TABLE C.1

Typical spreadsheet financial functions

Value to find	Quattro Pro	Lotus	Excel	SuperCalc
Present worth *P*	@NPV(*i*, cash flow, <Type>)	@NPV(*i*, cash flow)	NPV(*i*, cash flow)	NPV(*i*, cash flow)
	@PVAL(*i*, *N*, *A*, <*F*>, <Type>)	@PV(*A*, *i*, *N*)	PV(*i*, *N*, *A*, <*F*>, <type>)	PV(*A*, *i*, *N*)
	@PV(*A*, *i*, *N*)			
Future worth *F*	@FV(*A*, *i*, *j N*)	@FV(*A*, *i*, *N*)		FV(*A*, *i*, *N*)
	@FVAL(*i*, *N*, *A*, <*P*>, <Type>)		FV(*i*, *N*, *A*, <P>, <type>)	
Annual worth *A*	@PMT(*P*, *i*, *N*)	@PMT(*P*, *i*, *N*)		PMT(*P*, *i*, *N*)
	@PAYMT(*i*, *N*, *P*, <*F*>, <Type>)		PMT(*i*, *N*, *P*, <*F*>, <type>)	
Interest *i*	@RATE(*F*, *P*, *N*)	@RATE(*F*, *P*, *N*)	RATE(*N*, *A*, *P*, <*F*>, <type>, <guess>)	RATE(*F*, *P*, *N*)
				ANRATE(*A*, *P*, *N*)
Number of periods *N*	@TERM(*A*, *i*, *F*)	@TERM(*A*, *i*, *F*)	NPER(*i*, *A*, *P*, <*F*>, <type>)	TERM(*A*, *i*, *F*)
	@CTERM(*i*, *F*, *P*)	@CTERM(*A*, *i*, *F*)		CTERM(*i*, *F*, *P*)
	@NPER(*i*, *A*, *P*, <*F*>, <Type>)			ANTERM(*A*, *i*, *P*)
Internal interest rate of return (IRR)	@IRR(Guess, cash flow)	@IRR(guess, cash flow)	IRR(cash flow, guess)	IRR(guess,cash flow)
Portion of loan payment in period *j* (or start to end) that is principal	@PPAYMT(*i*, *j*, *N*, *P*, <*F*>, <Type>)	@PPAYMT(*P*, *i*, *N*, strt,<end> <type>,<*F*>)	PPMT(*i*, *j*, *N*, *P*, <*F*>, <type>)	KPRIN(*P*, *i*, *j*, *N*)
Portion of loan payment in period *j* (or start to end) that is interest	@IPAYMT(*i*, *j*, *N*, *P*, <*F*>, <Type>)	@IPAYMT(*P*, *i*, *N*, strt, <end>, <type>, <*F*>,)	IPMT(*i*, *j*, *N*, *P*, <*F*>, <type>)	KINT(*P*, *i*, *N*, *j*)
Double-declining-balance depreciation in period *j*	@DDB(*P*, *S*, *N*, *j*)	@DDB(*P*, *S*, *N*, *j*)	DDB(*P*, *S*,*N*, *j*, <factor>)	DDB(*P*, *S*, *N*, *j*)
Straight-line depreciation in period *j*	@SLN(*P*, *S*, *N*)	@SLN(*P*, *S*, *N*)	SLN(*P*, *S*, *N*)	SLN(*P*, *S*, *N*)

TABLE C.1 CONTINUED

Notes:
1. "Cash flow" refers to a block of data, for example, A1..A20.
2. "Type" indicates if data are end-of-period or beginning-of-period. Default is end of period. Type = 0 is end of period, Type = 1 is beginning of period.
3. <*xyz*> indicates that item *xyz* is optional.
4. <*F*> or <*P*> refers to a nonzero value of *F* or *P*.
5. "Guess" is an estimate of the value to be input by the user.
6. "Factor" is the rate at which the declining balance declines. Default is 2 for double.
7. *P*, *S*, *N*, *A*, and *i* are the conventional engineering economy symbols.
8. <Strt> and <end> are starting and ending periods for cumulative principal. If <end> is omitted, then accumulation is just for start period.
9. Not all functions are applicable to all versions of the spreadsheets. The analyst should check the particular version's User's Guide. Not all the possible functions are included in this table.

EXAMPLE C.1 **ANSI Factors**

The six ANSI factors listed in Table C.2 will now be computed with spreadsheet functions and formulas. An interest rate i of 5 percent and a time length N of 5 will be used in each case. The output of Quattro Pro is given in Fig. C.1.

The six ANSI factor symbols are shown in cells A6 through A11 (A6..A11 is Quattro Pro's block-range nomenclature). The resulting factor values are shown in Fig. C.1*a*, column B, and the formulas actually typed to get the results are shown in the same column B cell locations in Fig. C.1*b*. The formulas shown in cells B6 through B11 in Fig. C.1*b* are the same as those given in Table C.2. The remaining examples will have results presented with the same two options just given: results and formulas.

The analyst who uses CHEER and spreadsheets will probably conclude that CHEER is a little more flexible and user-friendly with its ANSI factor lookup option, although SHEER will enhance the flexibility of the lookup process.

TABLE C.2

Converting economic factors to spreadsheet functions

ANSI factor	Quattro Pro	Lotus	Excel	SuperCalc
(*P/F*, *i*, *N*)	@PVAL(*i*, *N*, 0, –1)	Find algebraically	PV(*i*, *N*, 0, –1)	Find algebraically
(*F/P*, *i*, *N*)	@FVAL(*i*, *N*, 0, –1)	Find algebraically	FV(*i*, *N*, 0, –1)	Find algebraically
(*P/A*, *i*, *N*)	@PV(1, *i*, *N*)	@PV(1, *i*, *N*)	PV(*i*, *N*, –1)	PV(1, *i*, *N*)
(*F/A*, *i*, *N*)	@FV(1, *i*, *N*)	@FV(1, *i*, *N*)	FV(*i*, *N*, –1)	FV(1, *i*, *N*)
(*A/P*, *i*, *N*)	@PAYMT(*i*, *N*, –1)	1/@PV(1, *i*, *N*)	PMT(*i*, *N*, –1)	PMT(1, *i*, *N*)
(*A/F*, *i*, *N*)	@PAYMT(*i*, *N*, 0 ,–1)	1/@FV(1, *i*, *N*)	PMT(*i*, *N*, 0, –1)	1/FV(1, *i*, *N*)