Bambora

Country	Sweden			Norway			Denmark			Finland			Netherlands			Remaining European countries				
	Interchange fee	Scheme fee	iZettle fee	Interchange fee	Scheme fee	iZettle fee	Interchange fee	Scheme fee	iZettle fee	Interchange fee	Scheme fee	iZettle fee	Interchange fee	Scheme fee	iZettle fee	Interchange fee	Scheme fee	iZettle fee (Germany)	iZettle fee (Spain)	iZettle fee (remaining European countries)
Pricing	Interchange fee (%)	Scheme fees (%)	iZettle fee (%)	Interchange (%)	Scheme fees (%)	iZettle fee (%)	Interchange (%)	Scheme fees (%)	iZettle fee (%)	Interchange (%)	Scheme fees (%)	iZettle fee (%)	Interchange (%)	Scheme fees (%)	iZettle fee (%)	Interchange (%)	Scheme fees (%)	iZettle fee (%)	iZettle fee (%)	iZettle fee (%)
Mastercard																				
Consumer Debit (Domestic)	0,20%	0,09%	1% - 2,75%	0,20%	0,08%	1% - 2,75%	0,20%	0,12%	1% - 2,75%	0,20%	0,07%	1% - 2,75%	0,20%	0,08%	1% - 2,75%	0,20%	0,01%	0,95% or 2,75%	0,99% - 1,99%	1% - 2,75%
Consumer Debit (EU)	0,20%	0,07%	1% - 2,75%	0,20%	0,06%	1% - 2,75%	0,20%	0,08%	1% - 2,75%	0,20%	0,07%	1% - 2,75%	0,20%	0,04%	1% - 2,75%	0,20%	0,01%	0,95% or 2,75%	0,99% - 1,99%	1% - 2,75%
Consumer Debit (Inter)	1,54%	0,34%	1% - 2,75%	1,54%	0,22%	1% - 2,75%	1,54%	0,40%	1% - 2,75%	1,54%	0,24%	1% - 2,75%	1,54%	0,24%	1% - 2,75%	1,54%	0,09%	0,95% or 2,75%	0,99% - 1,99%	1% - 2,75%
Consumer Credit (Domestic)	0,30%	0,06%	1% - 2,75%	0,30%	0,04%	1% - 2,75%	0,30%	0,04%	1% - 2,75%	0,30%	0,04%	1% - 2,75%	0,30%	0,03%	1% - 2,75%	0,30%	0,01%	0,95% or 2,75%	0,99% - 1,99%	1% - 2,75%
Consumer Credit (EU)	0,30%	0,04%	1% - 2,75%	0,30%	0,05%	1% - 2,75%	0,30%	0,05%	1% - 2,75%	0,30%	0,05%	1% - 2,75%	0,30%	0,04%	1% - 2,75%	0,30%	0,01%	0,95% or 2,75%	0,99% - 1,99%	1% - 2,75%
Consumer Credit (Inter)	1,71%	0,20%	1% - 2,75%	1,71%	0,13%	1% - 2,75%	1,71%	0,24%	1% - 2,75%	1,71%	0,15%	1% - 2,75%	1,71%	0,15%	1% - 2,75%	1,71%	0,09%	0,95% or 2,75%	0,99% - 1,99%	1% - 2,75%
Commercial (Domestic)	1,49%	0,06%	1% - 2,75%	1,52%	0,04%	1% - 2,75%	0,89%	0,03%	1% - 2,75%	0,75%	0,03%	1% - 2,75%	1,52%	0,03%	1% - 2,75%	1,52%	0,01%	0,95% or 2,75%	0,99% - 1,99%	1% - 2,75%
Commercial (EU)	1,40%	0,03%	1% - 2,75%	1,40%	0,04%	1% - 2,75%	1,40%	0,03%	1% - 2,75%	1,40%	0,03%	1% - 2,75%	1,40%	0,04%	1% - 2,75%	1,40%	0,01%	0,95% or 2,75%	0,99% - 1,99%	1% - 2,75%
Commercial (Inter)	2,00%	0,14%	1% - 2,75%	2,00%	0,09%	1% - 2,75%	2,00%	0,19%	1% - 2,75%	2,00%	0,12%	1% - 2,75%	2,00%	0,20%	1% - 2,75%	2,00%	0,09%	0,95% or 2,75%	0,99% - 1,99%	1% - 2,75%
