2998	5.9605	8.1573	11.0324	14.7579	19.5409	25.6289	25.6289
9	1.0000	1.0937	1.1951	1.3048	1.4233	1.5513	1.6895	1.8385	1.9990	2.1719	2.3579	2.7731	3.2519	3.8030	4.4355	5.1598	7.4506	10.6045	14.8937	20.6610	28.3343	38.4434	38.4434
10	1.0000	1.1046	1.2190	1.3439	1.4802	1.6289	1.7908	1.9672	2.1589	2.3674	2.5937	3.1058	3.7072	4.4114	5.2338	6.1917	9.3132	13.7658	20.1066	28.9255	41.0847	57.6650	57.6650
11	1.0000	1.1157	1.2434	1.3842	1.5395	1.7103	1.8983	2.1049	2.3316	2.5804	2.8531	3.4785	4.2282	5.1173	6.1759	7.4301	11.6415	17.9216	27.1439	40.4957	59.5728	86.4976	86.4976
12	1.0000	1.1268	1.2682	1.4258	1.6010	1.7959	2.0122	2.2522	2.5182	2.8127	3.1384	3.8660	4.8179	5.9360	7.2876	8.9161	14.5519	23.2981	36.6442	56.6939	86.3906	129.7463	129.7463
13	1.0000	1.1381	1.2936	1.4685	1.6651	1.8856	2.1329	2.4098	2.7196	3.0658	3.4523	4.3635	5.4924	6.8858	8.5994	10.6983	18.1899	30.2875	49.4697	79.3715	125.2518	194.6195	194.6195
14	1.0000	1.1495	1.3195	1.5126	1.7317	1.9799	2.2609	2.5785	2.9372	3.3417	3.7975	4.8871	6.2613	7.9875	10.1472	12.8392	22.7374	39.3738	66.7841	111.1201	181.6151	291.9293	291.9293
15	1.0000	1.1610	1.3459	1.5580	1.8009	2.0789	2.3966	2.7590	3.1722	3.6425	4.1772	5.4736	7.1379	9.2655	11.9737	15.4070	28.4217	51.1859	90.1585	155.5681	263.3419	437.8939	437.8939
16	1.0000	1.1726	1.3728	1.6047	1.8730	2.1829	2.5404	2.9522	3.4259	3.9703	4.5950	6.1304	8.1372	10.7480	14.1290	18.4884	35.5271	66.54171	121.7139	217.7953	381.8458	656.8408	656.8408
17	1.0000	1.1843	1.4002	1.6528	1.9479	2.2920	2.6928	3.1588	3.7000	4.3276	5.0545	6.8660	9.2765	12.4677	16.6722	22.1861	44.4089	86.5042	164.3138	304.9135	553.6764	985.2613	985.2613
18	1.0000	1.1961	1.4282	1.7024	2.0258	2.4066	2.8543	3.3799	3.9960	4.7171	5.5599	7.6900	10.5752	14.4625	19.6733	26.6233	55.5112	112.4554	221.8236	426.8789	802.8308	1477.8919	1477.8919
19	1.0000	1.2081	1.4568	1.7535	2.1068	2.5270	3.0256	3.6165	4.3157	5.1417	6.1159	8.6128	12.0557	16.7765	23.2144	31.9480	69.3889	146.1920	299.4619	597.63041	1164.1047	2216.8378	2216.8378
20	1.0000	1.2202	1.4859	1.8061	2.1911	2.6533	3.2071	3.8697	4.6610	5.6044	6.7275	9.6463	13.7435	19.4608	27.3930	38.3376	86.7362	190.0496	404.2736	836.6826	1687.9518	3325.2567	3325.2567
25	1.0000	1.2824	1.6406	2.0938	2.8658	3.9864	4.2919	5.4274	6.8485	8.6231	10.8347	17.0001	26.4619	40.8742	62.6686	95.3962	264.698	705.641	1812.78	4499.88	10819.3	2525.2	2525.2
30	1.0000	1.3478	1.8114	2.4273	3.2434	4.3219	5.7435	7.6123	10.0627	13.2677	17.4494	29.9599	50.9502	85.8499	143.371	237.376	807.794	2620.00	8128.55	24201.4	66349.0	191751	191751
35	1.0000	1.4166	1.9999	2.8139	3.9461	5.5160	7.6861	10.6766	14.7853	20.4140	28.1024	52.7996	98.1002	180.314	327.997	590.668	2465.19	9727.86	36448.7	130161	444509	1456110	1456110
40	1.0000	1.4889	2.2080	3.2620	4.8010	7.0400	10.2857	14.9745	21.7245	31.4094	45.2593	93.0510	188.884	378.721	750.378	1469.77	7523.16	36118.9	163437	700038	2849181	11057332	11057332
45	1.0000	1.5648	2.4379	3.7816	5.8412	8.9850	13.7646	21.0025	31.9204	48.3273	72.8905	163.988	363.679	795.444	1716.68	3657.26	22958.9	134107	732858	3764971	16262495	89866617	89866617
50	1.0000	1.6446	2.6916	4.3939	7.1067	11.4674	18.4202	29.4570	46.9016	74.3575	117.391	289.002	700.233	1670.70	3927.36	9100.44	70064.9	497929	3286158	20248916	117057734	637621500	637621500

TABLE II Present Value Interest Factors, PVIF, Discounted at k Percent for n Periods: $PVIF_{k,n} = \frac{1}{(1+k)^n}$

