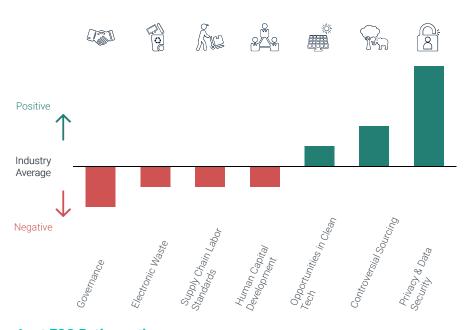
Technology Hardware, Storage & Peripherals | US

Robust data security practices; controversies weigh down on corporate behavior practices

Score attribution by key issue

This chart highlights the company's positioning relative to the industry average for each Key Issue that contributed to its ESG Rating as of December 28, 2021.



Last ESG Rating action

Rating action date: December 28, 2021

Apple has been upgraded to 'A' from 'BBB'.

Apple announced it has 1.6 billion active users. This is indicative of the large volume of sensitive personal data it handles and exposure to risks of compliance cost and adverse impact on reputation in case of a breach. The company monitors its data security programs through an overarching policy framework extending to all Apple and Apple-affiliated companies. Further, we note enhancements to user rights for third-party cookie tracking across its devices.

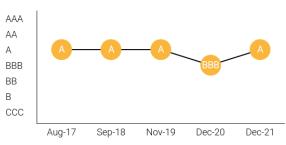
- Apple thrives on delivering 'ahead of curve' innovation in smart devices; this entails reliance on highly skilled talent. The company offers strong welfare benefits and professional development programs to remain an employer of choice in the competitive IT industry. Yet controversies pertaining to alleged unfair dismissals and employee discrimination persist.
- Apple's reliance on outsourced production exposes it to reputational risks and operational disruptions in case of labor unrest in its supply chain. While the company has instituted several industry best practices for supplier oversight, controversies related to supply chain labor may hint at potential gaps in policy implementation.
- Evidence suggests that Apple maintains robust business ethics policies and associated audit mechanisms. However, it has faced allegations ranging from anti-competitive business practices to misrepresentation of products features; these could lead to penalties, if found guilty.

Analysts: Akanksha Kumar, Siping Guo



LAST UPDATE: December 28, 2021

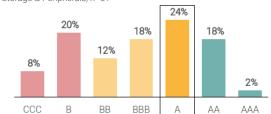
ESG Rating history



ESG Rating history shows five most recent rating actions

ESG Rating distribution

Universe: MSCI ACWI Index constituents, Technology Hardware, Storage & Peripherals, n=51



Key scores

	Weight	Score (0-10)
Industry-Adjusted Score		6.1
Weighted-Average Key Issue Score		4.7
Environmental Pillar Score	20%	3.8
Social Pillar Score	47%	5.6
Governance Pillar Score	33%	3.9

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Corporate governance	P05	Appendix	P58
summary		<u> </u>	
Analyst insights	P06	Glossary	P125
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What is an ESG Rating? MSCI ESG Ratings aim to measure a company's resilience to long-term ESG risks. Companies are scored on an industry-relative AAA-CCC scale across the most relevant Key Issues based on a company's business model.





LAST UPDATE: December 28, 2021

ESG Rating scorecard

As of December 28, 2021

As of December 28, 2021					
KEY ISSUE	WEIGHT	INDUSTRY AVERAGE	SCORE (0-10)	CHANGE	EXPLANATION
Weighted-Average Key Issue Score		4.2	4.7		
> ENVIRONMENT	20%	3.7	3.8	▲0.1	
Opportunities in Clean Tech	12%	3.6	4.5		 81% of revenues from business lines commonly involved in clean tech Targets to increase investments in clean tech
Electronic Waste	8%	3.9	2.8	▲0.3	 Involved in moderate controversy 100% of revenues in markets with stringent e-waste regulations E-waste management practices lagging peers
SOCIAL	47%	4.5	5.6	▲0.3	
Human Capital Development	16%	3.3	2.7	▼0.1	 Involved in severe & moderate controversies High proportion of operations rely on highly-skilled workers, combined with recent restructuring Lagging efforts to attract and retain talent relative to peers
Privacy & Data Security*	12%	7.2	9.2	▲1.6	Involved in moderate controversies Evidence of extensive data protection processes, including certification to external information security management standards and robust compliance programs (e.g., system audits and employee trainings)
Supply Chain Labor Standards	12%	5.5	4.5		 Involved in severe & moderate controversies High dependence on supply chains in regions with poor working conditions
Controversial Sourcing	7%	5.5	8.2		Strong initiatives compared to peers to source raw materials from non- controversial sources
> GOVERNANCE	33%	4.4	3.9	▲0.8	
Corporate Governance		5.6	6.4	▲0.7	 The company falls into the average scoring range relative to global peers, reflecting relatively few areas of concern.
Corporate Behavior		4.5	1.6	▲0.8	Involved in moderate controversies Substantial operations in business lines and regions associated with high perceived levels of corruption

^{*} denotes company-specific Key Issue

This table shows the Key Issue scores and weights contributing to the company's ESG Rating and any changes to those scores since the last ESG Rating action. The range of possible scores is 0-10, where 10 is best and 0 is worst.

Rating model details

Apple was rated based on a modified version of the **Technology Hardware**, **Storage** & **Peripherals** Industry ESG Rating model:

Privacy & Data Security has been added as a company-specific Key Issue due to the company's involvement in big data and analytics operations.

Company response

Response in last 12 months?	- Yes
Date of last interaction	- Dec 2021
Frequency of interactions*	- High

All companies are provided the opportunity to review their data. For details, see $\underline{\text{Appendix}}$ in full ESG Rating report.

*Frequency of interactions represents interactions over the past two years: High = Ten or more incoming communications; Medium = Between 3 and 9 incoming communications; Low = Between 1 and 2 incoming communications





Recent developments affecting ESG scores

This table shows the last 10 score changes* and rating actions that have occurred in the past 12 months. Date A Type Score (0-10) Change Explanation Current Weighted-Average Key Issue 4.7 Score ESG Rating action Dec 28, 2021 47 **▲** 0.4 Apple has been upgraded to 'A' from 'BBB'. Dec 28, 2021 Data Update: Controversies Dec 28, 2021 Data Update: Controversies Dec 27, 2021 Data Update: Exposure ▼0.3 Change in exposure score for the following Key Issue(s): Controversial Sourcing, Corporate Behavior, Electronic Waste, Human Capital Development, Opportunities in Clean Tech, Privacy & Data Security, Supply Chain Labor Standards, Dec 08, 2021 Data Update: Controversies ▼0.2 Severe controversy case(s): (1) Hong Kong: Allegations of improper layoffs from labor union Aug 10, 2021 Data Update: Corporate Governance ▼0.1 Flags Added: CEO Pay Total Realized Flags Removed: CEO Pay Perks & Other Comp Governance Score changed based on the listed Key Metric(s): Asset-Liability Valuation Issuer Verification: ESG ▲ 0.5 Feedback provided on Corporate Behavior, Electronic Waste and Jun 16, 2021 Privacy & Data Security Feb 19, 2021 Data Update: Corporate Governance ▲ 0.1 Flags Added: Expense Recognition, Revenue Recognition Flags Removed: Asset-Liability Valuation, Revenue Recognition Governance Score changed based on the listed Key Metric(s): Expense Recognition, Asset-Liability Valuation Jan 22, 2021 Data Update: Corporate Governance ▲ 0.2 Flags Added: CEO Pay Total Awarded Flags Removed: CEO Equity Changes, Not 30% Female Directors, Short-Term Pay Performance Governance Score changed based on the listed Key Metric(s): Entrenched Board

This table outlines the latest changes to specific data points that have occurred, the trigger for change (e.g. issuer feedback, data update or methodology enhancements) and the overall impact on the company's Weighted Average Key Issue Score. Companies are monitored on a continuous basis and significant score changes may trigger an ESG Rating action.

▼0.1

Apple has been downgraded to 'BBB' from 'A'.

4.2

View additional recent developments affecting the ESG score

ESG Rating action

Most recent controversies

Dec 11, 2020

Last update	Headline	Assessment	Туре
Dec-21	United States Congress inquiry into alleged anticompetitive business practices	Moderate	Anticompetitive Practices
Dec-21	France: Advertisers' complaint over new mobile applications privacy requirements; regulator investigation pending	Moderate	Anticompetitive Practices





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Dec-21	Dec-21 United States: Congress information request and lawsuits over allegations of anti-competitive practices favoring own		Anticompetitive
	apps sold through App Store		Practices
Dec-21	China: Allegations of illegally employing students at Chongqing facility that manufactured Apple watch	Moderate	Supply Chain Labor Standards
Dec-21	France: Finance ministry's lawsuit over allegedly abusive contractual terms imposed on app developers	Moderate	Anticompetitive Practices

This table shows the most recently updated controversies facing the company. Controversies are considered alongside other factors when assessing a company and may or may not impact the company's ESG Rating. For further details, See Controversies Detail section in full ESG Rating report appendix.





LAST UPDATE: December 28, 2021



^{*}CEO pay figures are sourced from listed company annual reports and proxy filings. When a new CEO is named the pay figures for the previous CEO will be displayed until this information has been updated for the new CEO

Peer benchmarking

LARGEST 5 INDUSTRY PEERS (TECHNOLOGY HARDWARE, STORAGE & PERIPHERALS)	Electronic Waste	Opportunities in Clean Tech	Human Capital Development	Supply Chain Labor Standards	Privacy & Data Security	Controversial Sourcing	Corporate Governance	Corporate Behaviour		9
CISCO SYSTEMS, INC.	N/A	• • • •	• • • •	• •	• • •	• • •	• •	• •	AA	4 >
MOTOROLA SOLUTIONS, INC.	N/A	• •	• • • •	• • • •	•	• • • •	• • •	• • •	AA	◆ ►
APPLE INC.	• •	• • • •	• •	• •	• • • •	••••	• • •	•	Α	A
Samsung Electronics Co., Ltd.	• • • •	• • • •	• • •	• •	• • •	• • • •	• • •	•	Α	4 >
DELL TECHNOLOGIES INC.	• • • •	• • •	• • • •	•	• • •	• • • •	• •	• • • •	Α	A
XIAOMI CORPORATION	•	•	• • • •	•	•	• •	•	• • •	В	4 ►

QUARTILE KEY : Bottom Quartile

Top Quartile

Top Quartile

Top Quartile

Upgrade

Upgrade by two or more notches

Downgrade

Downgrade

Downgrade by two or more notches

V

V

This table shows the company's positioning relative to five of its 51 industry peers. Industry peers are constituents of the MSCI ACWI Index in the ESG Ratings Industry classified as Technology Hardware, Storage & Peripherals, as of December 28, 2021. The selection of five industry peers in this distribution is based on market capitalization, sorted by ESG Ratings (best to worst).





Analyst insights

Sets ambitious target to reach net-zero for entire carbon footprint, but implementation challenges may persist

> October 29, 2021 Siping Guo

Scorecard assessed Apple's target as comprehensive compared with industry peers, as it covered most relevant emission categories, including upstream product manufacturing (Category 1, 71% of total emissions), product use-phase (Category 11, 19%) and product transportation (Category 9, 8%). Though Apple left the emissions from its capital goods (Category 2) out due to data availability issues, they may in fact add 16% to the company's emissions profile based on MSCI's Carbon Estimation Methodology.

To manage supply-chain emissions, Apple set a high bar in requiring as part of the company's Code of Conduct that its suppliers report carbon emissions and targets. Apple

In 2020, Apple committed to reaching net-zero emissions across its business operations and supply chain by 2030. With its entire hardware production outsourced, indirect value-

chain Scope 3 emissions comprised 99% of Apple's total emissions in 2020. MSCI's Target

To manage supply-chain emissions, Apple set a high bar in requiring as part of the company's Code of Conduct that its suppliers report carbon emissions and targets. Apple has supported suppliers through capacity-building and funding to improve their energy efficiency and adopt renewable energy sources. Apple appeared to be well on track to reduce its supply-chain carbon footprint in 2020, with a 44% reduction compared with 2019. But challenges may persist from its suppliers' presence mainly in markets with fossil-fuel-dominated power mixes such as China, Japan and Taiwan.

On the other hand, Apple also prioritized low-carbon design to decouple product enhancement with emissions. Apple has pioneered aligning environmental goals with product design and has showed solid progress at this over the years. This includes improving products' energy efficiency, shifting to recycled materials and designing durable hardware. However, Apple has been criticized and fined in Italy and France for allegedly perpetrating "planned obsolescence" in its products. Such a growth strategy, though not new to the tech industry, may lead to lost customer trust or scrutiny by regulators and may undermine Apple's climate goals.

iOS14.5 update: Progress on privacy but big tech gets bigger

May 24, 2021 Andrew Young A highly publicized update to Apple's operating system, iOS, will prompt Apple's customers to opt-in or out of third-party cookie tracking across their devices. The move attempts to balance a commitment to protect their customers online privacy with significant implications for online advertising markets that favor advertising giants like Facebook and Google.

Following the update, first-party cookies remain unchanged, so companies can still track visitors on their own apps and websites. But Apple device users will be able to opt out of third-party cookies which marketing companies use to track individuals' behavior across third-party apps and websites. It is expected that most* Apple device users will opt out of third-party cookie tracking.

Merchants pay advertising companies for marketing impressions (the number of times their advertisements are viewed). So, advertising companies compete based on their ability to produce the most promising audiences for merchant clients, using behavioral data from their proprietary platforms and from third-party cookies. Limiting third-party cookies doesn't exactly revert companies back to the old days of 'spray and pray' advertising but will reduce the ability for companies to target individuals. This may concentrate the advertising market toward the advertising companies with the most proprietary data collection capability, i.e. Facebook and Google.

Third-party cookies have been dying a slow death. Regulatory scrutiny may have contributed to Apple's Safari search engine allowing third-party cookie blocking in 2020, following a similar move by Mozilla's Firefox in 2019. The world's most popular search platform, Google Chrome announced plans to block third-party cookies in 2022. Both Apple and Google are developing proprietary alternative technologies to support advertisers in a post-third-party cookie environment.

*Adexchanger.com, "Will people actually opt in to IDFA tracking?", June 25, 2020

Pig tech anti-trust enforcement: Pincer movement

November 02, 2020

Andrew Young

The US 'big tech' companies, Apple, Amazon, Facebook and Alphabet have faced significant anti-trust scrutiny in their home market in 2020. This includes hearings by the US Senate Judiciary Committee in August 2020 and document request orders from





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the regulator, the US Federal Trade Commission (FTC) in February 2020 regarding their acquisitions between 2010 and 2020, which are being subjected to fresh antitrust review. The outcome of these investigations has culminated in an antitrust case brought by the Department of Justice (DoJ) against Alphabet's Google Search internet search engine which enjoys a market share approaching 90% in the US (see research note: "Default Status" on the Alphabet ESG Ratings report).

There may be many questions about what this case means for this group of big tech companies, such as, who will be next? But the group of companies might do well to keep their eye on as seemingly more forward-looking anti-trust regulator, the European Commission (EC):

The EC has open investigations into Apple and Amazon and is in a legal dispute with Facebook. It fined Alphabet a combined EUR8.2 billion in three separate cases between 2017 and 2019, including in a similar case of product 'bundling' to the one launched by the DoJ. However, the EC's Commissioner for Competition, Margarethe Vestager suggested that cases to date have been ineffectual from the point of view of stimulating competition (Reuters interview, June 2020). It appears to have shifted focus to a regulatory approach to stimulating competition: The region's anticipated Digital Services Act (publication is expected by the end of 2020) may have implications for all the US big tech companies. For example, it may require tech companies to share data with smaller competitors in standardized and non-discriminatory ways, potentially lowering the barriers for access to data, a key input for innovation.

Lapses in supply chain labor management may deepen concerns over COVID-19's impact on business continuity

March 20, 2020 Siping Guo Apple issued a warning about its quarterly earnings in February and reportedly delayed a product announcement in March as a result of the COVID-19 outbreak. Apple's final-products assembly suppliers are almost entirely concentrated in China, where they have been hit hard by operations suspensions and labor shortages. Although there were signs of production recovery at its major contract manufacturers (for example, Foxconn's Zhengzhou campus reportedly had 80% of its workforce back on March 15), the lack of company initiatives to prevent labor law violations could put lasting constraints on Apple's supply chain.

Apple's past high production volume and timely delivery in peak sales seasons was allegedly supported by heavy reliance on temporary workers (far beyond the 10% of workforce limit set by China's Labor Law) and excessive or forced overtime in its supply chain. We have not found concrete efforts from the company to address such violations in China. The situation there might be further exacerbated by ongoing labor shortages amid COVID-19 outbreak, and Apple's suppliers are likely to request more overtime to make up for delivery delays and revenue losses. If Apple can't collaborate with its suppliers in China to assure fair labor conditions while again ramping up production, the U.S. tech giant may face heightened risks of labor unrest and reputational damage with a supply chain heavily concentrated at the origin of the COVID-19 pandemic.

2019 green bonds for "low carbon design" among penalties for phone slowdowns raise questions on green-washing

> February 17, 2020 Meghna Mehta

In November 2019, Apple issued two green bonds worth USD 1 billion each to fund, among other things, low carbon design and engineering of new products. This included "expenditures related to the development or procurement of less carbon-intensive products and materials, such as improving product power usage efficiency, using materials produced from manufacturing processes requiring lesser greenhouse gas emissions, or sourcing materials with recycled or renewable content." While the company aims to lower the carbon impact of its products through initiatives financed by its bonds, its efforts could be met with skepticism, especially as Apple has faced allegations of reducing the life span of its phones. In February 2020, French regulators fined Apple approximately USD 27 million for intentionally capping the performance of old phone models without notifying users. In 2018, the company was fined by Italian regulators for similar reasons, and the company faces a number of lawsuits from other stakeholders including individual end users, for this specific reason. Extending product life span could be among the most effective way to reduce Apple's overall carbon footprint, because it would minimize the use of material and energy needed to create and distribute new phones.

As of February 17, 2020, the Apple green bonds were under review for the Bloomberg Barclays MSCI Green Bond Index. See also Green Bond Technical Note – February 2020 published on Jan 27, 2020 and available on ESG Manager.