Maestro			1% - 2,75%																	
Maestro (Domestic)	0,20%	0,08%	1% - 2,75%	0,20%	0,07%	1% - 2,75%	0,20%	0,08%	1% - 2,75%	0,20%	0,07%	1% - 2,75%	0,20%	0,08%	1% - 2,75%	0,20%	0,01%	0,95% or 2,75%	0,99% - 1,99%	1% - 2,75%
Maestro (EU)	0,20%	0,08%	1% - 2,75%	0,20%	0,07%	1% - 2,75%	0,20%	0,08%	1% - 2,75%	0,20%	0,07%	1% - 2,75%	0,20%	0,08%	1% - 2,75%	0,20%	0,01%	0,95% or 2,75%	0,99% - 1,99%	1% - 2,75%
Maestro (Inter)	0,60%	0,32%	1% - 2,75%	0,60%	0,25%	1% - 2,75%	0,60%	0,33%	1% - 2,75%	0,60%	0,26%	1% - 2,75%	0,60%	0,32%	1% - 2,75%	0,60%	0,09%	0,95% or 2,75%	0,99% - 1,99%	1% - 2,75%
Visa																				
Consumer Debit (Domestic)	0,20%	0,03%	1% - 2,75%	0,20%	0,03%	1% - 2,75%	0,20%	0,03%	1% - 2,75%	0,20%	0,03%	1% - 2,75%	0,20%	0,03%	1% - 2,75%	0,20%	0,02%	0,95% or 2,75%	0,99% - 1,99%	1% - 2,75%
Consumer Debit (EU)	0,20%	0,03%	1% - 2,75%	0,20%	0,02%	1% - 2,75%	0,20%	0,03%	1% - 2,75%	0,20%	0,03%	1% - 2,75%	0,20%	0,02%	1% - 2,75%	0,20%	0,02%	0,95% or 2,75%	0,99% - 1,99%	1% - 2,75%
Consumer Debit (Inter)	1,10%	0,46%	1% - 2,75%	1,10%	0,37%	1% - 2,75%	1,10%	0,46%	1% - 2,75%	1,10%	0,34%	1% - 2,75%	1,10%	0,41%	1% - 2,75%	1,10%	0,34%	0,95% or 2,75%	0,99% - 1,99%	1% - 2,75%
Consumer Credit (Domestic)	0,30%	0,04%	1% - 2,75%	0,30%	0,03%	1% - 2,75%	0,30%	0,03%	1% - 2,75%	0,30%	0,03%	1% - 2,75%	0,30%	0,03%	1% - 2,75%	0,30%	0,03%	0,95% or 2,75%	0,99% - 1,99%	1% - 2,75%
Consumer Credit (EU)	0,30%	0,03%	1% - 2,75%	0,30%	0,03%	1% - 2,75%	0,30%	0,03%	1% - 2,75%	0,30%	0,03%	1% - 2,75%	0,30%	0,03%	1% - 2,75%	0,30%	0,03%	0,95% or 2,75%	0,99% - 1,99%	1% - 2,75%
Consumer Credit (Inter)	1,10%	0,41%	1% - 2,75%	1,10%	0,34%	1% - 2,75%	1,10%	0,45%	1% - 2,75%	1,10%	0,37%	1% - 2,75%	1,10%	0,37%	1% - 2,75%	1,10%	0,35%	0,95% or 2,75%	0,99% - 1,99%	1% - 2,75%
Commercial (Domestic)	1,31%	0,03%	1% - 2,75%	1,40%	0,03%	1% - 2,75%	0,75%	0,02%	1% - 2,75%	0,75%	0,03%	1% - 2,75%	1,40%	0,03%	1% - 2,75%	1,40%	0,03%	0,95% or 2,75%	0,99% - 1,99%	1% - 2,75%
Commercial (EU)	1,31%	0,03%	1% - 2,75%	1,31%	0,03%	1% - 2,75%	1,31%	0,03%	1% - 2,75%	1,31%	0,02%	1% - 2,75%	1,31%	0,03%	1% - 2,75%	1,31%	0,03%	0,95% or 2,75%	0,99% - 1,99%	1% - 2,75%
Commercial (Inter)	2,00%	0,36%	1% - 2,75%	2,00%	0,34%	1% - 2,75%	2,00%	0,39%	1% - 2,75%	2,00%	0,38%	1% - 2,75%	2,00%	0,39%	1% - 2,75%	2,00%	0,35%	0,95% or 2,75%	0,99% - 1,99%	1% - 2,75%

Elavon

EUR countries

		Germany			France			Italy			Netherlands			Spain			Finland			Intra			Inter		