Number of Periods, n	Discount Rate, k																						
	0%	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	12%	14%	16%	18%	20%	25%	30%	35%	40%	45%	50%	
0	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
1	1.0000	0.9901	0.9804	0.9709	0.9615	0.9524	0.9434	0.9346	0.9259	0.9174	0.9091	0.8929	0.8772	0.8621	0.8475	0.8333	0.8000	0.7682	0.7407	0.7143	0.6897	0.6667	0.6667
2	1.0000	0.9803	0.9612	0.9426	0.9246	0.9070	0.8900	0.8734	0.8573	0.8417	0.8264	0.7972	0.7695	0.7432	0.7182	0.6944	0.6400	0.5917	0.5487	0.5102	0.4756	0.4444	0.4444
3	1.0000	0.9706	0.9423	0.9151	0.8890	0.8638	0.8396	0.8163	0.7938	0.7722	0.7513	0.7118	0.6750	0.6407	0.6086	0.5787	0.5120	0.4552	0.4064	0.3644	0.3280	0.2963	0.2963
4	1.0000	0.9610	0.9238	0.8885	0.8548	0.8227	0.7921	0.7629	0.7350	0.7084	0.6830	0.6355	0.5921	0.5523	0.5158	0.4823	0.4096	0.3501	0.3011	0.2603	0.2262	0.1975	0.1975
5	1.0000	0.9515	0.9057	0.8626	0.8219	0.7835	0.7473	0.7130	0.6806	0.6499	0.6209	0.5674	0.5194	0.4761	0.4371	0.4019	0.3277	0.2683	0.2230	0.1859	0.1560	0.1317	0.1317
6	1.0000	0.9420	0.8880	0.8375	0.7903	0.7462	0.7050	0.6663	0.6302	0.5963	0.5645	0.5066	0.4556	0.4104	0.3704	0.3349	0.2621	0.2072	0.1652	0.1328	0.1076	0.0878	0.0878
7	1.0000	0.9327	0.8706	0.8131	0.7599	0.7107	0.6651	0.6227	0.5835	0.5470	0.5132	0.4523	0.3996	0.3538	0.3139	0.2791	0.2097	0.1594	0.1224	0.0949	0.0742	0.0585	0.0585
8	1.0000	0.9235	0.8535	0.7894	0.7307	0.6768	0.6274	0.5820	0.5403	0.5019	0.4665	0.4039	0.3506	0.3050	0.2660	0.2326	0.1678	0.1226	0.0906	0.0678	0.0512	0.0390	0.0390
9	1.0000	0.9143	0.8368	0.7664	0.7026	0.6446	0.5919	0.5439	0.5002	0.4604	0.4241	0.3606	0.3075	0.2630	0.2255	0.1938	0.1342	0.0943	0.0671	0.0484	0.0353	0.0260	0.0260
10	1.0000	0.9053	0.8203	0.7441	0.6756	0.6139	0.5584	0.5083	0.4632	0.4224	0.3855	0.3220	0.2687	0.2267	0.1911	0.1615	0.1074	0.0725	0.0497	0.0346	0.0243	0.0173	0.0173
11	1.0000	0.8963	0.8043	0.7224	0.6496	0.5847	0.5268	0.4751	0.4289	0.3875	0.3505	0.2875	0.2366	0.1954	0.1619	0.1346	0.0859	0.0558	0.0388	0.0247	0.0168	0.0116	0.0116
12	1.0000	0.8874	0.7885	0.7014	0.6246	0.5568	0.4970	0.4440	0.3971	0.3555	0.3186	0.2567	0.2076	0.1685	0.1372	0.1122	0.0687	0.0429	0.0273	0.0176	0.0116	0.0077	0.0077
13	1.0000	0.8787	0.7730	0.6810	0.6006	0.5303	0.4688	0.4150	0.3677	0.3262	0.2897	0.2292	0.1821	0.1452	0.1163	0.0935	0.0550	0.0330	0.0202	0.0126	0.0080	0.0051	0.0051
14	1.0000	0.8700	0.7579	0.6611	0.5775	0.5051	0.4423	0.3878	0.3405	0.2992	0.2633	0.2046	0.1597	0.1252	0.0985	0.0779	0.0440	0.0254	0.0150	0.0090	0.0055	0.0034	0.0034
15	1.0000	0.8613	0.7430	0.6419	0.5553	0.4810	0.4173	0.3624	0.3152	0.2745	0.2394	0.1827	0.1401	0.1079	0.0835	0.0649	0.0352	0.0195	0.0111	0.0064	0.0038	0.0023	0.0023
16	1.0000	0.8528	0.7284	0.6232	0.5339	0.4581	0.3936	0.3367	0.2919	0.2519	0.2176	0.1631	0.1229	0.0930	0.0708	0.0541	0.0281	0.0150	0.0082	0.0046	0.0026	0.0015	0.0015
17	1.0000	0.8444	0.7142	0.6050	0.5134	0.4363	0.3714	0.3166	0.2703	0.2311	0.1978	0.1456	0.1078	0.0802	0.0600	0.0451	0.0225	0.0116	0.0061	0.0033	0.0018	0.0010	0.0010
18	1.0000	0.8360	0.7002	0.5874	0.4936	0.4155	0.3503	0.2959	0.2502	0.2120	0.1799	0.1300	0.0946	0.0691	0.0508	0.0376	0.0180	0.0089	0.0045	0.0023	0.0012	0.0007	0.0007
19	1.0000	0.8277	0.6864	0.5703	0.4746	0.3957	0.3305	0.2765	0.2317	0.1945	0.1635	0.1161	0.0829	0.0596	0.0431	0.0313	0.0144	0.0068	0.0033	0.0017	0.0009	0.0005	0.0005
20	1.0000	0.8195	0.6730	0.5537	0.4564	0.3769	0.3118	0.2584	0.2145	0.1784	0.1486	0.1037	0.0728	0.0514	0.0365	0.0261	0.0115	0.0053	0.0025	0.0012	0.0006	0.0003	0.0003
25	1.0000	0.7798	0.6095	0.4776	0.3751	0.2953	0.2330	0.1842	0.1460	0.1160	0.0823	0.0588	0.0378	0.0245	0.0160	0.0105	0.0038	0.0014	0.0006	0.0002	0.0001	0.0000	0.0000
30	1.0000	0.7419	0.5621	0.4120	0.3063	0.2314	0.1741	0.1314	0.0994	0.0754	0.0573	0.0334	0.0196	0.0116	0.0070	0.0042	0.0012	0.0004	0.0001	0.0000	0.0000	0.0000	0.0000
35	1.0000	0.7059	0.5000	0.3554	0.2534	0.1813	0.1301	0.0937	0.0676	0.0490	0.0356	0.0189	0.0102	0.0055	0.0030	0.0017	0.0004	0.0001	0.0000	0.0000	0.0000	0.0000	0.0000
40	1.0000	0.6717	0.4529	0.3066	0.2063	0.1420	0.0972	0.0666	0.0460	0.0318	0.0221	0.0107	0.0053	0.0026	0.0013	0.0007	0.0001	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
45	1.0000	0.6391	0.4102	0.2644	0.1712	0.1113	0.0727	0.0476	0.0313	0.0207	0.0137	0.0061	0.0027	0.0013	0.0006	0.0003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
50	1.0000	0.6080	0.3715	0.2281	0.1407	0.0872	0.0543	0.0339	0.0213	0.0134	0.0085	0.0035	0.0014	0.0006	0.0003	0.0001	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