ESG Rating drill down

	As of prior rating act	ion date: Dec 11, 2020	As of last update	date: Dec 28, 2021	Diffe	rence
Description	Score	Weight	Score	Weight	Score	Weigh
SG Rating Letter Grade	BBB		А		-	-
ndustry Adjusted Score	4.5		6.1		1.6	-
ndustry Minimum Score	2.7		2.7		-	-
ndustry Maximum Score	6.0		6.0		-	-
Veighted Average Key Issue Score	4.2		4.7		0.5	-
invironmental Pillar Score	3.7	20.0%	3.8	20.0%	0.1	-
Electronic Waste Key Issue Score	2.5	8.0%	2.8	8.0%	0.3	-
Exposure Score	7.8		8.2		0.4	-
Business Segment Exposure Score	5.9		6.0		0.1	-
Geographic Exposure Score	8.3		8.7		0.4	-
Management Score	3.3		4.0		0.7	-
Management Score - Excluding Controversies	4.1		4.8		0.7	-
Practices Score	4.1		4.8		0.7	-
Controversy Deduction	-0.8		-0.8		-	-
Opportunities in Clean Tech Key Issue Score	4.5	12.0%	4.5	12.0%	-	-
Exposure Score	5.2		6.4		1.2	-
Business Segment Exposure Score	5.2		6.4		1.2	-
Management Score	4.3		4.4		0.1	-
Management Score - Excluding Controversies	4.3		4.4		0.1	-
Practices Score	5.8		5.8		-	-
Performance Score	1.5		1.8		0.3	-
Controversy Deduction	0.0		0.0		-	-
ocial Pillar Score	5.3	47.0%	5.6	47.0%	0.3	-
Human Capital Development Key Issue Score	2.8	16.0%	2.7	16.0%	-0.1	-
Exposure Score	9.3		9.1		-0.2	-
Business Segment Exposure Score	8.3		8.1		-0.1	-
Company-Specific Exposure Score	1.0		1.0		-	-
Management Score	5.1		4.8		-0.3	-
Management Score - Excluding Controversies	6.4		7.3		0.9	-
Practices Score	6.3		7.6		1.3	-
Performance Score	6.5		6.5		-	-
Controversy Deduction	-1.3		-2.5		-1.2	-
Privacy & Data Security Key Issue Score	7.6	12.0%	9.2	12.0%	1.6	-
Exposure Score	5.4		6.5		1.1	-
Business Segment Exposure Score	4.3		6.5		2.2	-
Geographic Exposure Score	7.4		7.6		0.2	-
Management Score	6.0		8.7		2.7	-
Management Score - Excluding Controversies	7.3		10.0		2.7	-
Practices Score	7.3		10.0		2.7	-
Controversy Deduction	-1.3		-1.3			





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	As of prior rating ac	ction date: Dec 11, 2020	As of last update	e date: Dec 28, 2021	Diffe	erence
Description	Score	Weight	Score	Weight	Score	Weigh
Supply Chain Labor standards Key Issue Score	4.5	12.0%	4.5	12.0%	-	-
Exposure Score	10.0		10.0		-	-
Company-Specific Exposure Score	10.0		10.0		-	-
Management Score	7.5		7.5		-	-
Management Score - Excluding Controversies	10.0		10.0		-	-
Practices Score	10.0		10.0		-	-
Controversy Deduction	-2.5		-2.5		-	-
Controversial Sourcing Key Issue Score	8.2	7.0%	8.2	7.0%	-	-
Exposure Score	7.0		7.0		-	-
Company-Specific Exposure Score	7.0		7.0		-	-
Management Score	8.2		8.2		-	-
Management Score - Excluding Controversies	8.2		8.2		-	-
Practices Score	8.2		8.2		-	-
Controversy Deduction	0.0		0.0		-	-
Governance Pillar Score*	3.1	33.0%	3.9	33.0%	0.8	-
Governance Pillar Deductions**	-6.9		-6.1		0.8	-
Corporate Governance Deductions	-3.3		-2.8		0.5	-
Board	-1.6		-1.3		0.2	-
Pay	-0.8		-0.6		0.2	-
Ownership & Control	-0.5		-0.5		-	-
Accounting	-0.5		-0.4		0.2	-
Corporate Behavior Deductions	-3.6		-3.3		0.3	-
Business Ethics	-3.3		-2.7		0.6	-
- -	2.2					

^{*}Companies last rated prior to November 2020 will continue to show legacy Governance Key Issues (Corruption & Instability, Financial System Instability, Business Ethics & Fraud, and Anticompetitive Practices) in the ESG Rating drill down. These key issues will be removed from the drill down and replaced with Corporate Behavior and Corporate Governance Deductions at the next re-rating.

-0.5

-0.3

Tax Transparency

-0.2

^{**}Beginning November 2020, the Environmental Pillar Score and Social Pillar Score are calculated based on the weighted average of underlying Key Issue Scores, while the Governance Pillar Score is calculated based on 10 minus the sum of Corporate Governance and Corporate Behavior deductions. In the ESG Rating drill-down, deductions are scaled to indicate impact on the overall Governance Pillar Score. In subsequent sections of the report, deductions are scaled to show impact on the Corporate Behavior and Corporate Governance Theme Scores.



Overflow table: Recent developments affecting ESG scores

Date ▲	Туре	Score (0-10)	Change	Explanation
	Current Weighted-Average Key Issue Score	4.7		
Dec 28, 2021	ESG Rating action	4.7	▲0.4	Apple has been upgraded to 'A' from 'BBB'.
Dec 28, 2021	Data Update: Controversies			
Dec 28, 2021	Data Update: Controversies			
Dec 27, 2021	Data Update: Exposure		▼0.3	Change in exposure score for the following Key Issue(s): Controversial Sourcing, Corporate Behavior, Electronic Waste, Human Capital Development, Opportunities in Clean Tech, Privacy & Data Security, Supply Chain Labor Standards,
Dec 08, 2021	Data Update: Controversies		▼0.2	Severe controversy case(s): (1) Hong Kong: Allegations of improper layoffs from labor union
Aug 10, 2021	Data Update: Corporate Governance		▼0.1	Flags Added: CEO Pay Total Realized Flags Removed: CEO Pay Perks & Other Comp Governance Score changed based on the listed Key Metric(s): Asset-Liability Valuation
Jun 16, 2021	Issuer Verification: ESG		▲0.5	Feedback provided on Corporate Behavior, Electronic Waste and Privacy & Data Security
Feb 19, 2021	Data Update: Corporate Governance		▲0.1	Flags Added: Expense Recognition, Revenue Recognition Flags Removed: Asset-Liability Valuation, Revenue Recognition Governance Score changed based on the listed Key Metric(s): Expense Recognition, Asset-Liability Valuation
Jan 22, 2021	Data Update: Corporate Governance		▲0.2	Flags Added: CEO Pay Total Awarded Flags Removed: CEO Equity Changes, Not 30% Female Directors, Short-Term Pay Performance Governance Score changed based on the listed Key Metric(s): Entrenched Board
Dec 11, 2020	ESG Rating action	4.2	▼0.1	Apple has been downgraded to 'BBB' from 'A'.
Dec 11, 2020	Data Update: Corporate Governance			Flags Added: CEO Pay Perks & Other Comp, CEO Pay Total Fixed Flags Removed: CEO Pay Total Fixed
Dec 11, 2020	Data Update: Controversies			
Nov 05, 2020	Methodology Update: ESG Ratings	4.3	▼0.5	Methodology Enhancements: scores recalculated to reflect enhancements to the ESG Ratings model.
May 08, 2020	Data Update: Governance		▼0.1	Governance Score changed based on the listed Key Metric(s): Asset-Liability Valuation, Expense Recognition
May 08, 2020	Data Update: Governance		▼0.1	Governance Score changed based on the listed Key Metric(s): Asset-Liability Valuation, Expense Recognition





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Apr 08, 2020	Data Update: Controversies		▼0.1	Severe controversy case(s): (1) Xinjiang region: Allegations of subjecting Uyghurs to forced labor in factories
Dec 18, 2019	Data Update: Controversies		▼0.1	Moderate controversy case(s): (1) Oregon, United States: Lawsuit over Alleged Unfair Dismissal and Failure to Protect Employee from Customers' Racial Discrimination (2) Cork, Ireland: EUR 15,000 Compensation to Former Employee over Alleged Unfair Dismissal and Violation of Data Privacy
Nov 04, 2019	ESG Rating action	5.1		Apple's rating is unchanged at 'A'.





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Corporate Governance

Score	Change (since rating)	Quartile	As of
6.4	▲ 0.7	•••	Dec 23, 2021

Market Cap: 2,958,565,571,010 USD Home Market: United States Last Data Update: Dec 23, 2021

GOVERNANCE THEMES AND RANKINGS



SUMMARY

APPLE falls into the average scoring range for all the companies we assess relative to global peers and reflects a relatively low level of governance risk in most areas.

KEY AREAS OF CONCERN*

SCORING DEDUCTIONS

Board Skills & Diversity Entrenched Board	(-1.01)
Risk Management Expertise	
Pay Figures	(-0.60)
CEO Pay Total Realized	
CEO Pay Perks & Other Comp	
CEO Pay Total Fixed	
Board Effectiveness	(-0.51)
Overboarded Non-Exec Directors	

KEY DATES

September 26
Jan 05, 2021
Feb 23, 2021

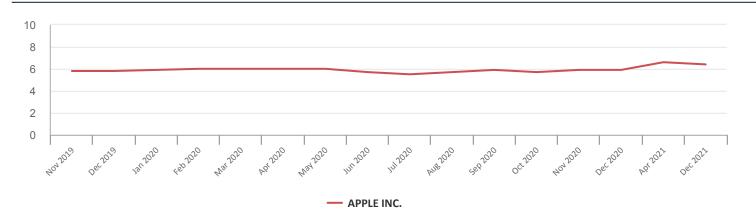
WEBSITE

https://www.apple.com/

*Key areas of concern include flagged key metrics within the three subissues that represent the largest scoring deductions. Please review the full report to see the complete set of flagged key metrics.



CORPORATE GOVERNANCE SCORE HISTORY



CHANGES TO FLAGGED KEY METRICS (SINCE AUGUST 2020)

Key Metric	Key Metric Change	Date	Score Change*	Change Notes
CEO Pay Total Awarded	Flag Removed	Nov 12, 2021	0.20	
CEO Pay Perks & Other Comp	Flag Added	Jul 29, 2021	-0.20	
CEO Pay Perks & Other Comp	Flag Removed	Jul 23, 2021	0.20	
CEO Pay Total Realized	Flag Added	Jun 21, 2021	-0.20	
Revenue Recognition	Flag Removed	Feb 18, 2021	-0.04	Updates to data for accounting peer group member(s)
Asset-Liability Valuation	Flag Removed	Feb 18, 2021	-0.03	Updates to data for accounting peer group member(s)
Revenue Recognition	Flag Added	Feb 15, 2021	0.04	Updates to data for accounting peer group member(s)
Expense Recognition	Flag Added	Feb 15, 2021	0.21	Updates to data for accounting peer group member(s)
Short-Term Pay Performance	Flag Removed	Jan 21, 2021	0.20	
Not 30% Female Directors	Flag Removed	Jan 21, 2021	0.10	
CEO Pay Total Awarded	Flag Added	Jan 21, 2021	-0.20	
CEO Equity Changes	Flag Removed	Jan 21, 2021	0.20	
CEO Pay Total Fixed	Flag Added	Dec 04, 2020	-0.20	
CEO Pay Total Fixed	Flag Removed	Nov 17, 2020	0.20	
CEO Pay Perks & Other Comp	Flag Added	Nov 17, 2020	-0.20	
CEO Pay Perks & Other Comp	Flag Removed	Oct 23, 2020	0.20	
Expense Recognition	Flag Removed	Oct 09, 2020	0.04	Updates to data for accounting peer group member(s)
CEO Pay Total Fixed	Flag Added	Sep 23, 2020	-0.20	

Note: A full list of score changes (including where there is no Key Metric Change) is included in the Appendix. *Score change available in respect of changes dated on or after 13 December 2017.





LAST UPDATE: December 28, 2021

BOARD OVERVIEW

Board Type: Unitary Board

Board of Directors



Since: Aug 24, 2011 Since: Nov 15, 2011

Executive Leadership

CFO Luca Maestri Since: May 29, 2014

■Executive ■Links to Management ■Independent of Management

PAY OVERVIEW

Highest Paid Executive - Deirdre O'Brien



Long Term Incentives AwardedShort Term Incentives Awarded

■ Fixed Pay

21,657,687 (USD) 3,577,000 (USD) 1,037,684 (USD)





LAST UPDATE: December 28, 2021

BOARD

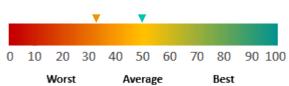
The policies and practices of the APPLE board fall within the average scoring range relative to global peers. We have flagged this board for potential concerns regarding possible board entrenchment and some non-executives may have too many other public board commitments.

0-10 Score	Global Percentile Rank	Home Market Percentile Rank		
7.1	51 st (Average)	34 th (Average)		

KEY METRICS SCORING

	Deduction
AUDIT OVERSIGHT	
Audit Committee Industry Expert	-0.10
Overboarded Audit Committee Members	-0.10
BOARD EFFECTIVENESS	
Overboarded Non-Exec Directors	-0.51
BOARD INDEPENDENCE	
BOARD SKILLS & DIVERSITY	
≈ Entrenched Board	-0.81
Risk Management Expertise	-0.20





BOARD PERFORMANCE VS.

LEADERSHIP

CHIEF EXECUTIVE OFFICER

History	CEO Since	Until	Name	Gender	Age
Current	Aug 2011		Timothy (Tim) Cook	M	60

CHIEF FINANCIAL OFFICER

History	CFO Since	Until	Name	Gender	Age
Current	May 2014		Luca Maestri	M	57

CHAIR

History	Chair Since	Until	Name	Gender	Age
Current	Nov 2011		Arthur (Art) Levinson	M	70





LAST UPDATE: December 28, 2021

BOARD OF DIRECTORS

The APPLE board currently has an independent majority, which enables it to more effectively fulfill its critical function of overseeing management on behalf of shareholders. Additionally, the company has split the roles of CEO and chair and has named a fully independent chairman. An independent chairman is characteristic of 37% of companies in MSCI ESG Research's coverage.

Number of Board Meetings: 4

Non-executives meet in absence of Executives: Yes

Name	M/F	Age	Tenure (Years)	Boards	Indepe of Mgmt	endent of Other Interests	Management Link/ Designation Reason	Nationality
Albert (Al) Gore Jr. \$	М	72	18	1	Yes	Yes		Not Disclosed
Alex Gorsky	М	60	< 1	3	Yes	Yes		Not Disclosed
Andrea Jung	F	62	13	2	Yes	Yes		United States of America
Arthur (Art) Levinson COB	М	70	21	1	Yes	Yes		Not Disclosed
James Bell \$	М	73	6	2	Yes	Yes		United States of America
Monica Lozano	F	64	< 1	3	Yes	Yes		United States of America
Ronald (Ron) Sugar \$	М	72	11	4	Yes	Yes		Not Disclosed
Susan (Sue) Wagner \$	F	59	7	3	Yes	No	Special Shareholder Representative	United States of America
Timothy (Tim) Cook CEO 1	М	60	10	2	No	Yes	Executive	United States of America
	F	# >= 70	# >= 15 yrs	# >= 4				
Total (of 9)	3	4	2	1	8	8		
Percentage	33.3%	44.4%	22.2%	11.1%	88.9%	88.9%		

 $Note: Board\ count\ includes\ the\ membership\ of\ this\ board.$

💲 - Financial Expert (4) 🚺 - Industry Expert 🚾 - Chief Executive Officer 🚾 - Chair of the Board

BOARD EFFECTIVENESS

We note that 29% of companies in United States are flagged for overboarded directors.

Nomination Committee - Number Of Meetings: 4

Name	M/F	Age	Board Tenure (Years)	Indepe of Mgmt	endent of Other Interests	Committee Status
Albert (Al) Gore Jr. \$	M	72	18	Yes	Yes	Member
Alex Gorsky	M	60	<1	Yes	Yes	Member
Andrea Jung	F	62	13	Yes	Yes	Member
Susan (Sue) Wagner \$	F	59	7	Yes	No	Chair

\$ - Financial Expert (2)





LAST UPDATE: December 28, 2021

BOARD SKILLS & DIVERSITY

MSCI ESG Research has flagged the board as potentially entrenched due to a number of long-serving directors. An entrenched board may be detrimental to sustainable shareholder interests during periods of extended underperformance and we do see the potential for such entrenchment at this firm due to a significant number of long-serving directors. While we recognize the benefits of experience, long-tenured directors may form relationships that could compromise their independence and therefore hinder their ability to provide effective oversight. We note that 26% in United States have been flagged for having an entrenched board.

A board with one or more active CEOs and overboarded directors may not be able to provide effective oversight of management. Their other roles may limit the time and attention required to fulfill their fiduciary duties.

AUDIT OVERSIGHT

Audit Committee - Number Of Meetings: 8

Name	M/F	Age	Board Tenure (Years)	Boards	Indepe of Mgmt	endent of Other Interests	Committee Status
James Bell \$	M	73	6	2	Yes	Yes	Member
Monica Lozano	F	64	< 1	3	Yes	Yes	Member
Ronald (Ron) Sugar \$	M	72	11	4	Yes	Yes	Chair
Susan (Sue) Wagner \$	F	59	7	3	Yes	No	Member

\$ - Financial Expert (3)

Risk Committee - Number Of Meetings: 8

Name	M/F	Age	Board Tenure (Years)	Indepe of Mgmt	endent of Other Interests	Committee Status
James Bell \$	M	73	6	Yes	Yes	Member
Monica Lozano	F	64	<1	Yes	Yes	Member
Ronald (Ron) Sugar \$	M	72	11	Yes	Yes	Chair
Susan (Sue) Wagner \$	F	59	7	Yes	No	Member

\$ - Financial Expert (3)





PAY OVERSIGHT

Pay Committee - Number Of Meetings: 6

The APPLE board includes an independent pay committee, which is considered best practice for oversight of executive pay according to international corporate governance standards.

Name	M/F	Age	Board Tenure (Years)	Independent enure (Years) of Mgmt of Other CEO Ro Interests		CEO Role?	Committee Status
Albert (Al) Gore Jr. \$	M	72	18	Yes	Yes		Member
Andrea Jung	F	62	13	Yes	Yes		Chair
Arthur (Art) Levinson	M	70	21	Yes	Yes		Member

\$ - Financial Expert

CONTROVERSIES & EVENTS

No major relevant controversies have been uncovered.



PAY

Executive pay practices at APPLE fall into the average scoring range relative to global peers.

0-10 Score	Global Percentile Rank	Home Market Percentile Rank		
6.4	61 st (Average)	60 th (Average)		

KEY METRICS SCORING

	Deduction
PAY FIGURES	
CEO Pay Total Realized	-0.20
CEO Pay Perks & Other Comp	-0.20
CEO Pay Total Fixed	-0.20
PAY PERFORMANCE ALIGNMENT	
Pay Linked to Sustainability	-0.20



PAY FIGURES

EXECUTIVE PAY - 2020

Executive	Title	Tenure (Years)	Total Awarded Pay (USD)	Total Realized Pay (USD)
Deirdre O'Brien	Executive		26,272,371	15,287,812
Jeffrey (Jeff) Williams	Executive		26,251,824	56,181,492
Katherine (Kate) Adams	Executive		26,248,997	8,475,952
Luca Maestri (1) \$	CFO	7	26,253,270	56,182,938
Timothy (Tim) Cook	CEO	10	14,769,259	296,690,059

S - Financial Expert 1 - Industry Expert (5)





CEO PAY DETAILS - Timothy (Tim) Cook

Pay Awarded	2020
Fixed Pay	
Salary	3,000,000 USD
Fees	0 USD
Pension	0 USD
Perks & Other Pay	1,038,259 USD
Variable Pay	
Short-term incentives	
Annual Bonus	0 USD
Other Non-equity Incentive Plan	10,731,000 USD
Long-term incentives	
Grant date value of Stock Options	0 USD
Grant date value of Stock Awards	0 USD
Total Awarded Pay	14,769,259 USD

Pay Realized	
Fixed Pay	
Salary	3,000,000 USD
Fees	0 USD
Pension	0 USD
Perks & Other Pay	1,038,259 USD
Variable Pay	
Short-term incentives	
Annual Bonus	0 USD
Other Non-equity Incentive Plan	10,731,000 USD
Long-term incentives	
Options Exercised	0 USD
Stock Awards Vested	281,920,800 USD
Total Realized Pay	296,690,059 USD

PAY PEER GROUP

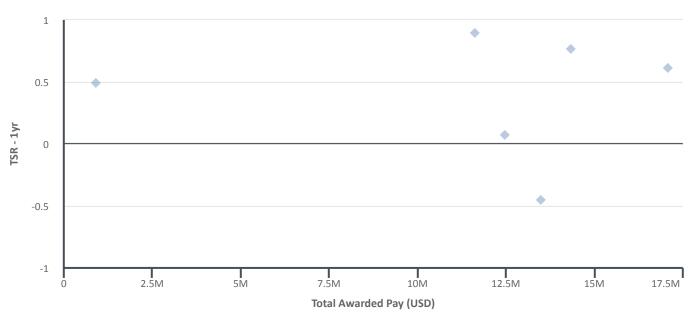
LARGECAP - DEVELOPED AMERICAS - TECHNOLOGY HARDWARE, STORAGE & PERIPHERALS (7 COMPANIES)

Company	Home Market	Market Cap (USD m)	Pay Year	1 Yr TSR	Total CEO Annual Pay (USD)	CEO Name	CEO Since
APPLE INC.	United States	2,892,120	2020		14,769,259	Cook	Aug 2011
WESTERN DIGITAL CORPORATION	United States	19,071	2021	0.61%	4,605,575	Goeckeler	Mar 2020
HP INC.	United States	40,765	2020	0.07%	4,502,940	Lores	Nov 2019
NETAPP, INC.	United States	19,456	2021	0.77%	3,579,332	Kurian	Jun 2015
SEAGATE TECHNOLOGY HOLDINGS PUBLIC LIMITED COMPANY	United States	22,858	2021	0.89%	3,111,403	Mosley	Oct 2017
HEWLETT PACKARD ENTERPRISE COMPANY	United States	19,307	2020	-0.45%	2,678,310	Neri	Feb 2018
DELL TECHNOLOGIES INC.	United States	44,729	2021	0.49%	930,415	Dell	Oct 2013



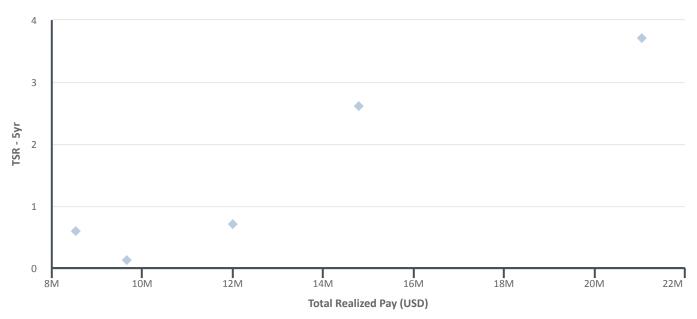


CEO TOTAL AWARDED PAY VERSUS PAY PEER GROUP



Pay Peers (*) are used in the calculation of the Key Metric CEO Pay Total Summary and selected as set out in the MSCI Governance Metrics Methodology Document.

