

	December 31, 2018					
	Gross Amounts Offset in the Consolidated Balance Sheets			Gross Amounts Not Offset in Consolidated Balance Sheets		
	Gross Amounts Recognized	Gross Amounts Offset	Net Amount Presented	Financial Instruments	Cash Collateral Received	Net Amount
Foreign exchange contracts assets	\$ 623	\$ —	\$ 623	\$ 549	\$ —	\$ 74
Foreign exchange contracts liabilities	549	—	549	549	—	—

## 5. Balance Sheet Components

### *Deferred Revenue*

Deferred revenue relates to performance obligations for which payments have been received by the customer prior to revenue recognition. Deferred revenue primarily consists of deferred software, or amounts allocated to mobile dashboard and on-line apps and unspecified upgrade rights. Deferred revenue also includes deferred subscription-based services. The deferred software and deferred subscription-based service performance obligations are anticipated to be recognized over the useful life or service periods of one to eighteen months.

Changes in the total short-term and long-term deferred revenue balance were as follows (in thousands):

	December 31,		
	2019	2018	2017
Beginning balances	\$ 36,836	\$ 42,432	\$ 49,904
Deferral of revenue	45,040	40,003	46,193
Recognition of deferred revenue	(41,034)	(45,599)	(53,665)
Ending balances	\$ 40,842	\$ 36,836	\$ 42,432

### *Revenue Returns Reserve*

Changes in the revenue returns reserve were as follows (in thousands):

	December 31,		
	2019	2018	2017
Beginning balances	\$ 104,001	\$ 109,872	\$ 98,851
Increases <sup>(1)</sup>	178,962	170,957	229,610
Returns taken	(181,637)	(176,828)	(218,589)
Ending balances	\$ 101,326	\$ 104,001	\$ 109,872

<sup>(1)</sup> Increases in the revenue returns reserve include provisions for open box returns and stock rotations.

### *Allowance for Doubtful Accounts*

Changes in the allowance for doubtful accounts were as follows (in thousands):

	December 31,		
	2019	2018	2017 <sup>(1)</sup>
Beginning balances	\$ 3,742	\$ 9,229	\$ 282
Increases	297	56	30,551
Write-offs	(291)	(5,543)	(21,604)
Ending balances	\$ 3,748	\$ 3,742	\$ 9,229

<sup>(1)</sup> Write-offs in 2017 was primarily related to the Wynit bankruptcy described in Note 7.