		Interchange fee (%)	Scheme fee (%)	iZettle fee (%)	Interchange fee (%)	Scheme fee (%)	iZettle fee (%)	Interchange fee (%)	Scheme fee (%)	iZettle fee (%)	Interchange fee (%)	Scheme fee (%)	iZettle fee (%)	Interchange fee (%)	Scheme fee (%)	iZettle fee (%)	Interchange fee (%)	Scheme fee (%)	iZettle fee (%)	Interchange fee (%)	Scheme fee (%)	iZettle fee (%)	Interchange fee (%)	Scheme fee (%)	iZettle fee (%)
Visa Consumer Credit	EMV/Electronic	0,300%	0,0218%	0,95% or 2,75%	0,300%	0,0138%	1% - 2,75%	0,300%	0,0138%	1% - 2,75%	0,300%	0,0138%	1% - 2,75%	0,300%	0,0138%	0,99% - 1,99%	0,3000%	0,0138%	1% - 2,75%	0,300%	0,0138%	See national fee	1,100%	0,3138%	See national fee
	Secure eCom	0,300%	0,0318%	0,95% or 2,75%	0,300%	0,0238%	1% - 2,75%	0,300%	0,0238%	1% - 2,75%	0,300%	0,0238%	1% - 2,75%	0,300%	0,0138%	0,99% - 1,99%	0,3000%	0,0238%	1% - 2,75%	0,300%	0,0238%	See national fee	1,440%	0,4138%	See national fee
	CVV2	0,300%	0,0218%	0,95% or 2,75%	0,300%	0,0138%	1% - 2,75%	0,300%	0,0138%	1% - 2,75%	0,300%	0,0138%	1% - 2,75%	0,300%	0,0138%	0,99% - 1,99%	0,3000%	0,0138%	1% - 2,75%	0,300%	0,0138%	See national fee	1,600%	0,3138%	See national fee
	Standard	0,300%	0,0218%	0,95% or 2,75%	0,300%	0,0138%	1% - 2,75%	0,300%	0,0138%	1% - 2,75%	0,300%	0,0138%	1% - 2,75%	0,300%	0,0138%	0,99% - 1,99%	0,3000%	0,0138%	1% - 2,75%	0,300%	0,0138%	See national fee	1,600%	0,3138%	See national fee
Visa Consumer Debit	EMV/Electronic	0,200%	0,0126%	0,95% or 2,75%	0,200%	0,0046%	1% - 2,75%	0,200%	0,0046%	1% - 2,75%	0,000%	0,0046%	1% - 2,75%	0,200%	0,0046%	0,99% - 1,99%	0,1900%	0,0046%	1% - 2,75%	0,200%	0,0046%	See national fee	1,100%	0,3138%	See national fee
	Secure eCom	0,200%	0,0226%	0,95% or 2,75%	0,200%	0,0146%	1% - 2,75%	0,200%	0,0146%	1% - 2,75%	0,000%	0,0146%	1% - 2,75%	0,200%	0,0046%	0,99% - 1,99%	0,1900%	0,0146%	1% - 2,75%	0,200%	0,0146%	See national fee	1,440%	0,4138%	See national fee
	CVV2	0,200%	0,0126%	0,95% or 2,75%	0,200%	0,0046%	1% - 2,75%	0,200%	0,0046%	1% - 2,75%	0,000%	0,0046%	1% - 2,75%	0,200%	0,0046%	0,99% - 1,99%	0,1900%	0,0046%	1% - 2,75%	0,200%	0,0046%	See national fee	1,600%	0,3138%	See national fee
	Standard	0,200%	0,0126%	0,95% or 2,75%	0,200%	0,0046%	1% - 2,75%	0,200%	0,0046%	1% - 2,75%	0,000%	0,0046%	1% - 2,75%	0,200%	0,0046%	0,99% - 1,99%	0,1900%	0,0046%	1% - 2,75%	0,200%	0,0046%	See national fee	1,600%	0,3138%	See national fee