CEO TOTAL REALIZED PAY VERSUS PAY PEER GROUP



Pay Peers (*) are used in the calculation of the Key Metric CEO Pay Total Summary and selected as set out in the MSCI Governance Metrics Methodology Document.

PAY PERFORMANCE ALIGNMENT

CEO & EXECUTIVE EQUITY

CEO equity policy as a multiple of salary:

10.0

Stock Ownership Guidelines: Under our stock ownership guidelines, Mr. Cook is expected to own shares of Apple stock that have a value equal to 10 times his annual base salary.





Executive	Tenure (Years)	Shares Held	YoY % Change	Shareholding As % of Salary
Deirdre O'Brien		982,028		
Jeffrey (Jeff) Williams		1,670,592		
Katherine (Kate) Adams		1,231,472		
Luca Maestri 1 \$	7	1,291,604		
Timothy (Tim) Cook	10	9,057,470	239.49%	33899.09%

\$ - Financial Expert | - Industry Expert (5)

PAY LINKED TO SUSTAINABILITY

The company has failed to incorporate links to sustainability performance in its current incentive pay policies.

CLAWBACK & MALUS

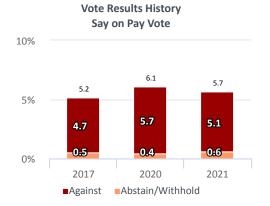
Clawback or malus provisions are in place.

Clawback Type:

Fraudulent

LATEST PAY VOTES

Year	Vote Type	Votes For %	Votes Against %	Abstain %
2021	Advisory Vote on Executive Compensation	94.3%	5.1%	0.6%



EQUITY PLAN DILUTION

	2020	2019	2018
Shares Outstanding	17,001,802,000	4,443,265,000	4,745,398,000
Equity Reserved	7.2%	8.1%	8.6%
Shares granted/awarded (in year)	0.9%	0.8%	1%





NON-EXECUTIVE DIRECTOR PAY

NON-EXECUTIVE EQUITY

Director	Tenure (Years)	Shares Held
Albert (Al) Gore Jr. \$	18	463,472
Andrea Jung	13	137,608
Arthur (Art) Levinson	21	4,592,140
James Bell \$	6	34,280
Monica Lozano	< 1	1,568
Ronald (Ron) Sugar \$	11	102,272
Susan (Sue) Wagner \$	7	62,652

\$ - Financial Expert (4)

NON-EXECUTIVE PAY TABLES

Director	Tenure (Years)	Cash Fees	Other Comp	Stock Award	Total Pay	Total Pay (USD)
Albert (Al) Gore Jr. \$	18	100,000 USD	8,398 USD	249,923 USD	358,321 USD	358,321
Andrea Jung	13	130,000 USD	22,282 USD	249,923 USD	402,205 USD	402,205
Arthur (Art) Levinson	21	300,000 USD	28,222 USD	249,923 USD	578,145 USD	578,145
James Bell \$	6	100,000 USD	9,179 USD	249,923 USD	359,102 USD	359,102
Ronald (Ron) Sugar \$	11	135,000 USD	13,704 USD	249,923 USD	398,627 USD	398,627
Susan (Sue) Wagner \$	7	125,000 USD	224 USD	249,923 USD	375,147 USD	375,147

\$ - Financial Expert (4)

CONTROVERSIES & EVENTS

No major relevant controversies have been uncovered.





OWNERSHIP & CONTROL

The company's ownership structure and shareholder rights at APPLE fall within the average scoring relative to global peers.

0-10 Score	Global Percentile Rank	Home Market Percentile Rank
7.9	62 nd (Average)	97 th (Best In Class)

KEY METRICS SCORING

	Deduction
DIRECTOR ELECTIONS	
Majority Voting	-0.20
OWNERSHIP STRUCTURE	
Dispersed Ownership Concerns	-0.20
SHAREHOLDER RIGHTS	
Bylaws Amendments	-0.10
TAKEOVER PROVISIONS	
Fair Bid Treatment Provisions	-0.10



CORPORATE STRUCTURE

Public Company

CAPITAL STRUCTURE

Capital Type	Votes Per Share	Shares Outstanding
Common stock	1.0	16,823,263,000

The Company's shares outstanding are Common Stock.

OWNERSHIP STRUCTURE

OWNERSHIP CATEGORIES

• Widely Held

NOTABLE SHAREHOLDERS

There is no principal shareholder at this firm. 5%+ shareholders - Aggregate Voting Power

20.4%

The company does not have a special capital structure, thus one vote right is afforded per common share. This principle of 'one share one vote' helps align economic and voting power and ensures that no class of shareholders has more voting power than economic exposure.





TAKEOVER PROVISIONS

Fair Price Provision	Mandatory Bid Provision	Mandatory Bid Ownership	Th:
No	No		
State of Incorporation	Business Co	mbination Provision	
California		No	
% of Votes to Approve a	Merger		
51%			

GOVERNING DOCUMENTS

MAJORITY REQUIREMENTS

	Bylaws	Charter
Default percentage of votes required to amend a provision	51%	51%

These Bylaws may be adopted, amended or repealed by the vote or written consent of holders of a majority of the outstanding shares entitled to vote. Any bylaws specifying or changing a fixed number of directors or the maximum or minimum number or changing from a fixed to a variable board or vice versa may only be adopted by the shareholders; provided, however, that a bylaw or amendment of the Articles of Incorporation reducing the number or the minimum number of directors to a number less than five (5) cannot be adopted it the votes cast against its adoption at a meeting or the shares not consenting in the case of action by written consent are equal to more than sixteen and two-thirds percent (16-2/3%) of the outstanding shares entitled to vote.

Articles of Incorporation

SHAREHOLDER RIGHTS

There may be governance risks for investors in relation to shareholder rights and management-controlled takeover defense mechanisms at APPLE including:

- The board's ability to amend the company's bylaws without shareholder approval
- fair price provisions that fail to ensure that all shareholders are treated fairly

SHAREHOLDER MEETINGS & RESOLUTIONS

	Call Special Meeting	Requisition a Resolution at AGM	Act by Written Consent
Percentage of shares required	10%		51%

RESTRICTIONS ON LEGAL ACTION BY SHAREHOLDERS

No exclusive forum provision has been identified.





SAY ON PAY

We note that shareholder votes on executive pay are mandatory in this market, affording shareholders the ability to review and approve executive pay practices at this company.

DIRECTOR ELECTIONS

BOARD RE-ELECTION PROVISIONS

Board Re-election Provisions	
Board Re-election Frequency (Years)	1
% of Board subject to re-election	100%

DIRECTOR ELECTION STANDARD

The company has not adopted a binding majority director election standard (with immediate resignation if the director does not receive a majority of the votes cast), which may limit shareholders' ability to hold members of the board accountable in uncontested elections.

Director Election Rules	
Vote Standard	Majority & Resignation Policy
Immediate Binding Resignation	No

Each Director elected at the Annual Meeting will be elected to serve a one-year term.

With respect to the election of directors (Proposal No. 1), the Company's bylaws provide that in an uncontested election of directors the affirmative vote of (i) a majority of the shares present or represented by proxy and voting at the Annual Meeting and (ii) a majority of the shares required to constitute a quorum is required to elect a director.

An "uncontested election of directors" means an election of directors in which, at the expiration of the time fixed pursuant to the Company's bylaws requiring advance notice of director candidates, the number of candidates for election does not exceed the number of directors to be elected by the shareholders at that election. Also, under the Company's bylaws, the term of any incumbent director who (1) does not receive the affirmative vote of (i) a majority of the shares present or represented by proxy and voting at the Annual Meeting and (ii) a majority of the shares required to constitute a quorum, and (2) has not earlier resigned, will end on the date that is the earlier of: (a) 90 days after the date on which the voting results for the Annual Meeting are determined by the inspector of election; or (b) the date on which the Board selects a person to fill the office held by that director in accordance with the Company's bylaws.

2021 DEF 14A p. 58- Apple has implemented majority voting in uncontested elections of directors. Accordingly, Apple's bylaws provide that in an uncontested election of directors the affirmative vote of (i) a majority of the shares present or represented by proxy and voting at the Annual Meeting and (ii) a majority of the shares required to constitute a quorum is required to elect a director.

The term of any incumbent director who does not receive the affirmative vote of (i) a majority of the shares present or represented by proxy and voting at the Annual Meeting and (ii) a majority of the shares required to constitute a quorum, and has not earlier resigned, will end on the date that is the earlier of (a) 90 days after the date on which the voting results for the Annual Meeting are determined by the inspector of election, or (b) the date on which the Board selects a person to fill the office held by that director in accordance with Apple's bylaws.

PROXY ACCESS

A proxy access provision is in place.





Proxy Access Terms		
Ownership Duration (Years)	3	
Ownership Threshold (% of shares)	3%	
Min/Max % of Board Seats	20%	





LAST UPDATE: December 28, 2021

ACCOUNTING

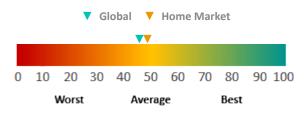
Based on the company's disclosures and other public information, accounting and financial reporting practices at APPLE appear to be generally appropriate and effective relative to global peers. We have flagged this company for potential concerns regarding expense recognition ratios (based on our quantitative assessment).

0-10 Score	Global Percentile Rank	Home Market Percentile Rank
7.3	47 th (Average)	50 th (Average)

KEY METRICS SCORING

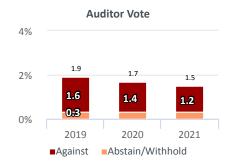
	Deduction
ACCOUNTING VARIANCE	
Revenue Recognition	-0.04
Expense Recognition	-0.21
Asset-Liability Valuation	-0.21

ACCOUNTING PERFORMANCE VS.



EXTERNAL AUDITORS

Туре	Since	Firm	Most Recent Fiscal Year End Signed Off
Primary	2009	Ernst & Young LLP	2020



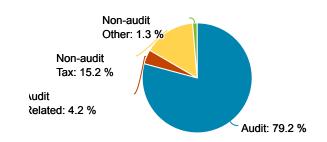




AUDITOR FEES

Fees paid to: Ernst & Young LLP (Primary)

Fee	Sep 26, 2020 (USD)	Sep 28, 2019 (USD)	Sep 29, 2018 (USD)
Audit	17,568,300	17,208,700	17,266,600
Audit Related	935,900	942,400	1,008,700
Total Audit + Audit Related	18,504,200	18,151,100	18,275,300
Tax Compliance/ Advice	3,382,300	3,019,100	2,306,000
Other Non- audit Services	297,400	115,000	107,500
Total Non- audit Fees	3,679,700	3,134,100	2,413,500
Total Fees	22,183,900	21,285,200	20,688,800



AUDITOR REPORT

	Sep 26, 2020	Sep 28, 2019	Sep 29, 2018
Report Disclosed	Yes	Yes	Yes
Opinion	Unqualified Opinion	Unqualified Opinion	Unqualified Opinion
Emphasis of Matter	No	No	No

CONTROVERSIES & EVENTS

No major relevant controversies have been uncovered.



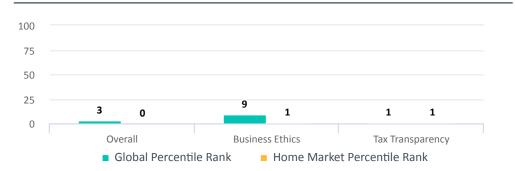
LAST UPDATE: December 28, 2021



Corporate Behavior

0-10 Score	Change (since rating)	Quartile	As of
1.6	0.0	•	Jun 16, 2021

CORPORATE BEHAVIOR THEME AND KEY ISSUE RANKINGS



METHODOLOGY NOTE

This theme evaluates the extent to which companies may face ethics issues such as fraud, executive misconduct, corruption scandals, money laundering, anti-trust violations, or tax-related controversies.

* [For symbols and terms used in this report, refer to the Glossary section at the end of the report]

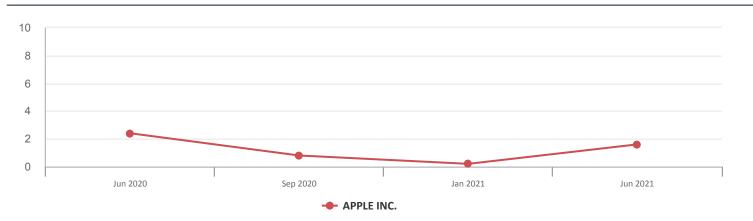
KEY AREAS OF CONCERN*

SCORING DEDUCTIONS

Business Ethics Policies & Practices Oversight for Ethics Issues	(-1.40)
Whistleblower Protection	
Business Ethics Risk & Controversies Corruption Risk Exposure & Controversies	(-5.60)
Business Ethics Controversies	
Tax Transparency Tax Controversies	(-1.40)

^{*}Key areas of concern include flagged key metrics that represent the largest scoring deductions. Please review the full report to see a complete set of flagged key metrics.

CORPORATE BEHAVIOR SCORE HISTORY







LAST UPDATE: December 28, 2021

BUSINESS ETHICS

KEY METRICS SCORING

	Deduction
BUSINESS ETHICS POLICIES & PRACTICES	-1.40
Oversight for Ethics Issues	-0.70
Whistleblower Protection	-0.70
BUSINESS ETHICS RISK & CONTROVERSIES	-5.60
Corruption Risk Exposure & Controversies	-2.00
Business Ethics Controversies	-3.60

Note: Business Ethics Policies & Practices deductions as well as Business Ethics Risk & Controversies are capped at a maximum of -7.0. Cumulative deductions are capped at 10.

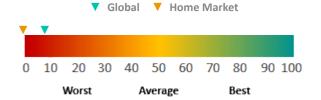
0-10	Score	Change (since rating)	Global Percentile Rank	Home Market Percentile Rank
2	2.9	0.0	9 th (Below Average)	1 st (Worst In Class)

METHODOLOGY NOTE

Companies are evaluated on their oversight and management of business ethics issues such as fraud, executive misconduct, corrupt practices, money laundering, or anti-trust violations.

*[For symbols and terms used in this report, refer to the Glossary section at the end of the report]

BUSINESS ETHICS VS.



BUSINESS ETHICS POLICIES & PRACTICES

Indicators	Company Practice	Best Practice	Deduction
Oversight for Ethics Issues	Special task force or risk officer	Board-level committee or C-suite or Executive committee	-0.70
Bribery and Anti-Corruption Policy	Detailed formal policy on bribery and anti-corruption	Detailed formal policy on bribery and anti-corruption	0.00
Regular Audits of Ethical Standards	Audits of all operations at least once every three years	Audits of all operations at least once every three years	0.00
Whistleblower Protection	Whistleblower protection with no details on system or legal protection	Formal anonymous whistleblower system with legal protection	-0.70
Employee Training on Ethical Standards	Programs covering all employees (including part-time) and contractors	Programs covering all employees (including part-time) and contractors	0.00
Anti-Corruption Policy for Suppliers	NA	All suppliers are required to have anti-corruption policies and programs to verify compliance	0.00
Policies Related to Anti-Money Laundering	NA	Policy and implementation strategy articulated	0.00

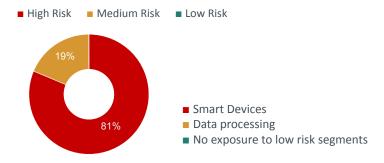
^{*}Business Ethics Policies & Practices deductions are capped at a maximum of -7.0.





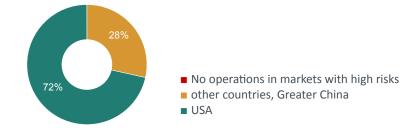
CORRUPTION RISK EXPOSURE

Exposure to: Regulatory risks or lost market access due to corruption scandals or political and social instability **Business Types:** Percentage of operations in business segments perceived most likely to pay or receive bribes



Source: Bribe Payers Index (Transparency International); State Capture Index (Transparency International); Refinitiv; MSCI ESG Research; company disclosure

Business Locations: Percentage of operations in countries with high/moderate/low level of corruption and political instability, violence or terrorism



Source: Corruption Perceptions Index (Transparency International); World Governance Indicators (World Bank); Refinitiv; MSCI ESG Research; company disclosure

CORRUPTION RISK EXPOSURE SCORING DEDUCTION KEY

% of operations in medium and high risk geographies	% of operations in high risk business segments	>=20% government ownership	<20% government ownership	No evidence of government ownership
20% or more	50% or more	-4.00	-2.60	-2.00
	Less than 50%	-1.20	-1.20	-1.20
Less than 20%	50% or more	-0.60	-0.60	-0.60
	Less than 50%	0.00	0.00	0.00

^{*}The Corruption Risk and Controversies Deduction is based on the maximum of deductions from the corruption risk exposure and corruption controversies category listed below

BUSINESS ETHICS CONTROVERSIES

Controversy Cases					
Category	Assessment	Headline	Status	Last Updated	Deduction
	Moderate	California, US: USD 9.75 million settlement of class action alleging misrepresentation of water resistance and battery life of PowerBeats earphones	Concluded	May 2021	
Business Ethics & Fraud	Moderate	S. Korea: KRW 300 million potential penalty over alleged obstruction of antitrust investigation	Ongoing	March 2021	-1.8
	Minor	Russia: Criticism over compliance with government's order to remove apps used by supporters of political opposition leader	Ongoing	September 2021	





LAST UPDATE: December 28, 2021

Category	Assessment	Headline	Status	Last Updated	Deduction
	Minor	United States: Purported class action over alleged misrepresentations of iCloud service and storage of user data in third-party servers	Ongoing	May 2021	
	Minor	New York, US: Purported class action over alleged misrepresentations of water resistance features of certain iPhones	Ongoing	April 2021	
	Minor	California, US: Purported class action over alleged misleading purchase option of digital content through Apple TV	Ongoing	April 2021	
	Minor	China: NGO criticism over alleged removal of politically-sensitive software from App Store	Ongoing	December 2020	
	Minor	Italy: EUR 10 million penalty over alleged misleading marketing practices related to water resistance of certain iPhone models	Concluded	November 2020	
	Minor	California, United States: Putative class action over alleged misleading claim on RF radiation of smartphones; lawsuit dismissed	S Concluded	October 2020	
	Moderate	United States: Congress information request and lawsuits over allegations of anti-competitive practices favoring own apps sold through App Store	f Ongoing	December 2021	
	Moderate	United States Congress inquiry into alleged anticompetitive business practices	Ongoing	December 2021	
	Moderate	France: EUR 1.1 billion penalty over alleged anti-competitive wholesale and distribution practices; appeal pending	Ongoing	December 2021	
	Moderate	Investigations into alleged anti-competitive practices related to payment options on mobile applications	Ongoing	December 2021	
	Moderate	EC antitrust inquiry into potential competition issues within the Internet of Things (IoT) sector	Ongoing	December 2021	
	Moderate	Italy: Investigation over alleged anti-competitive restrictions on the online sales of certain branded products	Ongoing	December 2021	-1.8
Anticompetitive Practices	Moderate	Russia: RUB 906.3 million penalty over alleged anticompetitive practices in the mobile applications market for iOS devices; appeal pending	Ongoing	December 2021	
	Moderate	Italy: Regulator investigation into alleged unfair commercial practices and unfair clauses in contracts	Ongoing	December 2021	
	Moderate	France: Advertisers' complaint over new mobile applications privacy requirements; regulator investigation pending	Ongoing	December 2021	
	Moderate	Spain: Regulatory investigation into potential anticompetitive practices in th online sales of Apple products	e Ongoing	December 2021	
	Moderate	France: Finance ministry's lawsuit over allegedly abusive contractual terms imposed on app developers	Ongoing	December 2021	
	Moderate	Japan: Antitrust investigation in the mobile operating systems market	Ongoing	December 2021	
	Moderate	S. Korea: KRW 100 billion settlement and voluntary corrective measures for alleged violation of competition regulations	Concluded	February 2021	_
Corruption	Minor	California, US: Head of security indicted over alleged bribery of Santa Clara sheriff's office to obtain four gun permits for employees; charges dismissed	Concluded	June 2021	0.0

^{*}The maximum deductions from the Anticompetitive Practices and Business Ethics & Fraud categories are summed to arrive at the overall Business Ethics Controversies deduction, which is capped at a maximum of -7.0.