TABLE III

Future Value Interest Factors for an Annuity, FVIFA, Compounded at k Percent for n Periods: $FVIFA_{k,n} = \sum_{t=1}^n (1+k)^{n-t} = \frac{(1+k)^n - 1}{k}$ (for non-zero k)

Number of Annuity Pmts., n	Interest Rate, k																							
	0%	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	12%	14%	16%	18%	20%	25%	30%	35%	40%	45%	50%		
1	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
2	2.0000	2.0100	2.0200	2.0300	2.0400	2.0500	2.0600	2.0700	2.0800	2.0900	2.1000	2.1200	2.1400	2.1600	2.1800	2.2000	2.2500	2.3000	2.3500	2.4000	2.4500	2.5000	2.5500	2.6000
3	3.0000	3.0301	3.0604	3.0909	3.1216	3.1525	3.1836	3.2149	3.2464	3.2781	3.3100	3.3744	3.4396	3.5056	3.5724	3.6400	3.8125	3.9900	4.1725	4.3600	4.5525	4.7500	4.9500	5.1500
4	4.0000	4.0604	4.1216	4.1836	4.2465	4.3101	4.3746	4.4399	4.5061	4.5731	4.6410	4.7793	4.9211	5.0665	5.2154	5.3680	5.7658	6.1670	6.6329	7.1040	7.6011	8.1250	8.6750	9.2500
5	5.0000	5.1010	5.2040	5.3091	5.4163	5.5256	5.6371	5.7507	5.8666	5.9847	6.1051	6.3528	6.6101	6.8771	7.1542	7.4416	8.2070	9.0431	9.9544	10.9456	12.0216	13.1875	14.4450	15.7950
6	6.0000	6.1520	6.3081	6.4684	6.6330	6.8019	6.9753	7.1533	7.3359	7.5233	7.7156	8.1152	8.5355	8.9775	9.4420	9.9299	11.2588	12.7560	14.4338	16.3238	18.4314	20.7813	23.3719	26.1000
7	7.0000	7.2135	7.4313	7.6625	7.8983	8.1420	8.3938	8.6540	8.9228	9.2004	9.4872	10.0890	10.7305	11.4139	12.1415	12.9159	15.0735	17.5828	20.4919	23.8534	27.7255	32.1719	37.2255	42.9000
8	8.0000	8.2857	8.5830	8.8923	9.2142	9.5491	9.8975	10.2598	10.6366	11.0285	11.4359	12.2997	13.2328	14.2401	15.3270	16.4991	19.8419	23.8577	28.6640	34.3947	41.2019	49.2578	58.5719	69.1500
9	9.0000	9.3685	9.7546	10.1591	10.5828	11.0266	11.4913	11.9780	12.4876	13.0210	13.5795	14.7757	16.0853	17.5185	19.0859	20.7989	25.8023	32.0150	39.6964	49.1526	60.7428	74.8867	91.9000	111.3300
10	10.0000	10.4622	10.9497	11.4639	12.0061	12.5779	13.1808	13.8164	14.4866	15.1929	15.9374	17.5487	19.3373	21.3215	23.5213	25.9587	33.2529	42.6195	54.5902	69.8137	89.0771	113.3300	143.6000	179.9950
11	11.0000	11.5668	12.1687	12.8078	13.4864	14.2068	14.9716	15.7836	16.6455	17.5603	18.5312	20.6546	23.0445	25.7329	28.7551	32.1504	42.5661	56.4053	74.6967	98.7391	130.162	170.9950	222.3300	285.0000
12	12.0000	12.6825	13.4121	14.1920	15.0258	15.9171	16.8669	17.8859	18.9771	20.1407	21.3843	24.1331	27.2707	30.8502	34.9311	39.5905	54.2077	74.3270	101.841	139.235	189.735	257.483	343.0000	448.0000
13	13.0000	13.8953	14.6603	15.6178	16.6268	17.7130	18.8821	20.1406	21.4953	22.9534	24.5227	28.0291	32.0887	36.7862	42.2187	48.4966	68.7596	97.6250	138.485	195.929	276.115	387.239	530.0000	700.0000
14	14.0000	14.9474	15.9739	17.0863	18.2919	19.5966	21.0151	22.5505	24.2149	26.0192	27.9750	32.3926	37.5811	43.6720	50.8180	59.1959	86.9495	127.913	187.954	275.300	401.367	581.859	800.0000	1050.0000
15	15.0000	16.0969	17.2534	18.5989	20.0236	21.5786	23.2760	25.1290	27.1521	29.3609	31.7725	37.2797	43.8424	51.6595	60.9653	72.0351	109.687	167.286	254.738	386.420	582.962	873.788	1150.0000	1500.0000
16	16.0000	17.2579	18.6393	20.1569	21.8245	23.6575	25.6725	27.8881	30.3243	33.0034	35.9497	42.7533	50.9804	60.9250	72.9390	87.4421	138.109	218.472	344.897	541.988	846.324	1311.68	1750.0000	2250.0000
17	17.0000	18.4304	20.0121	21.7616	23.6975	25.8404	28.2129	30.8402	33.7502	36.9737	40.5447	48.8837	59.1176	71.6730	87.0680	105.931	173.636	285.014	466.611	759.784	1228.17	1968.52	2650.0000	3400.0000
18	18.0000	19.6147	21.4123	23.4144	25.6454	28.1324	30.9057	33.9990	37.4502	41.3013	45.5992	55.7497	68.3941	84.1407	103.740	128.117	218.045	371.518	630.925	1064.70	1781.85	2953.78	3900.0000	5000.0000
19	19.0000	20.8109	22.8406	25.1169	27.6712	30.5390	33.7600	37.3790	41.4463	46.0185	51.5991	63.4397	78.9692	98.6032	123.414	154.740	273.556	483.973	852.748	1491.58	2584.68	4431.68	5800.0000	7500.0000
20	20.0000	22.0190	24.2974	26.8704	29.7781	33.0660	36.7856	40.9955	45.7620	51.601	57.2750	72.0524	91.0249	115.380	146.628	186.688	342.945	630.165	1152.21	2089.21	3748.78	6648.51	8800.0000	11500.0000
25	25.0000	28.2432	32.0303	36.4593	41.6459	47.7271	54.8645	63.2490	73.1059	84.7009	98.3471	133.334	181.871	249.214	342.603	471.981	1054.79	2348.80	5176.50	11247.1990	24040.7	50500.3	68000.0000	90000.0000
30	30.0000	34.7849	40.5881	47.5754	56.0849	66.4388	79.0562	94.4608	113.283	136.308	164.494	241.333	356.787	530.312	790.948	1181.88	3227.17	8729.99	23221.6	60501.1	154107	383500	500000.0000	650000.0000
35	35.0000	41.6603	49.9945	60.4621	73.6522	90.3203	111.435	138.237	172.317	215.711	271.024	431.663	693.573	1120.71	1816.65	2948.34	9856.76	32422.9	104136	325400	987794	2912217	3800000.0000	5000000.0000
40	40.0000	48.8664	60.4020	75.4013	95.0255	120.800	154.762	199.635	259.057	337.882	442.593	767.091	1342.03	2360.76	4163.21	7343.86	30088.7	120383	466960	1750082	6331512	22114663	28000000.0000	36000000.0000
45	45.0000	56.4811	71.8927	92.7199	121.029	159.700	212.744	285.749	386.506	525.859	718.905	1358.23	2590.56	4965.27	9531.58	18281.3	91831.5	447019	2093876	9412424	40583319	167933233	210000000.0000	270000000.0000
50	50.0000	64.4632	84.5794	112.797	152.667	209.348	290.336	406.529	573.770	815.084	1163.91	2400.02	4994.52	10435.6	21813.1	45497.2	280256	1659781	8398020	50822286	260128295	1275242998	1600000000.0000	2100000000.0000