Visa Premium/Commercial	Premium	N/A	N/A	0,95% or 2,75%	N/A	N/A	1% - 2,75%	N/A	N/A	1% - 2,75%	N/A	N/A	1% - 2,75%	N/A	N/A	0,99% - 1,99%	N/A	N/A	1% - 2,75%	N/A	N/A	See national fee	1,800%	0,3138%	See national fee
	Super Premium	N/A	N/A	0,95% or 2,75%	N/A	N/A	1% - 2,75%	N/A	N/A	1% - 2,75%	N/A	N/A	1% - 2,75%	N/A	N/A	0,99% - 1,99%	N/A	N/A	1% - 2,75%	N/A	N/A	See national fee	1,970%	0,3138%	See national fee
	Business	1,750%	0,0218%	0,95% or 2,75%	1,300%	0,0138%	1% - 2,75%	1,300%	0,0138%	1% - 2,75%	1,300%	0,0138%	1% - 2,75%	N/A	N/A	0,99% - 1,99%	0,1900%	0,0138%	1% - 2,75%	1,300%	0,0138%	See national fee	2,000%	0,3138%	See national fee
	Corporate/Purchasing	1,750%	0,0218%	0,95% or 2,75%	1,350%	0,0138%	1% - 2,75%	1,350%	0,0138%	1% - 2,75%	1,350%	0,0138%	1% - 2,75%	N/A	N/A	0,99% - 1,99%	0,7500%	0,0138%	1% - 2,75%	1,350%	0,0138%	See national fee	2,000%	0,3138%	See national fee
MasterCard Consumer Credit	EMV/Electronic	0,300%	0,0477%	0,95% or 2,75%	0,300%	0,0275%	1% - 2,75%	0,300%	0,0908%	1% - 2,75%	0,300%	0,0410%	1% - 2,75%	0,300%	0,0458%	0,99% - 1,99%	0,2000%	0,0160%	1% - 2,75%	0,300%	0,0160%	See national fee	1,100%	0,4160%	See national fee
	Secure eCom	0,300%	0,0477%	0,95% or 2,75%	0,300%	0,0275%	1% - 2,75%	0,300%	0,0908%	1% - 2,75%	0,300%	0,0410%	1% - 2,75%	0,300%	0,0458%	0,99% - 1,99%	0,2000%	0,0160%	1% - 2,75%	0,300%	0,0160%	See national fee	1,440%	0,4160%	See national fee
	Standard	0,300%	0,0477%	0,95% or 2,75%	0,300%	0,0275%	1% - 2,75%	0,300%	0,0908%	1% - 2,75%	0,300%	0,0410%	1% - 2,75%	0,300%	0,0458%	0,99% - 1,99%	0,2000%	0,0160%	1% - 2,75%	0,300%	0,0160%	See national fee	1,600%	0,4160%	See national fee
Debit MasterCard	EMV/Electronic	N/A	N/A	0,95% or 2,75%	0,300%	0,0275%	1% - 2,75%	0,200%	0,0908%	1% - 2,75%	0,000%	0,0410%	1% - 2,75%	0,200%	0,0458%	0,99% - 1,99%	0,3000%	0,0160%	1% - 2,75%	0,200%	0,0160%	See national fee	1,100%	0,4160%	See national fee
	Secure eCom	N/A	N/A	0,95% or 2,75%	0,300%	0,0275%	1% - 2,75%	0,200%	0,0908%	1% - 2,75%	0,000%	0,0410%	1% - 2,75%	0,200%	0,0458%	0,99% - 1,99%	0,3000%	0,0160%	1% - 2,75%	0,200%	0,0160%	See national fee	1,440%	0,4160%	See national fee
	Standard	N/A	N/A	0,95% or 2,75%	0,300%	0,0275%	1% - 2,75%	0,200%	0,0908%	1% - 2,75%	0,000%	0,0410%	1% - 2,75%	0,200%	0,0458%	0,99% - 1,99%	0,3000%	0,0160%	1% - 2,75%	0,200%	0,0160%	See national fee	1,600%	0,4160%	See national fee
MC Premium/Commercial	Premium	N/A	N/A	0,95% or 2,75%	0,300%	0,0275%	1% - 2,75%	0,300%	0,0908%	1% - 2,75%	0,300%	0,0410%	1% - 2,75%	N/A	N/A	0,99% - 1,99%	0,3000%	0,0160%	1% - 2,75%	0,300%	0,0160%	See national fee	1,980%	0,4160%	See national fee