LAST UPDATE: December 28, 2021

TAX TRANSPARENCY

KEY METRICS SCORING

	Deduction
TAX TRANSPARENCY	-1.40
Tax Controversies	-1.40

0-10 score	Change (since rating)	Global Percentile Rank	Home Market Percentile Rank
3.0	0.0	1 st (Worst In Class)	1 st (Worst In Class)

TAX GAP ASSESSMENT

T	

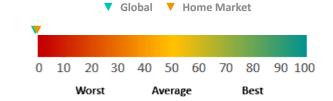
Indicators

Tax Gap	
Estimated Effective Tax Rate Estimated Corporate Income Tax Rate Estimated Tax Gap Tax Gap Assessment	16.9% 25.8% (8.9%) Moderate Gap
Revenue	
Foreign Revenue	63.4%
Confidence	
Confidence Level of Estimation	Low
Involvement in Controversies	YES
Tax Gap Score*	7.0

Companies are evaluated on their estimated corporate tax gap (i.e. gap between estimated effective tax rate and estimated corporate income tax rate) and their involvement in tax-related controversies.

*[For symbols and terms used in this report, refer to the Glossary section at the end of the report]





TAX CONTROVERSIES

Controversy Cases Category Assessment Headline Status **Last Updated** Deduction Moderate Europe: Investigation over allegations of tax evasion deals with Ireland Ongoing April 2021 Maine, United States: State court order to pay USD 530,000 in taxes and penalties Ongoing Tax Transparency -1 ₄ Minor February 2021 for certain discounted iPhone sales from 2010 to 2013



METHODOLOGY NOTE

^{*}The Tax Gap Score is based on the estimated tax gap, country revenue transparency, foreign revenues, controversies and whether a company is classified as a tax-favored structure such as a REIT. The score is derived on a 0-10 scale and can be used for cross-company comparisons but does not contribute to a company's overall ESG



TAX CONTROVERSIES SCORING DEDUCTION KEY

Involvement in tax controversies	Estimated tax gap	Tax gap assessment	Deduction
Yes	Below 5%	Low	-0.80
	5-10%	Moderate	-1.40
	Above 10%	High	-2.00
No	Below 5%	Low	0.00
	5-10%	Moderate	0.00
	Above 10%	High	0.00

Tax related controversies are not considered for companies in Real Estate Management services or Mortgage REITs industries. Tax gap assessment is effectively low for companies with less than 5% of total revenue categorized as foreign.



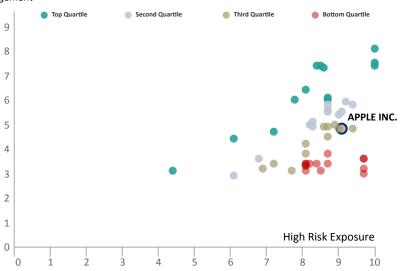
LAST UPDATE: December 28, 2021

OCO Hur Dev

Human Capital Development

Score	Change (since rating)	Quartile	Weight	As of
2.7	0.0	••	16.0%	Dec 28, 2021

Strong Risk Management



KEY ISSUE SCORE DISTRIBUTION



TOP 5 INDUSTRY LEADERS

ACER INCORPORATED	6.0
HP INC.	5.9
CATCHER TECHNOLOGY CO., LTD.	5.7
Lenovo Group Limited	5.7
BROTHER INDUSTRIES, LTD.	5.3

KEY ISSUE ASSESSMENT



BOTTOM 5 INDUSTRY LAGGARDS

Dawning Information Industry Co., Ltd.	1.6
Pegatron Corporation	0.9
Wiwynn Corporation	0.9
Wistron Corporation	0.5
WESTERN DIGITAL CORPORATION	0.3

RISK EXPOSURE ASSESSMENT

Company	9.1		
Industry	8.4		
	0	5	10
	Low	Mod	High Risk

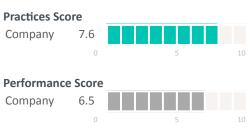
RISK MANAGEMENT ASSESSMENT

Company	4.8		
Industry	4.7		
	0	5	10
	Low	Mod	Strong Risk Management

Drivers of Risk Exposure



Drivers of Risk Management



METHODOLOGY NOTE

Companies are evaluated on their workforce talent requirements and their ability to attract, retain, and develop a highly skilled workforce.

*[For symbols and terms used in this report, refer to the Glossary section at the end of the report]

Controversy Deduction

Company - 2.5

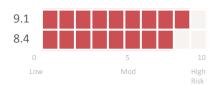




EXPOSURE

RISK EXPOSURE ASSESSMENT

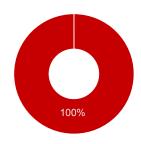
Company Industry



Key Drivers of Risk Exposure

Exposure to: Risk of increased turnover and associated costs of rehiring, loss of intellectual and human capital through attrition, reduced ability to attract talent

Business Types : Percentage of operations in business segments with high/moderate/low levels of employee qualification needs and compensation per employee



- Smart Devices, Data processing
- No exposure to medium risk segments
- No exposure to low risk segments

Source: Employment Projections Program (US Bureau of Labor Statistics); Occupational Employment Statistics (US Bureau of Labor Statistics); Refinitiv; MSCI ESG Research; company disclosure

Layoffs and Restructuring Events

Major merger or acquisition in the last three years (affecting large proportion of staff):

proportion of staff):

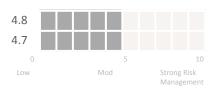
Major layoffs in the last three years (affecting 10% of staff or over 1,000 employees):

No Evidence

Yes

MANAGEMENT

RISK MANAGEMENT ASSESSMENT







LAST UPDATE: December 28, 2021

Description	Company Practice	Best Practice	Practices Score ²
Practices			
Scope of support for degree programs and certifications	General statements on training and development	Programs covering all employees (including part-time and contractors)	- LOW MID TOP
Strategy			
Extent of grievance reporting or escalation procedures	Formal grievance escalation/reporting (confidential)	Formal grievance escalation/reporting (confidential)	- LOW MID TOP
Engagement surveys to monitor employee satisfaction	General statements about engagement initiatives	Surveys conducted annually	- LOW MID TOP
Talent pipeline development strategy			
Formal talent pipeline development strategy (forecasts hiring needs, actively develops new pools of talent)	Not Disclosed	Yes	- LOW TOP
Graduate traineeship/apprenticeship program	Yes	Yes	- LOW TOP
Partners with educational institutions to develop or deliver joint training programs for staff	Yes	Yes	- LOW TOP
Programs & Initiatives			
Scope of employee stock ownership plan (ESOP) or employee stock purchase plan (ESPP)	Sector-leading number of employees eligible for ESOI and/or ESPP	Sector-leading number of Pemployees eligible for ESOP and/or ESPP	- LOW MID TOP
Non-salary benefits and work/life balance	Scope not determinable	Benefits cover all employees	- LOW MID TOP
Regular performance appraisals and feedback processes	Yes	Sector leading programs	- LOW MID TOP
Job-specific development training programs	Sector leading programs	Sector leading programs	- LOW MID TOP
Evidence of managerial/leadership development training	Comprehensive succession planning & development programs at multiple levels	Comprehensive succession planning & development programs at multiple levels	- LOW MID TOP

Training

Year (YYYY)	Percentage of employees receiving training	Annual training hours per employee
2020		
2019		
2018		





LAST UPDATE: December 28, 2021

Performance

External recognition as employer of choice (last three years) External recognition - details

Recognized as top employer on credible external list 2020

Best Employers for Diversity 2020

Best Employers for Veterans 2020

World's Best Employers 2020

2019

- Forbes AMERICA'S BEST LARGE EMPLOYERS 2019 LIST

2018

-FORBES THE WORLD'S BEST EMPLOYERS 2018

Workforce Diversity

Year (YYYY)	Annual employee turnover	Profit per employee (USD '000)	Percentage of women in executive management	Details
2020		390.55	23.50%	Net profit : 57,411,000,000 USD / 147,000 = 390551.0204081633 USD ~ 390.5510204081633 USD. 34% workforce represents Women
2019		40.33	40.00%	33% of workforce represents women
2018			40.00%	
2017			20.00%	
2016		393.85		Three of 18 senior executives are female executives (vice president and above)
2015		485.40		17% of executives or senior officials in the US are female executives (vice president and above)

CONTROVERSIES

All controversies are assessed as part of the annual review of a company's ESG rating. MSCI ESG Research tracks controversies for all companies on a regular basis. The Apple has been flagged for involvement in controversial events or alleged misconduct.

Controvers	

Assessment	Headline	Status	Last Updated
Severe	Hong Kong: Allegations of improper layoffs from labor union	Ongoing	October 2021
Moderate	Austin, US: Former employee alleged unfair dismissal for organizing activism actions	Ongoing	November 2021





LAST UPDATE: December 28, 2021

Assessment	Headline	Status	Last Updated
Moderate	United States: Hundreds of workers filed online complaints over allegation of harassment and discrimination	Ongoing	November 2021
Moderate	Ireland: EUR 4,500 compensation to former customer relations advisor for alleged constructive dismissal	Concluded	October 2021
Moderate	Oregon, United States: Lawsuit over alleged unfair dismissal and failure to protect employee from customers' racial discrimination	Ongoing	April 2021
Minor	United States: Former employee filed complaint with NLRB over CEO's alleged violation of labor laws in comment related to information leakage	Ongoing	November 2021
Minor	US: Two employees filed complaints with labor regulator over company's alleged efforts to prevent discussions on pay equity	Ongoing	October 2021
Minor	California, US: Lawsuit over managers' alleged discrimination against female Sindhi employee	Ongoing	August 2021
Minor	Employees' concerns raised over the hiring of advertising platform engineer who wrote a book allegedly containing discriminatory comments; engineer reportedly dismissed	Concluded	May 2021
Minor	California, US: Class action lawsuit over alleged unpaid wages for time spent on exit searches of employees' belongings	Ongoing	March 2021



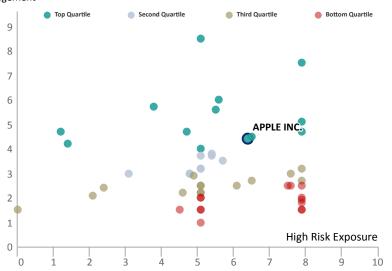




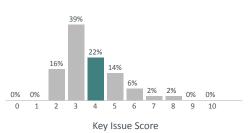
Opportunities in Clean Tech

Score	Change (since rating)	Quartile	Weight	As of
4.5	0.0	••••	12.0%	Dec 28, 2021

Strong Risk Management



KEY ISSUE SCORE DISTRIBUTION



TOP 5 INDUSTRY LEADERS

Inspur Electronic Information Industry Co., Ltd.	7.6
Hengtong Optic-Electric CO.,LTD	7.2
Samsung Electronics Co., Ltd.	5.8
CISCO SYSTEMS, INC.	5.5
FUJIFILM Holdings Corporation	5.5

KEY ISSUE ASSESSMENT

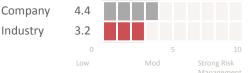
Business Types Company



RISK EXPOSURE ASSESSMENT



RISK MANAGEMENT ASSESSMENT



Drivers	of	Risk	Management





Performance Score



BOTTOM 5 INDUSTRY LAGGARDS

ARISTA NETWORKS, INC.	2.2
BYD Electronic (International) Company Limited	2.1
SEAGATE TECHNOLOGY HOLDINGS PUBLIC LIMITED COMPANY	2.0
Shenzhen Transsion Holdings Co Ltd	1.9
TianJin 712 Communication & Broadcasting Co Ltd	1.9

METHODOLOGY NOTE

Companies are evaluated on their clean tech innovation capacity, strategic development initiatives, and revenue generated from clean technologies.



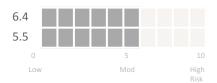
^{*} For symbols and terms used in this report, refer to the Glossary section at the end of the report]



EXPOSURE

RISK EXPOSURE ASSESSMENT

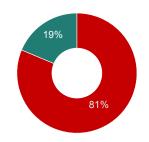
Company Industry



Key Drivers of Risk Exposure

Exposure to: Opportunity for business growth from capturing demand changes and enjoying early mover advantage or regulatory incentives

Business Types: Percentage of operations in business segments with high growth potential in clean tech markets

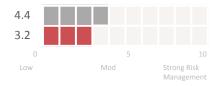


- Smart Devices
- No exposure to medium opportunity segments
- Data processing

Source: MSCI ESG Research; Refinitiv; company disclosure

MANAGEMENT

RISK MANAGEMENT ASSESSMENT







LAST UPDATE: December 28, 2021

Practices Score² Description **Company Practice Best Practice**

Strategy

tech

Strategic focus on clean technology development

Targets to increase investment in clean

Cleantech innovation is among key strategic objectives

Yes

Cleantech innovation is the

core strategy

Yes



LOW





R&D Expense

Year	R&D (USD million)	R&D / Sales ratio
2021	21,914	
2020	18,752	6.83%
2019	16,217	6.23%
2018	14,236	5.36%
2017	11,581	5.05%
2016	10,045	4.66%
2015	8,067	3.45%
2014	6,041	3.30%
2013	4,475	2.62%
2012	3,381	2.16%
2011	2,429	2.24%
2010	1,782	2.74%
2009	1,333	3.13%
2008	1,109	3.41%

Performance

Score: nature of involvement in clean tech activities 3.50

Power Management

Involvement in developing energy solutions for household products

Non-core involvement (revenues <20%)

Industrial Operations & Automation

Involvement in production or distribution of industrial automation technologies Involvement in developing or distributing optimization technologies & systems

R&D underway / exploring opportunities Non-core involvement (revenues <20%)

Reuse & Recycling

Involvement in development and distribution of reused products or products using recycled waste

Non-core involvement (revenues <20%)



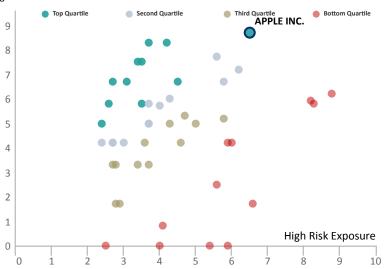




Privacy & Data Security

Score	Change (since rating)	Quartile	Weight	As of
9.2	0.0	••••	12.0%	Dec 22, 2021

Strong Risk Management



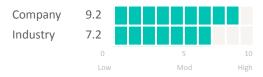
KEY ISSUE SCORE DISTRIBUTION*



TOP 5 INDUSTRY LEADERS

CANON INC.	10.0
Compal Electronics, Inc.	10.0
FUJIFILM Holdings Corporation	10.0
HP INC.	10.0
INVENTEC CORPORATION	10.0

KEY ISSUE ASSESSMENT



RISK EXPOSURE ASSESSMENT RISK MANAGEMENT ASSESSMENT

Company	6.5		
Industry	4.4		
	0	5	10
Data a of Di	Low	Mod	High Risk



Drivers of Risk Exposure Drivers of Risk Management

Business Ty	pes		Pra
Company	6.5		Со
	0	5 1	0







BOTTOM 5 INDUSTRY LAGGARDS

CHINA GREATWALL TECHNOLOGY GROUP CO., LTD.	3.7
Beijing BDStar Navigation Co., Ltd.	3.0
Fiberhome Telecommunication Technologies Co., Ltd.	2.1
TianJin 712 Communication & Broadcasting Co Ltd	1.6
Guangzhou Haige Communications Group Incorporated Company	1.1

METHODOLOGY NOTE

Companies are evaluated on the amount of personal data they collect, their exposure to evolving or increasing privacy regulations, their vulnerability to potential data breaches, and their systems for protecting personal data.



Business Locations

Company



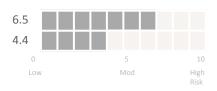
LAST UPDATE: December 28, 2021

*[For symbols and terms used in this report, refer to the Glossary section at the end of the report]

EXPOSURE

RISK EXPOSURE ASSESSMENT

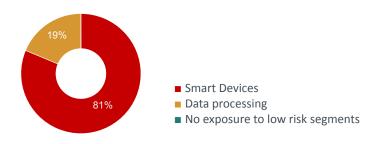
Company Industry



Key Drivers of Risk Exposure

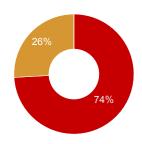
Exposure to: Risk of compliance cost increase or reputational damage from data breaches or controversial use of personal data

Business Types : Percentage of revenue derived from business segments that · require collection and/or handling of sensitive personal data · have witnessed high cost and frequency of data breaches



Source: Cost of Data Breach Report (Ponemon Institute); Data Breach Investigations Report (Verizon); Refinitiv; MSCI ESG Research; company disclosure

Business Locations: Percentage of operations in countries with strengthening or evolving data and privacy regulations, with high cost of data breaches



- other countries, Americas, Japan, USA, Europe
- Greater China. Asia Pacific
- No operations in markets with low risks

Source: Cost of Data Breach Report (Ponemon Institute); Refinitiv; MSCI ESG Research; company disclosure

MANAGEMENT

RISK MANAGEMENT ASSESSMENT







LAST UPDATE: December 28, 2021

Description	Company Practice	Best Practice	Practices Score ²
Practices - Operations			
Scope of company's publicly available data protection policy	Policy governs all relevant business lines/subsidiaries	Policy governs all relevant business lines/subsidiaries	- LOW MID TOP
Rights provided to individuals regarding the control of their data	,	Right of access, rectification and deletion of individuals' data	- LOW MID TOP
Information Security Policies and Systems audit frequency	•	s External independent audits are conducted at least once every two years	- LOW MID TOP
Company's executive body responsible for: Privacy and Data security	Board-level committee	Board-level committee	- LOW MID TOP
Practices - Employees			
Scope of employee training on data security and/or privacy-related risks & procedures	Training is provided to all employees, including contractors	Training is provided to all employees, including contractors	- LOW MID TOP

CONTROVERSIES

All controversies are assessed as part of the annual review of a company's ESG rating. MSCI ESG Research tracks controversies for all companies on a regular basis. The Apple has been flagged for involvement in controversial events or alleged misconduct.

