

**Sales-Type and Direct Financing Leases**

At December 31, 2019, the unguaranteed residual value of sales-type and direct financing leases was \$652 million. For further information on the company's net investment in leases, including guaranteed and unguaranteed residual values, refer to note K, "Financing Receivables."

For the years ended December 31, 2019 and 2018, impairment of residual values was immaterial.

The following table presents a maturity analysis of the lease payments due to IBM on sales-type and direct financing leases over the next five years and thereafter, as well as a reconciliation of the undiscounted cash flows to the financing receivables recognized in the Consolidated Balance Sheet at December 31, 2019:

(\$ in millions)	
	Total
2020	\$2,632
2021	1,921
2022	1,053
2023	382
2024	82
Thereafter	7
<b>Total undiscounted cash flows</b>	<b>\$6,077</b>
Present value of lease payments (recognized as financing receivables)	5,567*
<b>Difference between undiscounted cash flows and discounted cash flows</b>	<b>\$ (509)</b>

\* The present value of the lease payments will not equal the financing receivables balances in the Consolidated Balance Sheet, due to certain items including IDCs, allowance for credit losses and residual values, which are included in the financing receivables balances, but are not included in the future lease payments.

**Operating Leases**

The following table presents a maturity analysis of the undiscounted lease payments due to IBM on operating leases over the next five years and thereafter, at December 31, 2019:

(\$ in millions)	
	Total
2020	\$145
2021	35
2022	4
2023	0
2024	0
Thereafter	—
<b>Total undiscounted cash flows</b>	<b>\$184</b>

There were no material impairment losses incurred for equipment provided to clients under an operating lease for the year ended December 31, 2019.

At December 31, 2019, the unguaranteed residual value of operating leases was \$81 million.