	Super Premium	N/A	N/A	0,95% or 2,75%	0,300%	0,0275%	1% - 2,75%	0,300%	0,0160%	1% - 2,75%	0,300%	0,0410%	1% - 2,75%	N/A	N/A	0,99% - 1,99%	0,3000%	0,0160%	1% - 2,75%	0,300%	0,0160%	See national fee	1,850%	0,4160%	See national fee
	Business	1,880%	0,0477%	0,95% or 2,75%	1,250%	0,0275%	1% - 2,75%	1,500%	0,0908%	1% - 2,75%	1,250%	0,0410%	1% - 2,75%	N/A	N/A	0,99% - 1,99%	0,7500%	0,0160%	1% - 2,75%	1,250%	0,0160%	See national fee	2,000%	0,4160%	See national fee
	Corporate/Purchasing	1,880%	0,0477%	0,95% or 2,75%	1,250%	0,0275%	1% - 2,75%	1,500%	0,0908%	1% - 2,75%	1,500%	0,0410%	1% - 2,75%	N/A	N/A	0,99% - 1,99%	0,7500%	0,0160%	1% - 2,75%	1,500%	0,0160%	See national fee	2,000%	0,4160%	See national fee
Maestro	EMV/Electronic	0,200%	0,0210%	0,95% or 2,75%	0,200%	0,0180%	1% - 2,75%	0,200%	0,0821%	1% - 2,75%	0,000%	0,0180%	1% - 2,75%	N/A	N/A	0,99% - 1,99%	0,2000%	0,0180%	1% - 2,75%	0,200%	0,0180%	See national fee	0,600%	0,4180%	See national fee

Non-EUR countries

		Norway			UK			Sweden			Denmark			Inter		
		Interchange fee (%)	Scheme fee (%)	iZettle fee (%)	Interchange fee (%)	Scheme fee (%)	iZettle fee (%)	Interchange fee (%)	Scheme fee (%)	iZettle fee (%)	Interchange fee (%)	Scheme fee (%)	iZettle fee (%)	Interchange fee (%)	Scheme fee (%)	iZettle fee (%)
Visa Consumer Credit	EMV/Electronic	0,900%	0,0138%	1% - 2,75%	0,300%	0,0138%	1% - 2,75%	0,3000%	0,0138%	1% - 2,75%	0,3000%	0,0138%	1% - 2,75%	1,100%	0,3138%	See national fee
	Secure eCom	0,900%	0,0238%	1% - 2,75%	0,300%	0,0238%	1% - 2,75%	0,3000%	0,0238%	1% - 2,75%	0,3000%	0,0238%	1% - 2,75%	1,440%	0,4138%	See national fee
	CVV2	1,200%	0,0138%	1% - 2,75%	0,300%	0,0138%	1% - 2,75%	0,3000%	0,0138%	1% - 2,75%	0,3000%	0,0138%	1% - 2,75%	1,600%	0,3138%	See national fee
	Standard	1,400%	0,0138%	1% - 2,75%	0,300%	0,0138%	1% - 2,75%	0,3000%	0,0138%	1% - 2,75%	0,3000%	0,0138%	1% - 2,75%	1,600%	0,3138%	See national fee
Visa Consumer Debit	EMV/Electronic	0,100%	0,0046%	1% - 2,75%	0,200%	0,0046%	1% - 2,75%	0,2000%	0,0046%	1% - 2,75%	0,2000%	0,0046%	1% - 2,75%	1,100%	0,3138%	See national fee
	Secure eCom	0,100%	0,0146%	1% - 2,75%	0,200%	0,0146%	1% - 2,75%	0,2000%	0,0146%	1% - 2,75%	0,2000%	0,0046%	1% - 2,75%	1,440%	0,4138%	See national fee
	CVV2	0,300%	0,0046%	1% - 2,75%	0,200%	0,0046%	1% - 2,75%	0,2000%	0,0046%	1% - 2,75%	0,2000%	0,0046%	1% - 2,75%	1,600%	0,3138%	See national fee