Assessment	Headline	Status	Last Updated
Moderate	France: Court order to pay EUR 30,000 in damages over alleged unfair terms in the general conditions and privacy policy of iTunes and Apple Music; appeal filed	Ongoing	December 2021
Moderate	France: Complaint over alleged tracking of user data without prior consent for targeted advertising purposes	Ongoing	December 2021
Moderate	China: Criticism over customer data storage and app removal practices due to censorship and surveillance concerns	Ongoing	December 2021
Moderate	Reports of spyware attacks on journalists related to security vulnerabilities in previous iPhone operating systems	Concluded	December 2021
Moderate	US: Regulator inquiry on potential data surveillance and other consumer protection risks in payment systems	Ongoing	November 2021
Minor	California, US: Proposed class action over alleged unauthorized recording of audio communications with Siri virtual assistant	Ongoing	November 2021
Minor	Illinois, United States: Purported class action over alleged unauthorized collection of facial recognition data	Ongoing	October 2021
Minor	NGOs criticisms over planned device-scanning measures against child abuse material over privacy concerns and potential misuse by governments for censorship and surveillance	Ongoing	August 2021
Minor	California, US: Confidential settlement over alleged unauthorized distribution of customer's private data by contractors' repair technicians	Concluded	July 2021
Minor	California, US: Purported class action over alleged unauthorized reading of copied text by mobile application found in App Store	Ongoing	March 2021



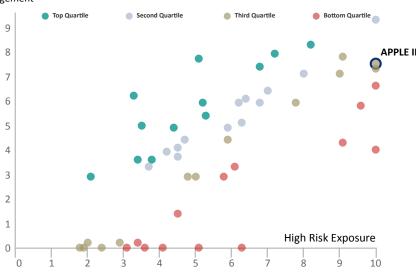




Supply Chain Labor Standards

Score	Change (since rating)	Quartile	Weight	As of
4.5	0.0	••	12.0%	Dec 16, 2020





KEY ISSUE SCORE DISTRIBUTION



TOP 5 INDUSTRY LEADERS

CATCHER TECHNOLOGY CO., LTD.	9.9
INVENTEC CORPORATION	9.6
Wistron Corporation	8.5
Wiwynn Corporation	7.8
ACER INCORPORATED	7.7

BOTTOM 5 INDUSTRY LAGGARDS

Dawning Information Industry Co.,

2.9

2.2

1.9

1.0

0.7

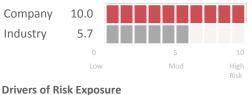
KEY ISSUE ASSESSMENT

RISK EXPOSURE ASSESSMENT



RISK MANAGEMENT ASSESSMENT

	Ltd.
	CANON INC.
	Shenzhen Transsion Holdings Co Ltd
10 Risk ement	XIAOMI CORPORATION
	Inspur Electronic Information Industry Co., Ltd.





Drivers of Risk Management

or wers or wisk Exposure





Controversy Deduction

Company - 2.5

METHODOLOGY NOTE

Companies are evaluated on the management and transparency of their supply chain and the working standards in the regions in which their suppliers are located.



^{*[} For symbols and terms used in this report, refer to the Glossary section at the end of the report]

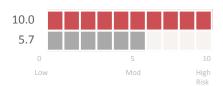


LAST UPDATE: December 28, 2021

EXPOSURE

RISK EXPOSURE ASSESSMENT

Company Industry



Footprint

Private label as percentage of sales (est.):

 $\label{percentage} \textbf{Estimated percentage of sales from products manufactured in} \\$

developing countries:

Total estimated sales of product outsourced to developing countries (private label where applicable):

80.41% 80.41%

172,481.70

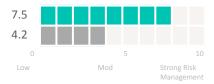
Trigger

Company is on Interbrand's Top 100 Brands list.:

Yes

MANAGEMENT

RISK MANAGEMENT ASSESSMENT







LAST UPDATE: December 28, 2021

Description	Company Practice	Best Practice	Pra	ctices	Score ²
Scope of supplier audits:					
Tier 1 supplier audits (Final product assembly)	11	Yes - Almost all Tier 1 suppliers or "high risk" suppliers identified through s rigorous systematic analysis	-	LOW	MID TOP
Tier 2 suppliers audits (Components)	Audits include Tier 2 suppliers (components)	Audits include Tier 2 suppliers (components)	-	LOW	MID TOP
Tier 3 suppliers audits (Raw Materials)	Yes - Includes at least some Tier 3 suppliers	Yes - Includes at least some Tier 3 suppliers	-	LOW	MID TOP
Code of Conduct covers the following:					
Code of Conduct covers Forced Labor	Yes	Yes	_	LOW	ТОР
Code of Conduct covers Child Labor	Yes	Yes	-	LOW	ТОР
Code of Conduct covers Working Hours	Yes	Yes	-	LOW	ТОР
Code of Conduct covers Paid Overtime	Yes	Yes	-	LOW	ТОР
Code of Conduct covers Minimum Wage	Yes	Yes	-	LOW	ТОР
Code of Conduct covers Anti- Discrimination	Yes	Yes	-	LOW	ТОР
Code of Conduct covers Freedom of Association	Yes	Yes	-	LOW	ТОР
Code of Conduct covers Health & Safety	Yes	Yes	-	LOW	ТОР
Supplier selection based on labor management performance	performance (e.g. factor is included in supplier	Preference shown for suppliers demonstrating t superior labor management performance (e.g. factor is included in supplier e"scorecard" along with price and quality)	-	LOW	MID TOP

CONTROVERSIES

All controversies are assessed as part of the annual review of a company's ESG rating. MSCI ESG Research tracks controversies for all companies on a regular basis. The Apple has been flagged for involvement in controversial events or alleged misconduct.





LAST UPDATE: December 28, 2021

Controversy C	ases		
Assessment	Headline	Status	Last Updated
Severe	Xinjiang region: Allegations of subjecting Uyghurs to forced labor in factories	Ongoing	December 2021
Moderate	China: Allegations of illegally employing students at Chongqing facility that manufactured Apple watch	Ongoing	December 2021
Moderate	Zhengzhou, China: Alleged labor law violation due to over-reliance on temporary workers in manufacturing facility	Ongoing	December 2021
Moderate	Criticisms over supplier's alleged excessive overtime work, abusive working environment, and oth labor violations including student worker program violations	er Ongoing	December 2021
Moderate	Karnataka, India: iPhone factory riot over supplier's alleged unpaid overtime and delayed paymen of wages	t Ongoing	December 2021



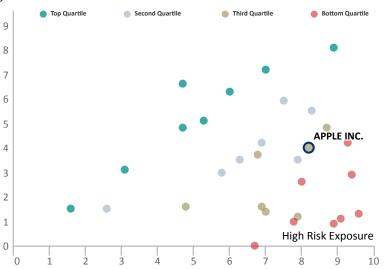




Electronic Waste

S	Score	Change (since rating)	Quartile	Weight	As of
	2.8	0.0	••	8.0%	Dec 28, 2021





KEY ISSUE SCORE DISTRIBUTION

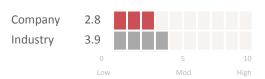


TOP 5 INDUSTRY LEADERS

Samsung Electronics Co., Ltd.	8.9
DELL TECHNOLOGIES INC.	7.3
ASUSTEK COMPUTER INCORPORATION	7.2
FUJIFILM Holdings Corporation	7.1
WESTERN DIGITAL CORPORATION	7.0

KEY ISSUE ASSESSMENT

RISK EXPOSURE ASSESSMENT



RISK MANAGEMENT ASSESSMENT

Company	4.0		
Industry	3.4		
	0	5	10
	Low	Mod	Strong Risk Management

Company	8.2			Company	4.0		
Industry	6.9			Industry	3.4		
	0	5	10		0	5	10
	Low	Mod	High Risk		Low	Mod	Strong Risk Management
Drivers of Ris	k Exposure			Drivers of Ris	sk Manag	ement	
Business Typ	oes			Practices Sc	ore		
Business Typ Company	6.0 6 .0			Practices Sco Company	ore 4.8		
		5	10		_	5	10
	6.0	5	10		4.8		10

BOTTOM 5 INDUSTRY LAGGARDS

Shenzhen Transsion Holdings Co Ltd	0.3
MICRO-STAR INTERNATIONAL CO.,LTD.	0.2
INVENTEC CORPORATION	0.0
QUANTA COMPUTER INC.	0.0
Wiwynn Corporation	0.0

METHODOLOGY NOTE

Companies are evaluated on their production of electronic waste, their potential exposure to e-waste regulations and their efforts around product collection and recycling.



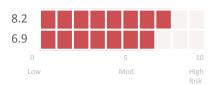
^{*[} For symbols and terms used in this report, refer to the Glossary section at the end of the report]



EXPOSURE

RISK EXPOSURE ASSESSMENT

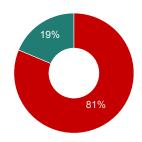
Company Industry



Key Drivers of Risk Exposure

Exposure to: Risk of increased compliance costs or market access constraints due to new or strengthening regulations on end-of-life recycling or disposal

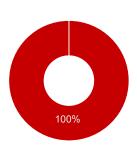
Business Types : Percentage of revenue from product segments subject to e-waste regulations



- Smart Devices
- No exposure to medium risk segments
- Data processing

Source: MSCI ESG Research; Refinitiv; company disclosure

Business Locations: Percentage of revenue in markets with strengthening or evolving e-waste regulations

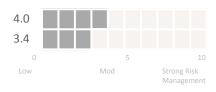


- other countries, Greater China, Americas, Japan, USA, Asia Pacific, Europe
- No operations in markets with medium risks
- No operations in markets with low risks

Source: Refinitiv; MSCI ESG Research; company disclosure

MANAGEMENT

RISK MANAGEMENT ASSESSMENT







LAST UPDATE: December 28, 2021

escription	Company Practice	Best Practice	Pra	ctices	Score	2
Practices						
xplicit ban of exportation of e-waste to on-OECD countries (in accordance with the Basel Ban Amendment to the Basel convention)	Not Disclosed	Yes	-	LOW		ТОР
Collection of e-Waste						
Scope of the recycling program, by product type	All products and brands are eligible for collection and recycling (including those not made by the company)	All products and brands are eligible for collection and recycling (including those not made by the company)	-	LOW	MID	ТОР
Scope of the recycling program, by location	Product collection and recycling is uniform across all geographic segments where the company operates	Product collection and recycling is uniform across all geographic segments where the company operates	-	LOW	MID	ТОР
Cost to the consumers of the take-back program	Provides credit against a new purchase	Provides credit against a new purchase	-	LOW	MID	ТОР
Means available for returning end-of-lif E-waste take-back programs include drop-off (at a store or designated pick-	e electronics to the company Yes	Yes	-	LOW		TOF
up locations) E-waste take-back programs include mail-in of end-of-life products	Yes	Yes	-	LOW		TO
E-waste take-back programs include pick-up of end-of-life products	No	Yes	-	LOW		TO
Facilities that handle recycling of collec	ted electronics					
Availability of own e-waste recycling facilities	Yes - but also uses third parties	Yes - and does not use third parties	-	LOW	MID	ТО
Desiration of the desiration of a desiration	Voc	Yes		1.014/		TO
	Yes		-	LOW		
Participation in industry networks that support or operate recycling facilities Designated vendors for e-waste recycling	Yes - and there is auditing either by the company or a	Yes - and there is auditing either by the company or a ortrusted independent auditor (e.g. the e-Steward organization)	-	LOW	MID	тоі



Overall collection and recycling performance to date

7.00





Score comment:

Follows regulations bound practices for ewaste take back and recycling

CONTROVERSIES

All controversies are assessed as part of the annual review of a company's ESG rating. MSCI ESG Research tracks controversies for all companies on a regular basis. There is no evidence of the Apple's current involvement in prominent controversial events or alleged misconduct.

Controversy Cases

Assessment Headline Status Last Updated

Moderate India: Suspension of import permit of subsidiary over alleged non-compliance with electronic waste Concluded April 2021 management regulations; suspension removed



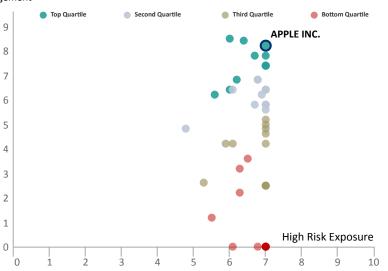




Controversial Sourcing

Sco	re	Change (since rating)	Quartile	Weight	As of
8.	2	0.0	••••	7.0%	Dec 01, 2020





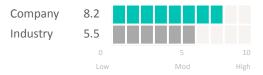
KEY ISSUE SCORE DISTRIBUTION



TOP 5 INDUSTRY LEADERS

ASUSTEK COMPUTER INCORPORATION	10.0
MICRO-STAR INTERNATIONAL CO.,LTD.	9.5
ACER INCORPORATED	9.0
APPLE INC.	8.2
SEIKO EPSON CORPORATION	8.1

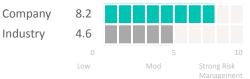
KEY ISSUE ASSESSMENT



RISK EXPOSURE ASSESSMENT







Drivers of Risk Exposure



Drivers of Risk Management

Practices Sc	ore		
Company	8.2		
	0	5	10

BOTTOM 5 INDUSTRY LAGGARDS

Fiberhome Telecommunication Technologies Co., Ltd.	2.3
GRG Banking Equipment Co., Ltd.	2.3
Hengtong Optic-Electric CO.,LTD	2.3
TianJin 712 Communication & Broadcasting Co Ltd	2.3
Yealink Network Technology Co Ltd	2.3

METHODOLOGY NOTE

Companies are evaluated on their dependence on and purchasing volume of raw materials procured from conflict areas and their efforts around traceability and certification.



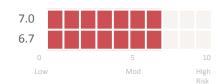
^{*[} For symbols and terms used in this report, refer to the Glossary section at the end of the report]



EXPOSURE

RISK EXPOSURE ASSESSMENT

Company Industry



Estimated % of sales reliant on material (private label where applicable)

Controversial Materials: 80.41%

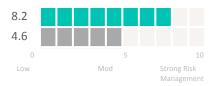
Total sales reliant on material (est. 3-yr average, USD million)

Controversial Materials: 214,502.79

MANAGEMENT

RISK MANAGEMENT **ASSESSMENT**

Company Industry



Practices Score² Description **Company Practice Best Practice**

Policy to address controversial raw materials

Evidence of commitments towards avoiding controversial materials

Publicly stated formal policy Publicly stated formal policy



Percentage of products externally certified by agencies with the most stringent standards

Extent of material certification by external agencies using the most stringent criteria

More than 60%

All Products



Percentage of products with traceable origin of raw materials

Extent of material traceability to place of origin

Up to 30%

All Products



Collaboration with suppliers to address impacts of raw materials

Extent of efforts to ensure compliance with controversial materials sourcing policy

All suppliers audited or all

All suppliers audited or all materials certified / traced materials certified / traced



CONTROVERSIES

All controversies are assessed as part of the annual review of a company's ESG rating. MSCI ESG Research tracks controversies for all companies on a regular basis. There is no evidence of the Apple's current involvement in prominent controversial events or alleged misconduct.





LAST UPDATE: December 28, 2021

OTHER RISKS & OPPORTUNITIES

Government Censorship & Surveillance

The nature of Apple's communication services and its rapid growth in some repressive markets suggest growing exposure to risks associated with the possibility of censorship and other government efforts to monitor or control citizens' communications and activities on the Internet. The company has been involved in several controversies related to government surveillance in the past few years, including its alleged role in the NSA scandal in 2013 and cases where it had to remove some applications from its App Store in China. Most recently in February 2016, Apple put on a public fight against the court order demanding the company to help FBI unlock an iPhone of San Bernardino shooter. Apple explicitly states that it refuses to assist with FBI or add a "backdoor" into any products. Through this case, Apple has made it clear to the public that it is not willing to hand over customer data to the government whenever they request it and may set stage for potentially more confrontation with the government regarding data requests. These moves have gained a lot of customer supports and could catalyze regulatory reviews and tighter controls on government surveillance, which some leading tech firms (e.g., Google, Facebook) have been pushing for since the NSA scandal erupted in 2013. We believe Apple's image as a protector of privacy is enhanced.

Censorship and other threats to civil liberties present a complicated set of challenges to tech giants like Apple. Some politically repressive regimes, of which China is the best known, direct companies to block websites or services, require service providers to monitor users' online speech and other modes of expression, block or remove "inappropriate" content, and sometimes turn in dissidents. In these markets, compliance with such requirements is a condition of doing business. Democratic governments are also increasingly seeing the appeal of mining communications data, presenting risks to companies in those markets as well. The Chinese market is becoming an increasingly important one for Apple, so as controversies related to its China App Store policies. Apple has been partnering with largest local telecom operators to sell customized iPhones on their vast network of local subscribers. This partnership exposes the company to potentially easier government censorship efforts as these major telecom operators, also state owned enterprises, have all cooperated with the government on censorship efforts.