TABLE IV Present Value Interest Factors for an Annuity, PVIFA, Discounted at k Percent for n Periods:

$$PVIFA_{k,n} = \sum_{t=1}^n \frac{1}{(1+k)^t} = \frac{1 - \frac{1}{(1+k)^n}}{k} = \frac{1}{k} - \frac{1}{k(1+k)^n} \quad (\text{for non-zero } k)$$

Number of Annuity Pmts., n	Discount Rate, k																						
	0%	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	12%	14%	16%	18%	20%	25%	30%	35%	40%	45%	50%	
1	1.0000	0.9901	0.9804	0.9709	0.9615	0.9524	0.9434	0.9346	0.9259	0.9174	0.9091	0.8929	0.8772	0.8621	0.8475	0.8333	0.8000	0.7692	0.7407	0.7143	0.6897	0.6667	0.6667
2	2.0000	1.9704	1.9416	1.9135	1.8861	1.8594	1.8334	1.8080	1.7833	1.7591	1.7355	1.6901	1.6467	1.6052	1.5656	1.5278	1.4400	1.3609	1.2894	1.2245	1.1653	1.1111	1.1111
3	3.0000	2.9410	2.8839	2.8286	2.7751	2.7232	2.6730	2.6243	2.5771	2.5313	2.4869	2.4018	2.3216	2.2459	2.1743	2.1065	1.9520	1.8161	1.6859	1.5689	1.4633	1.4074	1.4074
4	4.0000	3.9020	3.8077	3.7171	3.6299	3.5460	3.4651	3.3872	3.3121	3.2397	3.1699	3.0373	2.9137	2.7982	2.6901	2.5887	2.3616	2.1662	1.9969	1.8492	1.7195	1.6049	1.6049
5	5.0000	4.8534	4.7135	4.5797	4.4518	4.3295	4.2124	4.1002	3.9927	3.8897	3.7908	3.6048	3.4331	3.2743	3.1272	2.9906	2.6893	2.4356	2.2200	2.0352	1.8755	1.7366	1.7366
6	6.0000	5.7955	5.6014	5.4172	5.2421	5.0757	4.9173	4.7665	4.6229	4.4859	4.3553	4.1114	3.8887	3.6847	3.4976	3.3255	2.9514	2.6427	2.3652	2.1680	1.9831	1.8244	1.8244
7	7.0000	6.7282	6.4720	6.2303	6.0021	5.7864	5.5824	5.3893	5.2064	5.0330	4.8684	4.5638	4.2883	4.0386	3.8115	3.6046	3.1611	2.8021	2.5075	2.2628	2.0573	1.8829	1.8829
8	8.0000	7.6517	7.3255	7.0197	6.7327	6.4632	6.2098	5.9713	5.7466	5.5348	5.3349	4.9676	4.6389	4.3436	4.0776	3.8372	3.3289	2.9247	2.5982	2.3306	2.1085	1.9220	1.9220
9	9.0000	8.5660	8.1622	7.7861	7.4353	7.1078	6.8017	6.5152	6.2469	5.9952	5.7590	5.3282	4.9464	4.6065	4.3030	4.0310	3.4631	3.0190	2.6653	2.3790	2.1438	1.9480	1.9480
10	10.0000	9.4713	8.9826	8.5302	8.1109	7.7217	7.3601	7.0236	6.7101	6.4177	6.1446	5.6502	5.2161	4.8332	4.4941	4.1925	3.5705	3.0915	2.7150	2.4136	2.1681	1.9653	1.9653
11	11.0000	10.3676	9.7868	9.2526	8.7605	8.3064	7.8869	7.4987	7.1390	6.8052	6.4951	5.9377	5.4527	5.0286	4.6560	4.3271	3.6564	3.1473	2.7519	2.4393	2.1849	1.9769	1.9769
12	12.0000	11.2551	10.5753	9.9540	9.3851	8.8633	8.3838	7.9427	7.5361	7.1607	6.8137	6.1944	5.6603	5.1971	4.7952	4.4392	3.7251	3.1903	2.7782	2.4559	2.1965	1.9846	1.9846
13	13.0000	12.1337	11.3484	10.6350	9.9856	9.3936	8.8527	8.3577	7.9038	7.4869	7.1054	6.4235	5.8424	5.3423	4.9095	4.5327	3.7601	3.2233	2.7994	2.4685	2.2045	1.9897	1.9897
14	14.0000	13.0037	12.1062	11.2961	10.5631	9.8986	9.2950	8.7455	8.2442	7.8622	7.3667	6.6282	6.0021	5.4675	5.0081	4.6106	3.8241	3.2487	2.8144	2.4775	2.2100	1.9931	1.9931