	Standard	0,700%	0,0046%	1% - 2,75%	0,200%	0,0046%	1% - 2,75%	0,2000%	0,0046%	1% - 2,75%	0,2000%	0,0046%	1% - 2,75%	1,600%	0,3138%	See national fee
Visa Premium/Commercial	Premium	N/A	N/A	1% - 2,75%	0,300%	0,0138%	1% - 2,75%	N/A	N/A	1% - 2,75%	N/A	N/A	1% - 2,75%	1,800%	0,3138%	See national fee
	Super Premium	N/A	N/A	1% - 2,75%	N/A	N/A	1% - 2,75%	N/A	N/A	1% - 2,75%	N/A	N/A	1% - 2,75%	1,970%	0,3138%	See national fee
	Business	1,400%	0,0138%	1% - 2,75%	1,400%	0,0138%	1% - 2,75%	1,3000%	0,0138%	1% - 2,75%	0,7500%	0,0138%	1% - 2,75%	2,000%	0,3138%	See national fee
	Corporate/Purchasing	1,400%	0,0138%	1% - 2,75%	1,700%	0,0138%	1% - 2,75%	1,3500%	0,0138%	1% - 2,75%	0,7500%	0,0138%	1% - 2,75%	2,000%	0,3138%	See national fee
MasterCard Consumer Credit	EMV/Electronic	1,050%	0,0310%	1% - 2,75%	0,300%	0,0118%	1% - 2,75%	N/A	0,0160%	1% - 2,75%	0,2000%	0,0160%	1% - 2,75%	1,100%	0,4160%	See national fee
	Secure eCom	1,150%	0,0310%	1% - 2,75%	0,300%	0,0118%	1% - 2,75%	0,3000%	0,0160%	1% - 2,75%	0,2000%	0,0160%	1% - 2,75%	1,440%	0,4160%	See national fee
	Standard	1,450%	0,0310%	1% - 2,75%	0,300%	0,0118%	1% - 2,75%	0,3000%	0,0160%	1% - 2,75%	0,2000%	0,0160%	1% - 2,75%	1,600%	0,4160%	See national fee
Debit MasterCard	EMV/Electronic	0,460%	0,0310%	1% - 2,75%	0,200%	0,0118%	1% - 2,75%	0,3000%	0,0160%	1% - 2,75%	0,3000%	0,0160%	1% - 2,75%	1,100%	0,4160%	See national fee
	Secure eCom	0,560%	0,0310%	1% - 2,75%	0,200%	0,0118%	1% - 2,75%	0,2000%	0,0160%	1% - 2,75%	0,3000%	0,0160%	1% - 2,75%	1,440%	0,4160%	See national fee
	Standard	0,700%	0,0310%	1% - 2,75%	0,200%	0,0118%	1% - 2,75%	0,2000%	0,0160%	1% - 2,75%	0,3000%	0,0160%	1% - 2,75%	1,600%	0,4160%	See national fee
MC Premium/Commercial	Premium	1,550%	0,0310%	1% - 2,75%	0,300%	0,0118%	1% - 2,75%	0,2000%	0,0160%	1% - 2,75%	0,3000%	0,0160%	1% - 2,75%	1,980%	0,4160%	See national fee
	Super Premium	1,650%	0,0310%	1% - 2,75%	0,300%	0,0118%	1% - 2,75%	0,3000%	0,0160%	1% - 2,75%	0,3000%	0,0160%	1% - 2,75%	1,850%	0,4160%	See national fee
	Business	1,400%	0,0310%	1% - 2,75%	1,300%	0,0118%	1% - 2,75%	0,3000%	0,0160%	1% - 2,75%	0,8000%	0,0160%	1% - 2,75%	2,000%	0,4160%	See national fee
	Corporate/Purchasing	1,500%	0,0310%	1% - 2,75%	1,200%	0,0118%	1% - 2,75%	1,2500%	0,0160%	1% - 2,75%	0,9000%	0,0160%	1% - 2,75%	2,000%	0,4160%	See national fee
Maestro	EMV/Electronic	0,440%	0,0340%	1% - 2,75%	0,200%	0,0248%	1% - 2,75%	1,5000%	N/A	1% - 2,75%	0,9000%	0,0180%	1% - 2,75%	0,600%	0,4180%	See national fee

For more information, click here.*

*Microsoft Excel required