APPENDIX

CONTENTS

ADDITIONAL ESG ISSUES

ADDITIONAL CORPORATE GOVERNANCE CONTENT

KEY METRIC & SCORE CHANGES

CONTROVERSIES DETAIL

CEO PAY CHARTS

DIRECTOR VOTES

SHAREHOLDER/MANAGEMENT PROPOSALS

GOVERNANCE STANDARDS

DIRECTOR PROFILES





ISSUER COMMUNICATION SUMMARY

COMPANY COMMUNICATION PAST 15 MONTHS





LAST UPDATE: December 28, 2021

Direction	Method	Category	Research Product	Date
Outgoing	E-mail	Updated ESG Rating	ESG Ratings	Dec 28, 2021
Outgoing	E-mail	Feedback Notice	ESG GovernanceMetrics	Dec 27, 2021
Outgoing	E-mail	Feedback Notice	ESG Ratings	Dec 21, 2021
Outgoing	E-mail	Feedback Notice	ESG Ratings	Dec 21, 2021
Outgoing	E-mail	Feedback Notice	ESG Ratings	Dec 21, 2021
Outgoing	E-mail	Data Update Notification	ESG Controversies	Dec 17, 2021
Outgoing	E-mail	Other	ESG Ratings	Dec 16, 2021
Outgoing	E-mail	Feedback Notice	ESG Controversies	Dec 15, 2021
Outgoing	E-mail	Methodology query	ESG Controversies	Dec 13, 2021
Incoming	Issuer Communication Portal	Data Review - Feedback Provided	ESG Ratings	Dec 09, 2021
Incoming	Issuer Communication Portal	Data Review - Feedback Provided	ESG Ratings	Dec 09, 2021
Outgoing	E-mail	Methodology query	ESG Controversies	Dec 07, 2021
Incoming	E-mail	Methodology query	ESG Controversies	Dec 07, 2021
Outgoing	E-mail	Methodology query	ESG Ratings	Dec 03, 2021
Incoming	E-mail	Methodology query	ESG Ratings	Dec 02, 2021
Outgoing	E-mail	Methodology query	ESG Ratings	Dec 02, 2021
Incoming	Phone Call	Methodology query	ESG Ratings	Dec 01, 2021
Outgoing	E-mail	Data Review - Feedback Provided	ESG Ratings	Nov 30, 2021
Incoming	E-mail	Data Review - Feedback Provided	ESG Ratings	Nov 30, 2021
Outgoing	E-mail	Initial Acknowledgement sent	ESG Ratings	Nov 30, 2021
Incoming	E-mail	Methodology query	ESG Ratings	Nov 30, 2021
Outgoing	E-mail	Request for information	ESG Ratings	Nov 29, 2021
Outgoing	E-mail	Request for information	ESG Ratings	Nov 22, 2021
Incoming	E-mail	Engagement Process related	ESG Ratings	Nov 19, 2021
Outgoing	E-mail	Schedule query	ESG Ratings	Nov 19, 2021
Incoming	E-mail	Schedule query	ESG Ratings	Nov 19, 2021
Outgoing	E-mail	Engagement Process related	ESG Ratings	Nov 18, 2021
Outgoing	E-mail	Other	ESG Ratings	Aug 09, 2021
Outgoing	E-mail	Data Review - Feedback Provided	ESG Ratings	Jun 16, 2021
Outgoing	E-mail	Feedback Notice	ESG Ratings	Jun 16, 2021
Outgoing	E-mail	Feedback Notice	ESG Ratings	Jun 16, 2021
Outgoing	E-mail	Engagement Process related	ESG Ratings	Jun 08, 2021
Incoming	E-mail	Engagement Process related	ESG Ratings	Jun 08, 2021
Incoming	E-mail	Schedule query	ESG Ratings	May 24, 2021
Outgoing	E-mail	Other	ESG Ratings	May 11, 2021
Outgoing	E-mail	Other	ESG Ratings	May 11, 2021
Outgoing	E-mail	Updated ESG Rating	ESG Ratings	May 07, 2021





LAST UPDATE: December 28, 2021

Direction	Method	Category	Research Product	Date
Outgoing	E-mail	Updated ESG Rating	ESG Ratings	May 07, 2021
Outgoing	E-mail	Data Update Notification	ESG Controversies	May 04, 2021
Outgoing	E-mail	Feedback Notice	ESG Controversies	Apr 30, 2021
Outgoing	E-mail	Request for information	ESG Ratings	Apr 26, 2021
Incoming	E-mail	Request for information	ESG Ratings	Apr 09, 2021
Incoming	Issuer Communication Portal	Data Review - Feedback Provided	ESG Ratings	Apr 08, 2021
Incoming	Issuer Communication Portal	Data Review - Feedback Provided	ESG Ratings	Apr 08, 2021
Incoming	Issuer Communication Portal	Data Review - Feedback Provided	ESG Controversies	Apr 08, 2021
Incoming	Issuer Communication Portal	Data Review - Feedback Provided	ESG Ratings	Mar 10, 2021
Outgoing	E-mail	Request for information	ESG Ratings	Jan 28, 2021
Incoming	E-mail	Request for information	ESG Ratings	Jan 26, 2021
Outgoing	E-mail	Other report clarification	ESG Ratings	Dec 21, 2020
Incoming	E-mail	Other report clarification	ESG Ratings	Dec 21, 2020
Outgoing	E-mail	Updated ESG Rating	ESG Ratings	Dec 11, 2020
Outgoing	E-mail	Other	ESG Ratings	Nov 10, 2020
Incoming	E-mail	Other	ESG Ratings	Nov 10, 2020
Outgoing	E-mail	Other	ESG Ratings	Oct 31, 2020
Incoming	E-mail	Other	ESG Ratings	Oct 31, 2020
Outgoing	E-mail	Other	ESG Ratings	Oct 08, 2020
Incoming	E-mail	Other	ESG Ratings	Oct 07, 2020

LEGEND Category Direction Outgoing: MSCI ESG Research contacts Data Review - Alert: Notification of pending issuer. annual update of ESG Rating, and invitation to engage MSCI. **Incoming:** Query by corporate issuer. Data Review - Report: MSCI ESG Research delivers report of updated ESG data Data Review - Feedback Provided: Feedback provided to MSCI ESG Research. Request for Information: Issuer inquiries; MSCI ESG Research queries. Published Report Sent: MSCI ESG Research delivers issuers' ESG product report that is posted to the MSCI ESG Manager platform. Other: Issuer notified of custom projects; Miscellaneous queries.





Anticompetitive Practices

Score	Change (since rating)	Quartile	Weight	As of
3.7	0.0	N/A		Nov 04, 2019

A chart is not available because we do not measure exposure on this key issue.

TOP 5 INDUSTRY LEADERS

ACER INCORPORATED	5.0
ADVANTECH Co., Ltd.	5.0
ARISTA NETWORKS, INC.	5.0
ASUSTEK COMPUTER INCORPORATION	5.0
Accton Technology Corp.	5.0

BOTTOM 5 INDUSTRY LAGGARDS

Yealink Network Technology Co Ltd	5.0
ZTE Corporation	5.0
MOTOROLA SOLUTIONS, INC.	4.2
APPLE INC.	3.7
Samsung Electronics Co., Ltd.	3.7

KEY ISSUE ASSESSMENT



Risk Exposure

RISK MANAGEMENT ASSESSMENT



Drivers of Risk Management

Controversy Deduction



METHODOLOGY NOTE

This issue evaluates the extent to which companies may face regulatory risks relating to anti-competitive practices. Companies successfully avoiding incident score "5", while companies that have faced controversies in the last three years score lower, based on the severity and type of controversy. This Key Issue is discontinued effective November 2020.

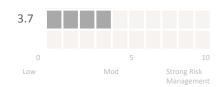
*[For symbols and terms used in this report, refer to the Glossary section at the end of the report]





MANAGEMENT

RISK MANAGEMENT ASSESSMENT



Controversy C	ases		
Assessment	Headline	Status	Last Updated
Moderate	United States: Congress information request and lawsuits over allegations of anti-competitive practices favoring own apps sold through App Store	Ongoing	December 2021
Moderate	United States Congress inquiry into alleged anticompetitive business practices	Ongoing	December 2021
Moderate	S. Korea: KRW 100 billion settlement and voluntary corrective measures for alleged violation of competition regulations	Concluded	December 2021
Moderate	$\label{prop:competitive} France: \ EUR\ 1.1\ billion\ penalty\ over\ alleged\ anti-competitive\ wholesale\ and\ distribution\ practices;\ appeal\ pending$	Ongoing	December 2021
Moderate	Investigations into alleged anti-competitive practices related to payment options on mobile applications	Ongoing	December 2021
Moderate	Italy: Investigation over alleged anti-competitive restrictions on the online sales of certain branded products	Ongoing	December 2021
Moderate	EC antitrust inquiry into potential competition issues within the Internet of Things (IoT) sector	Ongoing	December 2021
Moderate	Russia: RUB 906.3 million penalty over alleged anticompetitive practices in the mobile applications market for iOS devices; appeal pending	Ongoing	December 2021
Moderate	Italy: Regulator investigation into alleged unfair commercial practices and unfair clauses in contracts	Ongoing	December 2021
Moderate	France: Advertisers' complaint over new mobile applications privacy requirements; regulator investigation pending	Ongoing	December 2021
Moderate	France: Finance ministry's lawsuit over allegedly abusive contractual terms imposed on app developers	Ongoing	December 2021
Moderate	Spain: Regulatory investigation into potential anticompetitive practices in the online sales of Apple products	Ongoing	December 2021
Moderate	Japan: Antitrust investigation in the mobile operating systems market	Ongoing	December 2021







Business Ethics & Fraud

Score	Change (since rating)	Quartile	Weight	As of
3.7	0.0	N/A		Nov 04, 2019

A chart is not available because we do not measure exposure on this key issue.

TOP 5 INDUSTRY LEADERS

ACER INCORPORATED	5.0
ADVANTECH Co., Ltd.	5.0
ARISTA NETWORKS, INC.	5.0
ASUSTEK COMPUTER INCORPORATION	5.0
Accton Technology Corp.	5.0

BOTTOM 5 INDUSTRY LAGGARDS

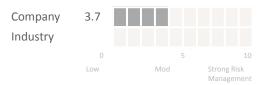
SEAGATE TECHNOLOGY HOLDINGS PUBLIC LIMITED COMPANY	4.2
XIAOMI CORPORATION	4.2
APPLE INC.	3.7
Samsung Electronics Co., Ltd.	3.3
ZTE Corporation	3.3

KEY ISSUE ASSESSMENT



Risk Exposure

RISK MANAGEMENT ASSESSMENT



Drivers of Risk Management

Controversy Deduction Company - 1.3

METHODOLOGY NOTE

This issue evaluates the extent to which companies may face regulatory or legal risks or loss of investor confidence due to ethics issues such as fraud, executive misconduct, or insider trading. Companies successfully avoiding incident score "5", while companies that have faced controversies in the last three years score lower, based on the severity and type of controversy. This Key Issue is discontinued effective November 2020.

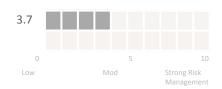
*[For symbols and terms used in this report, refer to the Glossary section at the end of the report]





MANAGEMENT

RISK MANAGEMENT ASSESSMENT



Assessment	Headline	Status	Last Updated
Moderate	California, US: USD 9.75 million settlement of class action alleging misrepresentation of water resistance and battery life of PowerBeats earphones	Concluded	May 2021
Moderate	S. Korea: KRW 300 million potential penalty over alleged obstruction of antitrust investigation	Ongoing	April 2021
Minor	Italy: EUR 10 million penalty over alleged misleading marketing practices related to water resistance of certain iPhone models	Concluded	December 2021
Minor	Russia: Criticism over compliance with government's order to remove apps used by supporters of political opposition leader	Ongoing	October 2021
Minor	United States: Purported class action over alleged misrepresentations of iCloud service and storage of user data in third-party servers	Ongoing	August 2021
Minor	California, US: Purported class action over alleged misleading purchase option of digital content through Apple TV	Ongoing	July 2021
Minor	New York, US: Purported class action over alleged misrepresentations of water resistance features of certain iPhones	Ongoing	July 2021
Minor	China: NGO criticism over alleged removal of politically-sensitive software from App Store	Ongoing	January 2021
Minor	California, United States: Putative class action over alleged misleading claims on RF radiation of smartphones; lawsuit dismissed	Concluded	November 2020



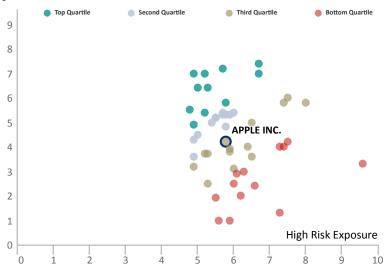




Corruption & Instability

Score	Change (since rating)	Quartile	Weight	As of
5.4	▲ 0.8	••	0.0%	Dec 27, 2021

Strong Risk Management



This issue does not present significant risks or opportunities to the company and with the assigned weight of 0% does not contribute to the overall ESG rating for the company.

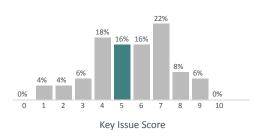
MSCI ESG Research provides additional scores on a select set of ESG Issues for all companies on the MSCI ACWI Index and MSCI ACWI IMI Index. Every company on the index receives scores for the following ESG Issues, regardless of whether they contribute to the overall Company ESG Rating.

The additional key issue scores and data available by index are as follows:

- MSCI ACWI: Water Stress, Labor Management, Privacy and Data Security
- MSCI ACWI IMI: Carbon Emissions, Human Capital Development and Tax Transparency

We continue to provide data and scores for the discontinued Key Issues under the ESG Rating model for the MSCI ACWI Index: Corruption & Instability, Business Ethics & Fraud, Anticompetitive Practices.

KEY ISSUE SCORE DISTRIBUTION*



TOP 5 INDUSTRY LEADERS

Nokia Oyj	9.1
HEWLETT PACKARD ENTERPRISE COMPANY	8.8
Lenovo Group Limited	8.5
DELL TECHNOLOGIES INC.	8.4
SEAGATE TECHNOLOGY HOLDINGS PUBLIC LIMITED COMPANY	8.1

BOTTOM 5 INDUSTRY LAGGARDS

Shenzhen Sunway Communication Co., Ltd.	2.8
Ninestar Corporation	2.4
Yealink Network Technology Co Ltd	2.1
Hengtong Optic-Electric CO.,LTD	1.0
ZTE Corporation	0.7

METHODOLOGY NOTE

This issue evaluates the extent to which companies may face regulatory risks or lost market access due to corruption scandals or political and social instability. Scores are based on reliance on government contracts and operations in regions facing political instability or high perceived corruption levels; anti-bribery policies,





LAST UPDATE: December 28, 2021

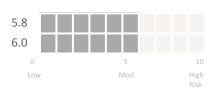
programs, and transparency; and controversies. This Key Issue is discontinued effective November 2020.

*[For symbols and terms used in this report, refer to the Glossary section at the end of the report]

EXPOSURE

RISK EXPOSURE ASSESSMENT

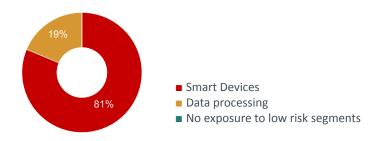
Company Industry



Key Drivers of Risk Exposure

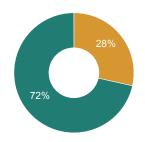
Exposure to: Regulatory risks or lost market access due to corruption scandals or political and social instability

Business Types: Percentage of operations in business segments perceived most likely to pay or receive bribes



Source: Bribe Payers Index (Transparency International); State Capture Index (Transparency International); Refinitiv; MSCI ESG Research; company disclosure

Business Locations: Percentage of operations in countries with high/moderate/low level of corruption and political instability, violence or terrorism



- No operations in markets with high risks
- other countries, Greater China
- USA

Source: Corruption Perceptions Index (Transparency International); World Governance Indicators (World Bank); Refinitiv; MSCI ESG Research; company disclosure

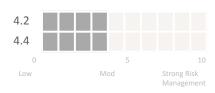
Additional Drivers of Exposure

Company is reliant on the government sectors for a major proportion:

Not Disclosed

MANAGEMENT

RISK MANAGEMENT ASSESSMENT







LAST UPDATE: December 28, 2021

			LAST UPDATE: December 28, 2021
Description	Company Practice	Best Practice	Practices Score ²
Policies & Commitments			
Executive body responsible for managing business ethics and corruption issues	Special task force or risk officer	Board-level committee	- LOW MID TOP
Company's bribery and anti-corruption policy	Detailed formal policy on bribery and anti-corruption	Detailed formal policy on bribery and anti-corruption	- LOW MID TOP
Scope of anti-corruption policy for suppliers	All suppliers are required to have anti-corruption policies	All suppliers are required to have anti-corruption policies and programs to verify compliance	- LOW MID TOP
Business ethics policy covers facilitation payments	Policy prohibits facilitation payments	Policy prohibits facilitation payments	- LOW MID TOP
Commitment to external standards f	or ethics / anti-corruption		
List of commitments to ethics and ant corruption mandates	i- ILO		
	ILO, EICC		
World Economic Forum's Partnering Against Corruption Initiative (PACI)	Not Disclosed	Yes	- LOW TOP
Transparency International's Business Principles for Countering Bribery	Not Disclosed	Yes	- LOW TOP
Programs & Structures			
Scope of employee training on ethical standards	Programs covering all permanent employees (excluding part-time and contractors)	Programs covering all employees (including part-time) and contractors	- LOW MID TOP
Internal assurance of compliance with ethical standards	Not Disclosed	Yes	- LOW TOP
External assurance of compliance with ethical standards	Not Disclosed	Yes	- LOW TOP
Provision of whistleblower protection	Whistleblower protection with no details on system o legal protection	Formal anonymous r whistleblower system with legal protection	- LOW MID TOP
Due diligence and monitoring of third- party intermediaries / agents with respect to corruption	Not disclosed	Formal processes for screening and monitoring agents	- LOW MID TOP
Discloses value of political donations / lobbying expenditure	Yes	Yes	- LOW TOP
Disclosure of government contracts value	Not Disclosed	Yes	- LOW TOP



MSCI ESG RATINGS

CCC B BB BBB A AA AAA

LAST UPDATE: December 28, 2021

Disclosure of facilitation payments

value

Not Disclosed Yes

- LOW

TOP

Disclosure of taxes/royalties paid to governments

Not Disclosed Yes

LOW

TOP

Human Rights - Policies and Programs

List of commitments to external mandates to protect human rights

ILO

ILO, EICC

CONTROVERSIES

All controversies are assessed as part of the annual review of a company's ESG rating. MSCI ESG Research tracks controversies for all companies on a regular basis. There is no evidence of the Apple's current involvement in prominent controversial events or alleged misconduct.

Controversy Cases

Assessment Headline Status Last Updated
Minor California, US: Head of security indicted over alleged bribery of Santa Clara sheriff's office to obtain Concluded August 2021

four gun permits for employees; charges dismissed



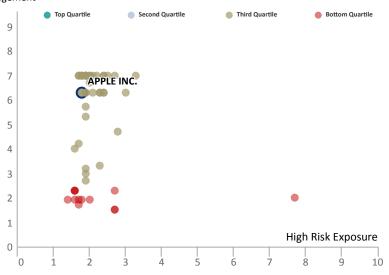




Carbon Emissions

Score	Change (since rating)	Quartile	Weight	As of
10.0	0.0	••	0.0%	Dec 11, 2020

Strong Risk Management



This issue does not present significant risks or opportunities to the company and with the assigned weight of 0% does not contribute to the overall ESG rating for the company.

MSCI ESG Research provides additional scores on a select set of ESG Issues for all companies on the MSCI ACWI Index and MSCI ACWI IMI Index. Every company on the index receives scores for the following ESG Issues, regardless of whether they contribute to the overall Company ESG Rating.

The additional key issue scores and data available by index are as follows:

- MSCI ACWI: Water Stress, Labor Management, Privacy and Data Security
- MSCI ACWI IMI: Carbon Emissions, Human Capital Development and Tax Transparency

We continue to provide data and scores for the discontinued Key Issues under the ESG Rating model for the MSCI ACWI Index: Corruption & Instability, Business Ethics & Fraud, Anticompetitive Practices.

KEY ISSUE SCORE DISTRIBUTION*



...,

TOP 5 INDUSTRY LEADERS

ACER INCORPORATED	10.0
ADVANTECH Co., Ltd.	10.0
APPLE INC.	10.0
ARISTA NETWORKS, INC.	10.0
ASUSTEK COMPUTER INCORPORATION	10.0

BOTTOM 5 INDUSTRY LAGGARDS

F5, INC.	6.7
Ninestar Corporation	6.6
Beijing BDStar Navigation Co., Ltd.	5.8
GRG Banking Equipment Co., Ltd.	5.8
CATCHER TECHNOLOGY CO., LTD.	1.3

METHODOLOGY NOTE

Companies are evaluated on the carbon intensity of their operations and their efforts to manage climaterelated risks and opportunities.