15	15.0000	13.8651	12.8483	11.9379	11.1184	10.3797	9.7122	9.1079	8.5595	8.0607	7.6061	6.8109	6.1422	5.5755	5.0916	4.6755	3.8593	3.2682	2.8255	2.4839	2.2138	1.9954	1.9954
16	16.0000	14.7179	13.5777	12.5611	11.6523	10.8378	10.1059	9.4466	8.8514	8.3126	7.8237	6.9740	6.2651	5.6685	5.1624	4.7296	3.8874	3.2832	2.8337	2.4885	2.2164	1.9970	1.9970
17	17.0000	15.5623	14.2919	13.1661	12.1657	11.2741	10.4773	9.7632	9.1216	8.5436	8.0216	7.1196	6.3729	5.7487	5.2223	4.7746	3.9099	3.2948	2.8398	2.4918	2.2182	1.9980	1.9980
18	18.0000	16.3983	14.9920	13.7535	12.6593	11.6896	10.8276	10.0591	9.3719	8.7556	8.2014	7.2497	6.4674	5.8178	5.2732	4.8122	3.9279	3.3037	2.8443	2.4941	2.2195	1.9986	1.9986
19	19.0000	17.2260	15.6785	14.3238	13.1339	12.0853	11.1581	10.3356	9.6036	8.9501	8.3649	7.3658	6.5504	5.8775	5.3162	4.8455	3.9424	3.3105	2.8476	2.4958	2.2203	1.9991	1.9991
20	20.0000	18.0456	16.3514	14.8775	13.5903	12.4622	11.4699	10.5940	9.8181	9.1285	8.5136	7.4694	6.6231	5.9288	5.3527	4.8696	3.9539	3.3158	2.8501	2.4970	2.2209	1.9994	1.9994
25	25.0000	22.0232	19.5235	17.4131	15.6221	14.0939	12.7834	11.6536	10.6748	9.8226	9.0770	7.8431	6.8729	6.0971	5.4669	4.9476	3.9849	3.3286	2.8556	2.4984	2.2220	1.9999	1.9999
30	30.0000	25.8077	22.3965	19.6004	17.2920	15.3725	13.7648	12.4090	11.2578	10.2737	9.4269	8.0552	7.0027	6.1772	5.5168	4.9789	3.9950	3.3321	2.8568	2.4999	2.2222	2.0000	2.0000
35	35.0000	29.4086	24.9986	21.4872	18.6646	16.3742	14.4982	12.9477	11.6546	10.5668	9.6442	8.1755	7.0700	6.2153	5.5386	4.9915	3.9984	3.3330	2.8571	2.5000	2.2222	2.0000	2.0000
40	40.0000	32.8347	27.3555	23.1148	19.7928	17.1591	15.0463	13.3317	11.9246	10.7574	9.7791	8.2438	7.1050	6.2335	5.5462	4.9966	3.9995	3.3332	2.8571	2.5000	2.2222	2.0000	2.0000
45	45.0000	36.0945	29.4902	24.5187	20.7200	17.7741	15.4558	13.6055	12.1084	10.8812	9.8628	8.2825	7.1232	6.2421	5.5523	4.9986	3.9998	3.3333	2.8571	2.5000	2.2222	2.0000	2.0000
50	50.0000	39.1961	31.4236	25.7298	21.4822	18.2559	15.7619	13.8007	12.2335	10.9617	9.9148	8.3045	7.1327	6.2463	5.5541	4.9995	3.9999	3.3333	2.8571	2.5000	2.2222	2.0000	2.0000



FINANCIAL MANAGEMENT

**PRINCIPLES
AND
PRACTICE**



To Susan and Em

—T.J.G.

To Emily

—J.D.A.



Preface

THE CHALLENGE

Finance professors often start the first day of class behind the eight ball. Many students sign up for a class in financial management because they must, not because they want to. Or, students sign up because they believe the course will teach them all they need to know to succeed on Wall Street. Once students learn the course focus is managing a firm's finances, their attention wanes.