*[For symbols and terms used in this report, refer to the Glossary section at the end of the report]

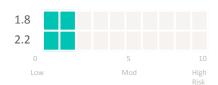




EXPOSURE

RISK EXPOSURE ASSESSMENT

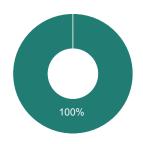
Company Industry



Key Drivers of Risk Exposure

Exposure to: Risks of having to pay increased compliance costs tied to carbon emissions regulations

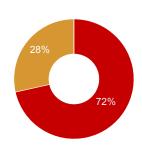
Business Types: Percentage of operations in business segments with high/moderate/low carbon intensity



- No exposure to high risk segments
- No exposure to medium risk segments
- Smart Devices, Data processing

Source: IERS' Comprehensive Environmental Data Archive (CEDA); Air Emissions Accounts (Eurostat); Refinitiv; MSCI ESG Research; company disclosure

Business Locations: Percentage of operations in countries with strengthening or pending carbon emissions regulation



- USA
- other countries, Greater China
- No operations in markets with low risks

Source: MSCI ESG Research; Refinitiv; company disclosure

MANAGEMENT

RISK MANAGEMENT ASSESSMENT







LAST UPDATE: December 28, 2021

Practices Score² Description **Company Practice Best Practice**

Targets

Aggressiveness of the company's reduction target in the context of its current performance

Company sets GHG reduction targets

Aggressive target with a low base





Carbon Improvement Targets

Baseline Year	Target Year	Target Description	Target Reduction (%)
2019	2030	Commitment to continue annually sourcing 100% renewable electricity through FY2030.	
2019	2030	Reduce absolute combined scope 1, 2 and 3 GHG emissions 62% by FY2030 from a FY2019 base year.	62.00%
2019	O19 Scope 1 2 3 emissions reduction target for Apple: 61.7 percent by 2030 relative to our 2019 emissions		61.70%
2015	2030 Reduce emissions by 75% through low-carbon design, energy efficiency, renewable energy and direct emissions abatement		75.00%
2015	Reduce emissions by 100%. 75% reduction through low-carbon design, energy efficiency, renewable energy and direct emissions abatement. For the remaining 25%, develop/invest in innovative carbon removal solutions.		100.00%
2015	2020	source from or install more than 4 gigawatts of new renewable energy projects worldwide, by 2020	
2015	015 2030 Reduce emissions by 75 percent by 2030, compared to 2015 levels		75.00%
2012	12 2036 Reduce Scope 1+2 emissions (market-based)		52.00%
2012	2020	Reduce Scope 1+2 emissions (market-based)	7.00%
2011	2019	Reduce Scope 2 emissions (market-based)	100.00%
2011	2019	power 100% of global facilities with 100% renewable energy	
2011	2019	power 100% of our global facilities with 100% renewable energy	

Mitigation

Strength of Greenhouse Gas Mitigation 7.00 Strategy (0-10 Score, 0=worst, 10=best)

Programs or actions to reduce the emissions intensity of core operations

1.08. and of details to read of the emissions intensity of details of							
Use of cleaner sources of energy	Some efforts	Aggressive efforts	- LOW MID TOP				
Energy consumption management and operational efficiency enhancements	Some efforts	Aggressive efforts	- LOW MID TOP				
CDP disclosure	Yes	Yes	- LOW TOP				

Performance

Carbon Emissions Performance Relative to Peers (0-10 Score, 0=worst, 10=best)



5.00



GHG Emissions - metric tons CO2e

Year	Scope 1 Disclosed	Scope 1 Estimate Key	Scope 2 Disclosed	Scope 2 Estimate Key	Scope 1+2 Disclosed	Scope 3 (upstream)	Scope 3 (downstream)	Scope 3 (undefined)	Scope 1 Estimated	Scope 2 Estimated	Scope 1+2 Estimated	Scope 1+2 Estimate Key	GHG Emissions Details
2020	47,430.0	Reported	0.0	Reported	47,430.0	16,387,000.0	4,360,000.0	1,800,000.0				Reported	
2019	50,540.0	Reported	0.0	Reported	50,540.0	19,420,160.0	4,160,000.0	1,400,000.0				Reported	
2018	57,440.0	Reported	8,730.0	Reported	66,170.0	19,020,500.0	6,000,000.0					Reported	
2017	47,050.0	Reported	36,250.0	Reported	83,300.0	21,393,440.0	6,000,000.0					Reported	Scope 1 also includes emissions from R&D processes. The company has started tracking these emissions in FY2017
2016	34,320.0	Reported	41,600.0	Reported	75,920.0	23,112,910.0	6,400,000.0					Reported	
2015	28,100.0	Reported	42,460.0	Reported	70,560.0	29,912,910.0	8,400,000.0					Reported	
2014	28,490.0	Reported	63,210.0	Reported	91,700.0	259,130.0						Reported	
2013	29,300.0	Reported	91,510.0	Reported	120,810.0	225,630.0						Reported	
2012	21,220.0	Reported	139,160.0	Reported	160,380.0	225,630.0						Reported	Updated based on 2016 CSR Report
2011	21,657.0	Reported	154,273.0	Reported	175,930.0	155,025.0						Reported	Updated based on 2015 CSR Report
2010		E.CSI		E.CSI					10,284.0	19,300.0	29,584.0	E.CSI	Aug - 2018 Estimation Update
2009		E.CSI		E.CSI					6,733.0	12,637.0	19,370.0	E.CSI	Aug - 2018 Estimation Update
2008		E.CSI		E.CSI					5,133.0	9,634.0	14,767.0	E.CSI	Aug - 2018 Estimation Update

GHG Emissions Intensity - metric tons CO2e / USD million sales

Year	GHG Intensity	GHG Intensity Details	GHG Intensity - Reported	GHG Intensity - Reported Details
2020	0.20			
2019	0.20			
2018	0.20			
2017	0.40			
2016	0.40			
2015	0.30			
2014	0.50			
2013	0.70			
2012	1.00			
2011	1.60			
2010	0.50			
2009	0.50			
2008	0.50			

Energy Consumption

Year	Total energy consumption (reported)	Total energy consumption (MWh)	Energy intensity (reported)	Reported intensity details	Total energy consumption intensity	Energy consumption details
2020	372,901.40	372,901.40			1.36	Total energy use
2019	2,877,600	2,877,600			11.06	Electricity + Fuel
2018	2,597,695.40	2,597,695.40			9.78	Electricity (1), Natural gas (2)
2017	1,867,886.40	1,867,886.40			8.15	(1) Electricity and (2) natural gas
2016	1,735,451.55	1,735,451.55			8.05	(1) Electricity and (2) natural gas





LAST UPDATE: December 28, 2021

Year	Total energy consumption (reported)	Total energy consumption (MWh)	Energy intensity (reported)	Reported intensity details	Total energy consumption intensity	Energy consumption details
2015	1,245,451.21	1,245,451.21			5.33	(1) Electricity and (2) natural gas
2014	1,109,305.69	1,109,305.69			6.07	(1) Electricity and (2) natural gas
2013	931,936.70	931,936.70			5.45	(1) Electricity and (2) natural gas
2012	697,041.60	697,041.60			4.45	(1) Electricity and (2) natural gas





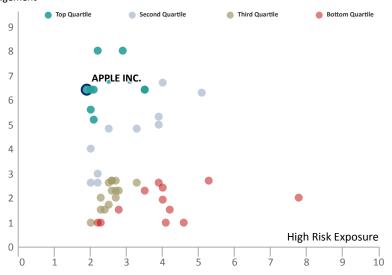
LAST UPDATE: December 28, 2021



Water Stress

Score	Change (since rating)	Quartile	Weight	As of
10.0	0.0	••••	0.0%	Aug 12, 2020

Strong Risk Management



This issue does not present significant risks or opportunities to the company and with the assigned weight of 0% does not contribute to the overall ESG rating for the company.

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- MSCI ACWI IMI: Carbon Emissions, Human Capital Development and Tax Transparency

We continue to provide data and scores for the discontinued Key Issues under the ESG Rating model for the MSCI ACWI Index: Corruption & Instability, Business Ethics & Fraud, Anticompetitive Practices.

KEY ISSUE SCORE DISTRIBUTION*



TOP 5 INDUSTRY LEADERS

APPLE INC.	10.0
ASUSTEK COMPUTER INCORPORATION	10.0
CISCO SYSTEMS, INC.	10.0
DELL TECHNOLOGIES INC.	10.0
HEWLETT PACKARD ENTERPRISE COMPANY	10.0

BOTTOM 5 INDUSTRY LAGGARDS

LITE-ON TECHNOLOGY CORPORATION	4.4
GRG Banking Equipment Co., Ltd.	4.3
NETAPP, INC.	3.9
Logitech international S.A.	3.4
CATCHER TECHNOLOGY CO., LTD.	1.2

METHODOLOGY NOTE

Companies are evaluated on the water intensity of their operations, levels of water stress in their areas of operation and their efforts to manage water-related risks and opportunities.

*[For symbols and terms used in this report, refer to the Glossary section at the end of the report]

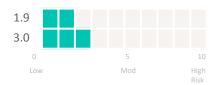




EXPOSURE

RISK EXPOSURE ASSESSMENT

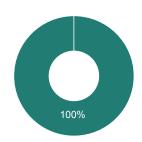
Company Industry



Key Drivers of Risk Exposure

Exposure to: Risk of increased cost of input, disputes around access rights to key resources or operational disruptions to production processes requiring water as a critical input

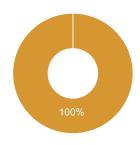
Business Types: Percentage of operations in business segments with high/moderate/low water intensity



- No exposure to high risk segments
- No exposure to medium risk segments
- Smart Devices, Data processing

Source: IERS' Comprehensive Environmental Data Archive (CEDA); MSCI ESG Research; Refinitiv; company disclosure

Business Locations : Percentage of operations in countries or regions with high/moderate/low percent of territory affected by oversubscription to water resources



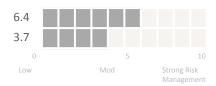
- No operations in markets with high risks
- other countries, Greater China, USA
- No operations in markets with low risks

Source: WRI Aqueduct; Refinitiv; MSCI ESG Research; company disclosure

MANAGEMENT

RISK MANAGEMENT ASSESSMENT

Company Industry







LAST UPDATE: December 28, 2021

Practices Score² Description **Company Practice Best Practice Governance and Strategy** Implementation of Water Efficient 7.00 **Production Processes** Evidence of Using Alternative Water Yes Yes LOW Sources

Executive body responsible for water management strategy and performance:

Yes

Senior Executive or Executive Committee are responsible for water management strategy and performance

Yes

- LOW



Performance

Water Intensity Relative to Peers (0-10 Score, 0=worst, 10=best)

5.00

Water Withdrawal Performance

Year	Freshwater Withdrawal (m3)	Freshwater Withdrawal Intensity (m3/ USD million sales)
2020	4,882,650	17.79
2019	4,988,630	19.17
2018	4,920,500	18.53
2017	3,785,000	16.51
2016	2,384,550	11.06
2015	2,168,805	9.28
2014	1,869,790	10.23
2013	1,627,550	9.52
2012	1,305,825	8.34
2011	1,000,000	9.21
2010	800,651	12.31

Water Consumption Performance

_	Year	Freshwater Consumption (m3)	Freshwater Consumption Intensity (m3/ USD million sales)	Details
	2020			
	2019			
	2018			

CONTROVERSIES

All controversies are assessed as part of the annual review of a company's ESG rating. MSCI ESG Research tracks controversies for all companies on a regular basis. There is no evidence of the Apple's current involvement in prominent controversial events or alleged misconduct.





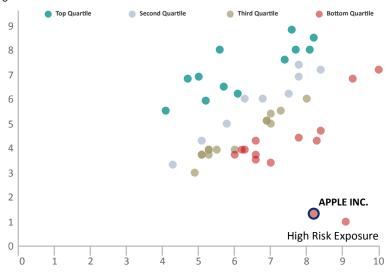
LAST UPDATE: December 28, 2021



Labor Management

Score	Change (since rating)	Quartile	Weight	As of
0.1	▼ -0.6	•	0.0%	Dec 28, 2021

Strong Risk Management



This issue does not present significant risks or opportunities to the company and with the assigned weight of 0% does not contribute to the overall ESG rating for the company.

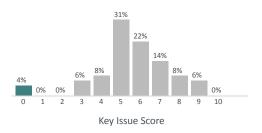
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- MSCI ACWI IMI: Carbon Emissions, Human Capital Development and Tax Transparency

We continue to provide data and scores for the discontinued Key Issues under the ESG Rating model for the MSCI ACWI Index: Corruption & Instability, Business Ethics & Fraud, Anticompetitive Practices.

KEY ISSUE SCORE DISTRIBUTION*



TOP 5 INDUSTRY LEADERS

Logitech international S.A.	9.4
MICRO-STAR INTERNATIONAL CO.,LTD.	9.1
ACER INCORPORATED	8.9
F5, INC.	8.4
Lenovo Group Limited	8.2

BOTTOM 5 INDUSTRY LAGGARDS

Ninestar Corporation	3.4
QUANTA COMPUTER INC.	3.3
BYD Electronic (International) Company Limited	3.0
APPLE INC.	0.1
Pegatron Corporation	0.0

METHODOLOGY NOTE

Companies are evaluated on the complexity of their workforce (size, labor intensity, and regions of operation), employee relations, strength of worker protections, and employee engagement efforts.

*[For symbols and terms used in this report, refer to the Glossary section at the end of the report]

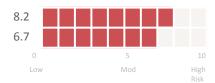




EXPOSURE

RISK EXPOSURE ASSESSMENT

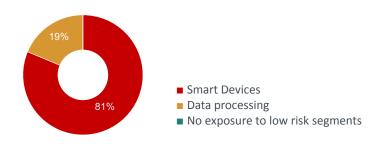
Company Industry



Key Drivers of Risk Exposure

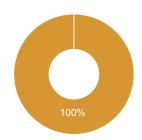
Exposure to: Risk of workflow disruptions due to labor unrest, or reduced productivity due to poor job satisfaction

Business Types: Percentage of operations in business segments with high/moderate/low labor intensities, as measured by average sales per employee of industries



Source: MSCI ESG Research; Refinitiv; company disclosure

Business Locations: Percentage of operations in countries with high/moderate/low likelihood of labor unrest (based on historic precedent)



- No operations in markets with high risks
- other countries, Greater China, USA
- No operations in markets with low risks

Source: International Labour Organization; Refinitiv; MSCI ESG Research; company disclosure

Layoffs Events

Major Layoffs: No

Size and Composition of Workforce

Number of employees: 147,000

Number of Employees

Year	Number of employees	Part time workers (%)	Contract or temporary workers (%)	Estimated Part time/contract %
2021	154,000			
2020	147,000			
2019	137,000			
2018	132,000			
2017	123,000			





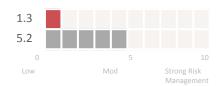
LAST UPDATE: December 28, 2021

Year	Number of employees	Part time workers (%)	Contract or temporary workers (%)	Estimated Part time/contract %
2016	116,000			
2015	110,000			
2014	92,600			
2013	80,300			
2012	76,100			
2011	63,300			
2010	49,400			
2009	36,800			
2008	35,100			

MANAGEMENT

RISK MANAGEMENT ASSESSMENT

Company Industry



Description Practices Score² **Company Practice Best Practice** Strategy Yes Evidence of collective agreements No LOW TOP Employee stock ownership plan (ESOP) Sector-leading number of Sector-leading number of LOW MID **TOP** or employee stock purchase plan (ESPP) employees eligible for ESOP employees eligible for ESOP and/or ESPP and/or ESPP Variable performance-based No evidence of variable Strong performance-based MID TOP component to pay incentive pay for non-officer incentive pay structure staff covers all employees Non-compensation benefits including Scope not determinable Benefits cover all employees LOW TOP pension and retirement

Performance

External recognition as employer of choice (last three years)

No Value

External recognition - details

Year	Awarding authority name	Title of the Award
2020	Forbes	Best Employers for Veterans 2020
2020	Forbes	World's Best Employers 2020
2020	Forbes	Best Employers for Diversity 2020
2019	Human Rights Campaign	Best Places to Work
2019	Forbes	AMERICA'S BEST LARGE EMPLOYERS 2019 LIST





Year	Awarding authority name	Title of the Award
2018	FORBES	THE WORLD'S BEST EMPLOYERS 2018: TOP TEN
2017	Human Rights Campaign	Best Places to Work
2016	Human Rights Campaign	Best Places to Work 2016

Employee turnover

Year	Annual employee turnover (%)	Details
2020		No disclosure found for salary per employee.
2020		
2019		
2018		
2017		
2016		

Employee Productivity

Year	Profit per employee (USD '000)
2020	0
2019	0
2018	0
2017	0

CONTROVERSIES

All controversies are assessed as part of the annual review of a company's ESG rating. MSCI ESG Research tracks controversies for all companies on a regular basis. The Apple has been flagged for involvement in controversial events or alleged misconduct.

Controversy Cases			
Assessment	Headline	Status	Last Updated
Severe	Hong Kong: Allegations of improper layoffs from labor union	Ongoing	October 2021
Moderate	Austin, US: Former employee alleged unfair dismissal for organizing activism actions	Ongoing	November 2021
Moderate	United States: Hundreds of workers filed online complaints over allegation of harassment and discrimination	Ongoing	November 2021
Moderate	Ireland: EUR 4,500 compensation to former customer relations advisor for alleged constructive dismissal	Concluded	October 2021
Moderate	Oregon, United States: Lawsuit over alleged unfair dismissal and failure to protect employee from customers' racial discrimination	Ongoing	April 2021
Minor	United States: Former employee filed complaint with NLRB over CEO's alleged violation of labor laws in comment related to information leakage	Ongoing	November 2021
Minor	US: Two employees filed complaints with labor regulator over company's alleged efforts to prevent discussions on pay equity	Ongoing	October 2021
Minor	California, US: Lawsuit over managers' alleged discrimination against female Sindhi employee	Ongoing	August 2021
Minor	Employees' concerns raised over the hiring of advertising platform engineer who wrote a book allegedly containing discriminatory comments; engineer reportedly dismissed	Concluded	May 2021





LAST UPDATE: December 28, 2021

Assessment	Headline	Status	Last Updated
Minor	California, US: Class action lawsuit over alleged unpaid wages for time spent on exit searches of employees' belongings	Ongoing	March 2021





LAST UPDATE: December 28, 2021

CONTROVERSIES DETAIL

Here you will find the narratives for all controversies relevant to the ESG Ratings issues covered for the company in addition to those controversies that do not map to the ESG Ratings issues.

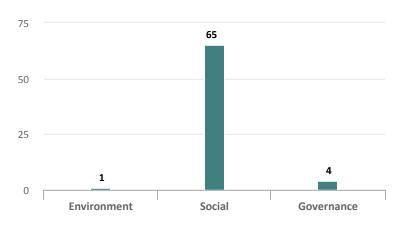
CONTROVERSY CARD

	MOST SEVERE CONTROVERSY	CONTROVERSY COUNT	
Environment			
Carbon Emissions	None	0	
Water Stress	None	0	
Electronic Waste	Moderate	1	
Opportunities in Clean Tech	None	0	
Social			
Labor Management	Severe	10	
Human Capital Development	Severe	10	
Supply Chain Labor Standards	Severe	5	
Controversial Sourcing	None	0	
Privacy & Data Security	Moderate	10	
Governance			
Corruption & Instability	Minor	1	
Business Ethics & Fraud	Moderate	9	
Anticompetitive Practices	Moderate	13	
Corporate Governance	None	0	
Corporate Behavior	Moderate	25	

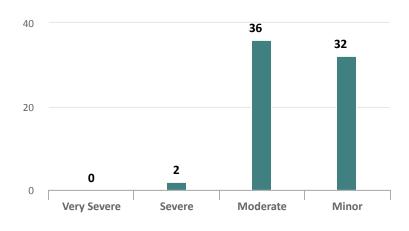
CONTROVERSIES

- Very Severe: Indicates an action by a company that results in a very large impact on society and/or the environment.
- Severe: Indicates an action by a company that results in a large impact on society and/or the environment.
- Moderate: Indicates an action by a company that results in a moderate impact on society and/or the environment.
- Minor: Indicates an action by a company that results in a low impact on society and/or the environment.
- None: There is no evidence that a company is involved in any controversy.

NUMBER OF CONTROVERSIES BY PILLAR



NUMBER OF CONTROVERSIES BY ASSESSMENT







LAST UPDATE: December 28, 2021

ENVIRONMENTAL CONTROVERSIES

Moderate Controversies

Date: April 2021

Assessment: Moderate **Status:** Concluded

India: Suspension of import permit of subsidiary over alleged non-compliance with electronic waste management regulations; suspension removed

In April 2019, the Central Pollution Control Board (CPCB) of India suspended the import permits of several technology companies, including Apple India Pvt. Ltd., a subsidiary of Apple Inc., over alleged non-compliance with electronic waste management regulations, in violation of the Extended Producer Responsibility (EPR) clauses, leaving electronic merchandise with a combined value of about INR 50 billion (approximately USD 719.18 million) stranded with customs. The companies allegedly stated that the CPCB should have imposed penalties instead of revoking their import permits due to claims of proper electronic waste collection and failure on minor compliance issues only such as not securing prior approval from relevant authorities regarding the opening or closure of a centre.