How do we convince students that the concepts and tools they will learn in corporate finance are key to their business success? Each professor, we suspect, has a different strategy to grab students' attention so that the learning can begin. No matter what your strategy, we know that our text will bolster your efforts. How? We help students make the most of their time, and we make finance fun, real, and relevant to their lives.

HELPING YOU MEET THE NEEDS OF TODAY'S FINANCE STUDENTS

This book is intended for business students, and many other majors required to take this course. What a broad audience that is! Today's students are a patchwork of all ages, sexes, and cultural backgrounds. Perhaps more importantly, unlike the days when most students attended college full-time and held no jobs, most students now juggle much more than their bookbags. They have jobs, families, and other concerns that compete for their attention.

Helping Students Make Better Use of Their Time

No book can give students more time. However, our text helps them make better use of their time. We know that students have neither the time nor inclination to sort through pages of detail that seem irrelevant to their careers. First, with the help of countless students and reviewers, we streamlined our text to focus on only essential topics in finance, rather than special topics that are rarely covered in this first finance course. Second, our comprehensive learning system helps students master the material more quickly. We present chapter objectives that are directly linked to the chapter summary and to the end-of-chapter problems. We also include student tips in the margin that offer ideas for learning, additional clarification, or links to related topics.

Helping Students Have More Fun Learning

We know that finance can be fun. In *Financial Management: Principles and Practice*, we cover the basics of business financial management in a clear, conversational tone that engages students. We also use vivid, real-life examples. These range from high-profile examples, such as Magic Johnson's venture with Sony to bring a movie theater to southern Los Angeles, to inspirational examples of lesser-known businesses, such as Thunder Sports, Inc., a business formed by two University of Nebraska students to bring indoor soccer to fans. The purpose of the examples is twofold: to heighten interest and to show students how to apply the concepts so they can, in turn, use them outside the classroom walls.

To add even more fun, we use movie character names in many end-of-chapter problems and some in-text examples that students may enjoy trying to identify. We also rely on cartoons to add humor and (sometimes) to make a financial point.

Helping Students Become Business Leaders

Business students want to learn skills that they will use in the workplace. What are those skills and how can this text help students develop them? The **American Assembly of Collegiate Schools of Business (AACSB)** surveyed employers nationwide about the competencies business students should have to succeed in the world of work. We list four of the most highly rated competencies next and show you how our text helps students develop these skills.

- *Analytic Thinking and Judgment:* Fifteen chapters in our text require students to use analytic skills and judgment. Beginning with chapter 4, “Analyzing Financial Statements,” students learn how to analyze financial statements critically so that they can read and understand the basic “report cards” of business. They then move to forecasting, risk and return, the time value of money, valuation, capital budgeting techniques, estimating cash flows, and short-term budgeting techniques. For every concept, we provide an application to show students how to use analytic tools in the workplace. End-of-chapter problems also reinforce and test students’ judgment. For instance, we include challenge problems that disguise the subject of the problem, so students must decide what concept to apply to find the answer. In addition, we have complex comprehensive problems that require students to ferret out relevant information to problem solve and to apply more than one concept. Finally, our boxed features pose questions that often do not have a “right” or “wrong” answer.
- *Achievement Drive:* We recognize that we can’t teach students to achieve. However, we can give students opportunities to excel and apply their knowledge in many ways. We provide research tools and communication activities that not only help students master content, they teach students how to learn continuously. At the end of every chapter we offer two Build Your Communication Skills exercises that require students to conduct library research, interview community leaders, debate issues with their peers, or make a classroom presentation. Also, we offer a free Prentice Hall *New York Times* Dodger, a collection of recent news articles on finance. The Dodger encourages students to read the newspaper to educate themselves about the role of finance around the globe. Finally, we offer PHLIP, an Internet access site that students and professors may visit to gather financial information. These tools teach students how to gather information to build new knowledge and skills.
- *Integrity:* This book integrates social and professional responsibility topics in the chapter text and in boxed features in an approachable way. For instance, in chapter 4, we present a box on the ethics of movie studios using “net profits” to compensate the authors whose books provide the basis for mega-hit movies. Our aim is to expose students to the main ethical issues in finance so they will be better prepared to make ethical business decisions.
- *Teamwork Skills:* Our text is the only finance text to offer exercises that promote teamwork and networking skills. Over half of the Build Your Communication Skills exercises at the end of each chapter focus on teams or networking.

QUALITY GUARANTEE

One of the greatest hurdles a first-edition finance text faces is the concern that the text will have errors that a tried-and-true text may not. To meet this concern head-on, hundreds of students across the nation tested the text at every stage of manuscript development. The class tests not only helped to eliminate quantitative errors, they helped us shape the text into one that reached a broader audience. We are proud to report that the reaction to the final version from students and faculty has been overwhelmingly positive.

But we didn't stop in the classroom. Aside from the many talented reviewers of the text, we had four additional quality checks. Vickie Bajtelsmit and Susan Singer reviewed the text material, figures, charts, in-text examples, and problem materials for technical accuracy. We also had Sibnath Mitra and Sue Hine check and recheck the problems and solutions to all in-text examples and end-of-chapter problems. Many thanks to our quality checkers for their painstaking efforts.

OUR APPROACH

First, we take a valuation, rather than a balance-sheet approach. That is, market values are emphasized over book values wherever possible. We stress marginal analysis, cashflows, and the creation of value. The risk and return coverage focuses on creating value for the firm's owners, subject to legal, regulatory, and ethical constraints.

Second, we balance financial theory with skill development. More specifically, we show students how to use theory to solve real-world problems. The end result? Students will learn not only *how* to solve a financial problem, but *why* the solution works.

Third, the focus of the text is not exclusively on large corporations. Most students plan to work for small-to-medium sized businesses, so we balance examples of small, medium, and large businesses throughout the book. We also selected many entrepreneurial examples to make the financial principles presented seem more useful to the students taking this course.

Fourth, we supplement the financial management material with essential background information on financial markets and institutions. This coverage helps students better understand the environment in which a firm operates so that they can become more effective financial decision makers.

STREAMLINED COVERAGE

We know time is a precious commodity, so we offer 21 chapters instead of the more typical 25. The annotated table of contents that follows provides a quick glance at the main themes of each chapter.

ANNOTATED TABLE OF CONTENTS

Part 1—The World of Finance—contains three chapters that describe the goals and structure of the firm, how finance skills can help business people meet the firm's goals, financial markets and institutions, and interest rates.

Chapter 1. Finance and the Firm

This chapter examines the structure and goals of the firm, the agency issue, and the role of the financial manager.

Chapter 2. Financial Markets and Interest Rates

This chapter explores types of financial markets and securities, interest rate determinants, and the yield curve.

Chapter 3. Financial Institutions

In this chapter we look at financial intermediation, the role of and types of financial institutions, and Federal Reserve regulation.

Part 2—Essential Concepts in Finance—presents six chapters on accounting statements and their interpretation, forecasting, risk and return, the time value of money, and security valuation.

Chapter 4. Review of Accounting

Here we review accounting basics. We look closely at financial statements, depreciation, and taxes.

Chapter 5. Analysis of Financial Statements

This chapter shows students how to interpret the three basic financial statements. It explains how to use financial ratios to assess the health of the business.

Chapter 6. Forecasting for Financial Planning

In this chapter we integrate many of the concepts from earlier chapters. Students learn how to use market and historical financial information to create pro forma statements, the blueprint for the firm's business plan.

Chapter 7. Risk and Return

This building-block chapter blends theory and skill development to teach students about the risk/return tradeoff, types of risk, and methods for assessing, managing, and reducing risk. We end the chapter with a discussion of the Capital Asset Pricing Model.

Chapter 8. The Time Value of Money

The time value of money is a crucial concept in finance. First we tell and then show students why it is so important. Then we tie the theory and mathematical calculations together so that students can perform time value of money computations with understanding, instead of just plugging in numbers.

Chapter 9. Bond and Stock Valuation

Here we investigate valuation methods for bonds, preferred stock, and common stock. Students learn to apply the methods using concepts from earlier chapters, such as the time value of money and cash flows.

Part 3—Long-Term Financial Management Decisions—a seven-chapter part, covers capital budgeting, incremental cash flow estimation, capital structure, bonds, preferred stock, leasing, common stock, and dividend policy.

Chapter 10. Capital Budgeting Decision Methods

This chapter explores how firms use capital budgeting. We look at the payback, net present value, and internal rate of return capital budgeting methods, with an emphasis on net present value. We also examine capital rationing and capital budgeting risk measurement techniques.

Chapter 11. Estimating Incremental Cash Flows	Through the chapter explanation and examples, students learn which cash flows are relevant to a capital budgeting project and how to estimate those cash flows.
Chapter 12. The Cost of Capital	Here, we investigate the cost of different types of capital, how to estimate a firm's cost of capital, and how those costs affect a firm's financing and investment decisions.
Chapter 13. Capital Structure Basics	This chapter examines the effects of capital structure on a firm's value. Specifically, it presents the concepts of leverage and the associated risks with each type of leverage. It also covers the risks and return possibilities of a leveraged buyout.
Chapter 14. Corporate Bonds, Preferred Stock, and Leasing	We discuss the features and uses of corporate bonds, preferred stock, and leases. We also compare and contrast a genuine lease and a disguised purchase contract, examine the accounting treatment of leases, and explore the lease-or-buy decision.
Chapter 15. Common Stock	We explain common stock basics and look at why firms may or may not want to use equity financing. We also describe how firms issue common stock and describe the risk and return features of rights and warrants.
Chapter 16. Dividend Policy	Students learn in this chapter the how and why of a firm's dividend policy, how a firm pays dividends, and alternatives to paying cash dividends.
Part 4—Short-Term Financial Management Decisions —presents the concepts of working capital policy, cash and marketable securities, accounts receivable and inventory, and short-term financing.	
Chapter 17. Working Capital Policy	This chapter examines the importance of managing a firm's current assets, how firms manage their working capital, why they accumulate it, and how they determine their working capital policies.
Chapter 18. Managing Cash	Presented here are the factors that affect the level of a firm's cash assets, how to target an optimal cash balance, how to prepare a cash budget, and how to manage cash flows to maximize value.
Chapter 19. Accounts Receivable and Inventory	In this chapter students will learn what accounts receivable and inventory are and methods for managing them and for determining their optimal level. We show students how to take a value-added approach to accounts receivable and inventory management. We also cover alternative inventory management approaches, and show how firms make credit decisions and create collection policies.
Chapter 20. Short-Term Financing	Here, we look at the advantages and disadvantages of short-term financing, sources of that financing, and methods for calculating the cost of each source. We also investigate loan terms and sources of short-term loan collateral.
Part 5—Finance in the Global Economy —covers international finance topics, in addition to the international coverage woven throughout the book.	
Chapter 21. International Finance	This chapter presents the global environment in which firms operate and explains the basics of international finance, such as exchange rate risks and theories, and major international trade agreements.

BOOK FEATURES

Our text contains innovative features that will help you meet AACSB objectives and help students prepare for their careers. We offer *real world opening vignettes*, *performance-based learning objectives*, *chapter summaries that link directly to the objectives*, *self-test questions with fully worked-out solutions*, *review questions*, and *student-tested problem material*. In addition, we have the following features that set us apart from other texts:

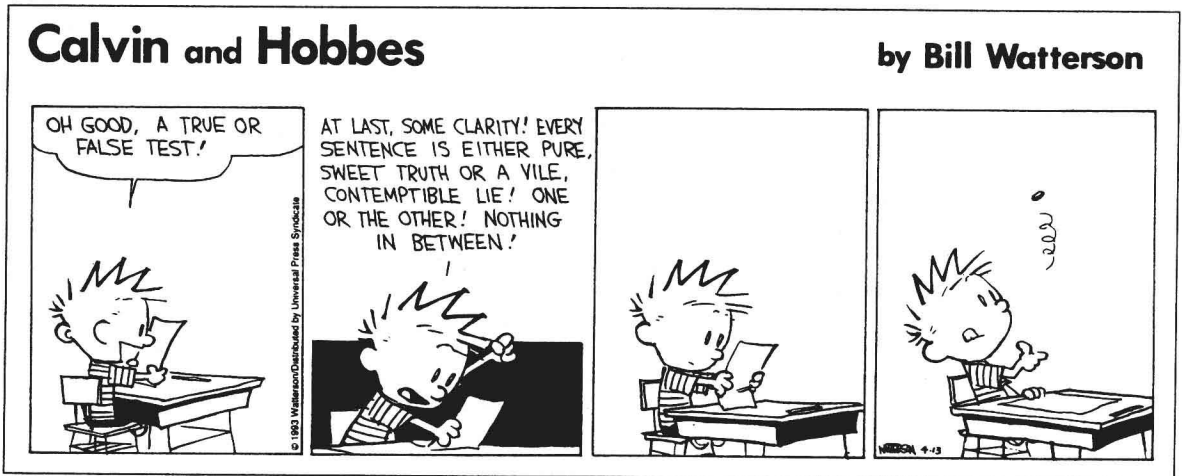
- **Take Note** features, located in the margins of the text pages, are student annotations. No other book has these helpful notes. They contain learning tips, offer additional examples, or show how the material links to business practice.
- **Concept Connections** are cross-references to related topics. This simple but innovative feature, placed in the text margins, identifies the page and chapter number for topics related to the one being discussed. Students who use the cross-references not only reinforce their understanding with a topic review, they will see connections between concepts more effectively.
- **Ethical Connections boxes** highlight an actual ethical dilemma that relates to the chapter concepts. Closing questions challenge students to think critically about the issue. The boxes, in addition to the in-text ethics coverage, comply with the AACSB requirement of ethics integration.
- **Financial Management and You boxes** take financial management concepts and show students how to apply them to personal finance decisions. Unique to our text, these features make the concepts more relevant to students—especially to those students who expected an investments course.
- **Finance At Work** interview boxes are in direct response to an AACSB standard that urges schools to teach students how each functional area relates to other areas of business. This innovative feature shows how finance affects decision makers in other business areas, such as management, marketing, and production.
- **Financial Calculator Solutions** to all general time value of money and specific security valuation problems are included. This material is presented with the TIBAI+ calculator in mind, but a conversion card allows students to use a variety of financial calculators with clear instruction.
- **Build Your Communication Skills**, another feature unique to our text, are two end-of-chapter exercises designed to build a student's written and oral communication skills. Many of the exercises involve teamwork or networking, two skills employees need to succeed in the 21st century.
- **Challenge Problems** and **Comprehensive Problems**: Like many texts, we identify the subject of all non-comprehensive problems. However, we are the only text to include one *challenge problem* per chapter that does not have an identifier, so that students develop issue-spotting skills. The *comprehensive problems* build on earlier concepts and often include irrelevant information so that students must select and use relevant information to problem solve. This type of problem better replicates what students will face on the job.

INSTRUCTOR AND STUDENT RESOURCES

As with our text, we tried to offer the most useful, relevant, and interesting support package on the market. The following list describes key support materials for both professors and students.

Instructor Resources

1. The **Instructor's Resource Manual** contains over 400 pages of course preparation materials. This handy lecture tool provides chapter reviews, an in-depth analysis of critical chapter concepts and objectives, lecture outlines, lecture tips and suggestions, in-class examples, discussion starters, and additional problem material.
2. A **Computerized Test Item File** based on powerful testing technology developed by Engineering Software Associates, Inc., gives instructors the ability to create and tailor exams to their own needs, administer them traditionally or online, then automatically transfer the data for evaluation. The program, available in Windows or DOS, uses *algorithmic technologies* so that an infinite number of select test items can be generated. The test bank includes multiple choice, problem, and essay questions.
3. The **Problems/Solutions Manual** contains worked-out solutions to all problems contained in the text.
4. **Spreadsheet Software** containing problem-solving templates is available for instructors and students on disk or through the Internet.
5. The **Transparency Acetates** and **PowerPoint Slides** are for classroom presentation of text material and teaching visual aids. We offer a package of over 150 color acetates of art from the text and over 800 PowerPoint full-color electronic presentation screens.
6. **Internet Faculty Support through the PHLIP** (Prentice Hall's Learning through the Internet Partnership—<http://www.finance.fac.marist.edu/phlip>) allows adopting faculty to sign in with their *user name* and *password* and download lecture aids, including lecture notes, PowerPoint presentations, problem and case solutions, and chapter outlines and updates. Services such as "PHLIPping through the News" tie current events and news stories directly to text chapters and pages to enhance currency of faculty lectures.



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Student Resources

1. Our **Study Guide** is designed to reinforce concepts and skills and to aid understanding and application. This resource contains chapter summaries and outlines, helpful hints, study tips, self-tests, and practice problems (with solutions) requiring both mathematical and verbal ability.
2. **FinCoach Software** (The Financial Management Math Practice Program, Version B) includes over 7 million practice problems and self-tests in mathematical areas of corporate financial management, from valuation of single cash flows to CAPM and firm valuation.
3. **Career Paths in Finance**, the ultimate job-search tool, teaches students how to position themselves competitively in the field of finance. Instead of wasting valuable time scouring the library for multiple references, students find all key information pulled together on one hybrid CD-ROM (ISBN: 0-13-531336-8).
4. **PHLIPping Through the News** Internet service center gives students access to news stories directly linked to the text with page references and to additional Internet finance resources, academic and government resources, search engines, and indexes. The service shows students how finance is relevant to their understanding of today's business world and helps students research class assignments and projects.

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