In April 2021, Apple informed MSCI ESG Research that its latest SEC 10-Q filing stated no further import suspensions for Apple related to e-waste across its global operations.

UPDATES: 08 Apr 2021: Company communication. (Apple Inc.)

13 Apr 2019: Apple, Samsung in a jam with imports held up at customs. (THE ECONOMIC TIMES)

11 Apr 2019: Tech giants' imports halted over e-waste. (Deccan Herald)

Source: 08 Apr 2021 (Apple Inc.)

SOCIAL CONTROVERSIES

Severe Controversies

Date: December 2021
Assessment: Severe
Status: Ongoing

Xinjiang region: Allegations of subjecting Uyghurs to forced labor in factories

In March 2020, Australian Strategic Policy Institute reported that Apple, Inc.'s. suppliers O-Film Technology (O-Film), a compact camera modules and touchscreen manufacturer, Foxconn Technology (Foxconn), an electronics manufacturer, Hefei Highbroad Advanced Material Co (Hefei Highbroad), a flatpanel display parts manufacturer, and Hubei Yihong Precision Manufacturing Co. (Hubei Yihong), an electronics precision parts manufacturer, allegedly employed Uyghur or Uighur (a Muslim minority group in Xinjiang, China) workers who were part of the Chinese government's labor transfer programs.

According to various reports, since 2017, more than one million Uighurs, Kazakhs and other ethnic minorities have been detained in 're-education camps'. The camps were reportedly being monitored by cameras, guarded by armed police and walled with barbed wires. In addition, the reports cited allegations that the Uighurs were forced to carry out manual labor in the camps for various production supply chains that provide raw materials allegedly sourced by a number of manufacturing and retail companies globally.

The O-Film facility manufactured front cameras for Apple's mobile devices, including iPhone 8 and iPhone X. According to an ASPI article, about 700 Uyghurs were transferred from one O-film factory in Hotan Prefecture to another in Jiangxi province between April 2017 and May 2017. In October 2017, the Hotan government allegedly hoped to supply 1,300 more workers to the company. Moreover, in a purported deleted press release, the Apple CEO visited the site in December 2017 and praised the facility for its 'humane approach' toward employees. One Uyghur worker also claimed that there were at least a thousand Uyghur workers at the Jiangxi facility.

Allegedly making half the world's iPhone, the Foxconn facility in Zhengzhou was dubbed "Iphone City". As per a 2019 government document, 560 Xinjiang laborers were transferred to work in facilities in the Henan province, including at Foxconn. In addition, China Labor Watch noted that contract workers, including Uyghurs, were subjected to at least 100 hours of overtime work in a month. Foxconn also allegedly participated in the Xinjiang Aid policy.

Hefei Highbroad, which supplies flat panel display (LCD or OLED) parts to an Apple supplier, BOE Technology, allegedly signed a contract with the government to take in 1000 Uyghurs every year for three years. In 2017, about 500 Uyghurs were transferred to the Anhui province to work for Hefei Highbroad. In 2018, at least 500 Uyghurs were relocated to Hefei Highbroad and its subsidiary Fuying Photoelectric Co.

Lastly, the ASPI reported that approximately 105 Uyghurs were transferred to Hubei Yihong. Hubei Yihong was not listed as Apple's supplier. However, it lists another company, Goertek, which supplies AirPods to Apple.

In May 2021, Apple Insider reported that an investigation by The Information alleged that seven Apple suppliers including: AcBel Polytech, Advanced-Connectek, Avary Holding, CN Innovations, Luxshare Precision Industry, Shenzhen Deren Electronic Co., and Suzhou Dongshan Precision Manufacturing Co., were linked to the suspected forced labor of Uyghurs. The report said that hundreds of Xinjiang workers were sent to an iPhone and AirPods supplier, Luxshare Precision, from 2017 to 2020; 1,000 were sent to antenna and internal cable supplier, Shenzhen Deren Electronic, in recent years; 400 were sent to printed circuit board supplier, Avary Holding, from 2019 to 2020. Other component suppliers were also said to have received Xinjiang laborers. The Information further claimed that one supplier, Advanced-Connectek, owned a factory in Xinjiang that was located beside a suspected forced labor detention facility.

UPDATES: 09 Dec 2021: Company communication. (Apple Inc.)

27 Sep 2021: Campaign for Accountability Files Customs and Border Protection Complaint over Apple's Use of Forced Labor. (Campaign for Accountability) The nonprofit organization requested for the U.S. Customs and Border Protection to issue Withhold Release Orders against Apple products allegedly linked to forced labor.





LAST UPDATE: December 28, 2021

10 Jun 2021: U.S. senator slams Apple, Amazon, Nike, for enabling forced labor in China. (Reuters) A US senator reportedly criticized several companies during a Senate Foreign Relations Committee hearing for allegedly benefitting from forced labor in the region.

12 May 2021: EXCLUSIVE: Rep. Buck Demands Answers On Apple's Relationship With Companies Accused Of Using Forced Labor. (Daily Caller) A Colorado congressman reportedly sent a letter to the CEO of Apple, seeking information on its relationship with seven suppliers that have allegedly used forced labor and as well as information on Apple's internal investigations, verification processes, and action plans related to the prevention of human rights abuses at its suppliers.

10 May 2021: Seven Apple suppliers linked to Chinese forced labor programs. (Apple Insider)

17 Mar 2021: China's O-Film apparently cut off from Apple supply chain. (Nikkei Asia) The report suggested that Apple Inc. may be the unidentified customer that ceased business ties with O-Film.

14 Jan 2021: Apple linked to forced labor in China, again. (DanWatch) According to the non-profit group Tech Transparency Project, it was given access to documents that showed that Lens Technology, a supplier of Apple, Tesla, and Amazon took approximately 2000 forced-displaced Uighurs to work in its factories in Hunan Province, China for many hours without breaks.

29 Dec 2020: Apple's longtime supplier accused of using forced labor in China. (The Washington Post)

15 Dec 2020: Nike and Coca-Cola Lobby Against Xinjiang Forced Labor Bill. (The New York Times) According to the New York Times, several companies including Apple were reportedly involved in lobbying efforts related to the limiting of certain provisions of the Uyghur Forced Labor Prevention bill passed by the U.S. House of Representatives. Apple reportedly said that it did not lobby against the Uyghur Forced Labor Prevention Act and believes the said bill should become law.

05 Dec 2020: Chinese dissident targets Apple, Nike, others after report says they lobbied to weaken forced labor bill. (CNBC)

10 Aug 2020: Apple imported clothes from Xinjiang firm facing US forced labour sanctions; Details on staff uniforms come after CEO Tim Cook says he will not tolerate modern slavery. (The Guardian) The report alleged that certain shipments of retail staff uniforms have previously been sourced from a garment supplier currently facing U.S. sanctions for sourcing cotton from the Xinjiang region.

02 Mar 2020: Apple benefits from forced Uighur labor at its iPhone supplier factories in China, according to an explosive new report. (Business Insider)

01 Mar 2020: Uyghurs for Sale: 'Re-education', forced labour and surveillance beyond Xinjiang. (Australian Strategic Policy Institute)

01 Mar 2020: Uighurs are making shoes for Nike in Chinese forced labour factories, report claims; The accusations add to a growing sense of the oppression Uighur Muslims in China are subjected to. (Telegraph)

Source: 09 Dec 2021 (Apple Inc.)

Date: September 2021 Assessment: Severe Status: Ongoing

Hong Kong: Allegations of improper layoffs from labor union

In September 2021, The Standard quoted the IT People Association of Hong Kong, an affiliate of the Hong Kong Federation of Trade Unions (FTU), as saying it had received reports from 80 Apple Inc. (Apple) employees claiming over 200 employees had been unfairly dismissed. The employees said the dismissals were made between April 2020 and March 2021, and without proper compensation.

A former FTU lawmaker said Apple cited employee misconduct—in a company-subsidized medical checkup program—as a pretext for making the job cuts, after its retail sales reduced in 2019 and 2020. Around five former employees have reportedly filed court claims against Apple.

UPDATES: 22 Sep 2021: Around 200 Apple employees "unreasonably" dismissed. (The Standard)

Source: 22 Sep 2021 (The Standard)

Moderate Controversies

Date: December 2021

Assessment: Moderate **Status:** Ongoing

United States: Congress information request and lawsuits over allegations of anti-competitive practices favoring own apps sold through App Store

In September 2019, the House Judiciary Committee requested information and executives' email from Alphabet, Amazon, Apple, and Facebook as part of the committee's antitrust probe.

The committee requested Apple Inc.'s algorithm for its App Store where developers have alleged that the company's algorithm puts Apple's applications in favor of other applications. The committee also requested documents on the discussion of Apple's outside payment and revenue-share policies which has been called as the Apple tax and criticized that it puts its own applications to an advantage. Lawsuits by developers remain ongoing.

UPDATES: 09 Dec 2021: Company communication. (Apple Inc.)

26 Jan 2021: In Re Apple iPhone Antitrust Litigation, 11-cv-06714. (U.S. District Court, Northern District of California) The company continued to face lawsuits over its alleged anticompetitive practices through its App Store.

18 Dec 2020: In Re Apple iPhone Antitrust Litigation, 11-cv-06714. (U.S. District Court, Northern District of California) The company continued to face lawsuits over its alleged anticompetitive practices through its App Store.

18 Nov 2020: Apple will slash App Store fees as antitrust pressure mounts. (CNN Business)

13 Sep 2019: House committee asks Facebook, Amazon, Apple, and Alphabet to turn over documents in antitrust probe. (CNBC)

13 Sep 2019: Apple's app store eyed in U.S. Congress antitrust probe. (Reuters)

19 Aug 2019: APPLE INC: iOS Developers File Class Action Over App Store Fees. (CLASS ACTION REPORTER)

14 Aug 2019: APPLE INC: Sermons Sues over Monopoly of Apps and in-App Products. (CLASS ACTION REPORTER)

26 Jul 2019: APPLE INC: Faces Class Suit from App Developers. (CLASS ACTION REPORTER)

18 Jul 2019: APPLE INC: Awaits Ruling in iPhone Apps Monopoly Class Action. (CLASS ACTION REPORTER)





LAST UPDATE: December 28, 2021

12 Jul 2019: APPLE INC: Lawrence Suit Asserts Phone App Monopoly, Price-fixing. (CLASS ACTION REPORTER)

18 Jun 2019: APPLE INC: iPhone Owners May Sue for Monopolization, SCOTUS Says. (CLASS ACTION REPORTER)

04 Jun 2019: Developers sue Apple over App Store practices. (Reuters)

30 May 2019: Apple defends itself against claims its App Store is an abusive monopoly. (COMPUTING)

06 Nov 2018: High Court Prepares for Argument Concerning Apple App Store Distribution. (CONSUMER ELECTRONICS DAILY)

03 Oct 2018: High Court Allows DOJ Oral Argument in Apple Antitrust Lawsuit Case. (CONSUMER ELECTRONICS DAILY)

18 Jun 2018: U.S. top court mulls Apple's App Store commissions in antitrust case. (Reuters)

12 Jan 2017: US appeals court reopens lawsuit against Apple for alleged App Store monopoly. (ZDNet)

Source: 09 Dec 2021 (Apple Inc.)

Date: December 2021 Assessment: Moderate Status: Ongoing

China: Allegations of illegally employing students at Chongqing facility that manufactured Apple watch

In October 2018, Scholars Against Corporate Misbehavior (SACOM), a Hong Kong-based workers' rights group, alleged that Quanta Computer Inc. illegally employed students at its Chongqing facility to assemble Apple Watch. The students worked in the factory as part of an internship program in order to receive their graduation certificate. SACOM interviewed 28 students in the summer of 2018 and it was revealed that the students were working overtime and night shifts with minimal breaks in between.

In April 2021, Apple informed MSCI ESG Research that it has launched investigation into the allegation made by the report about student interns working overtime and night shifts.

UPDATES: 09 Dec 2021: Company communication. (Apple Inc.)

08 Apr 2021: Company communication. (Apple Inc.)

31 Oct 2018: Quanta under fire over student labor. (Taipei Times - Business)

Source: 09 Dec 2021 (Apple Inc.)

Date: December 2021 **Assessment:** Moderate **Status:** Ongoing

United States Congress inquiry into alleged anticompetitive business practices

In July 2019, the U.S. House of Representatives held a hearing into alleged anticompetitive business practices by Apple and other tech giants over concern that their dominant position might prevent new companies from competing and undermine market innovation. Apple denied the allegations and argued that their company was also facing intensive competition from various competitors. Apple also stated that their products and platforms helped facilitate the success of many other businesses.

In October 2020, the House Judiciary Committee's Antitrust Subcommittee released the findings of its antitrust investigation into the business practices of four tech giants, including Apple. The subcommittee's report alleged that the companies leveraged their market dominance and stifled innovation through the acquisition of small competitors, self-preferencing, predatory pricing, and exclusionary conduct. The report also contains the subcommittee's recommendations for Congress and antitrust enforcement agencies to update and strengthen antitrust laws and enforcement to restore competition in the digital market, including through the structural separation of the companies' online platforms from other business lines.

UPDATES: 09 Dec 2021: Company communication. (Apple Inc.)

21 Apr 2021: Apple, Google Come Under Fire at Senate Antitrust Hearing. (The Wall Street Journal)

21 Oct 2020: Apple, Google worked as 'one company' on search deal, US says. (THESTAR.COM.MY)

08 Oct 2020: Le Congrès accuse les Gafa d'être de «nouveaux monopoles». [Congress accuses the Gafa of being "new monopolies"] (Le Figaro)

06 Oct 2020: UPDATE 2-U.S. House antitrust findings on Big Tech likely in three reports - sources. (REUTERS INDIA)

06 Oct 2020: Judiciary Antitrust Subcommittee Investigation Reveals Digital Economy Highly Concentrated, Impacted By Monopoly Power. (U.S. House Committee on the Judiciary)

13 Aug 2020: U.S. Justice Department going 'full tilt' on tech antitrust probe -official. (REUTERS INDIA)

03 Aug 2020: House antitrust hearing chair says probe found Google stole content from others. (SNL KAGAN MEDIA & COMMUNICATIONS REPORT)

30 Jul 2020: Amazon, Apple, Facebook and Google grilled on Capitol Hill over their market power. (The Washington Post)

23 Jul 2020: 3 lawmakers in charge of grilling Apple, Amazon, Google, and Facebook on antitrust own thousands in stock in those companies (AAPL, AMZN, GOOGL, FB). (BUSINESS INSIDER)

01 Jul 2020: Apple, Google, Amazon and Facebook CEOs agree to testify in House antitrust hearing. (CNBC)

16 Jul 2019: Lawmakers grill Amazon, Facebook, Google and Apple at antitrust hearing. (The Washington Post)

Source: 09 Dec 2021 (Apple Inc.)

Date: December 2021 **Assessment:** Moderate **Status:** Ongoing

Zhengzhou, China: Alleged labor law violation due to over-reliance on temporary workers in manufacturing facility

In September 2019, non-profit monitor of labor rights, China Labor Watch, alleged that Apple Inc. and supplier Foxconn, officially known as Hon Hai Precision Industry Co., Ltd., have breached Chinese labor laws, including the temporary staff limit of 10 percent of the total workforce. An undercover of CLW reportedly discovered that 50% of the staff were temporary workers in August 2019 and the number was 55% in 2018 including student interns. According to the report, Foxconn hires tens of thousands of temporary workers to meet iPhone demand during for peak seasons.

UPDATES: 09 Dec 2021: Company communication. (Apple Inc.)





LAST UPDATE: December 28, 2021

08 Apr 2021: Company communication. (Apple Inc.)

09 Sep 2019: Apple violates labour law in China to build iPhones. (LiveMint)

09 Sep 2019: Apple, Foxconn say they overly relied on temporary workers in China. (Reuters)

09 Sep 2019: Apple violates labour law in China to build iPhones. (LiveMint)

Source: 09 Dec 2021 (Apple Inc.)

Date: December 2021 Assessment: Moderate Status: Ongoing

France: EUR 1.1 billion penalty over alleged anti-competitive wholesale and distribution practices; appeal pending In June 2019, the French Competition Authority alleged that Apple Inc. had violated competition laws with its sales and distribution

In March 2020, the French regulator asked Apple Inc. to pay EUR 1.1 billion (approximately USD 1.23 billion) as penalty for allegedly forcing retailers to align prices of Apple products with its own store prices through anti-competitive agreements with two of its top wholesalers. The company stated that it planned to appeal the decision.

The two other wholesalers involved were Tech Data and Ingram Micro which were penalized EUR 76.1 million (approximately USD 84.5 million) and EUR 63 million (approximately USD 70 million) respectively.

UPDATES: 09 Dec 2021: Company communication. (Apple Inc.)

08 Apr 2021: Company communication. (Apple Inc.)

16 Mar 2020: France fines Apple \$1.2 billion for forcing retailers to match prices in the tech giant's own stores. (MAIL ONLINE UK)

01 Nov 2019: Apple faces fine for breaking French competition law. (THE DAILY TELEGRAPH (LONDON))

Source: 09 Dec 2021 (Apple Inc.)

Date: December 2021 Assessment: Moderate

Status: Ongoing

Investigations into alleged anti-competitive practices related to payment options on mobile applications

In June 2020, the European Commission (EC) formally opened investigations into Apple Inc.'s alleged anti-competitive practices related to its mobile applications store (Apple Store), online payment platform (Apple Pay), and music streaming service (Apple Music). The regulator alleged the company had improperly required mobile applications in its App Store to have Apple Pay as their default in-app payment option and restricted application developers from informing customers of alternative payment options.

In February 2021, Reuters reported the Netherlands Authority for Consumers and Markets (ACM) was nearing a decision in its investigation against Apple over allegations of requiring app developers to use its payment system for in-app purchases. The ACM initiated an investigation in April 2019 into Apple's alleged abuse of market dominance with its App Store by giving preferential treatment to its own apps, following indications of possible anticompetitive behavior gathered from feedback from other providers during the agency's market study into app stores. The agency was also reportedly examining Apple's rules allegedly prohibiting developers from informing users of cheaper payment alternatives outside the app. In October 2021, ACM informed Apple that its App. Store practices were anti-competitive. The the decision was still pending legal review and was expected to be published within the

In March 2021, the U.K. Competition and Markets Authority (CMA) also launched an investigation into Apple following complaints from app developers that its terms and conditions for the distribution of apps on Apple devices are unfair and anti-competitive. According to the CMA, the complaints highlighted Apple's terms requiring developers to distribute their apps to iPhones and iPads via the App Store and use Apple's payment system rather than an alternative system for in-app features, add-ons, or upgrades. According to Reuters, Apple said it would cooperate with the CMA.

In May 2021, the European Commission (EC) informed Apple of its preliminary findings that the company abused its dominant market position for the distribution of music streaming apps and distorted competition in favor of its own Apple Music service. The EC raised concerns related to the "mandatory use of Apple's own in-app purchase system" and "anti-steering provisions" which imposed a 30% fee on streaming providers for purchases of subscriptions and raised their prices without being able to inform users of cheaper offers.

In June 2021, the Federal Cartel Office of Germany (FCO) opened an investigation into Apple's alleged involvement in various anticompetitive practices including its App Store practices including its mandatory in-app purchase system. The FCO has also reportedly received antitrust complaints related to the pre-installation of its own apps on Apple devices and its privacy-related changes for its iPhone operating system update.

In September 2021, the Japan Fair Trade Commission (JFTC) announced that it has closed an antitrust investigation on Apple. Since October 2016, JFTC has been investigating Apple's alleged antitrust violations through its restrictions on certain business activities of app developers including their sales of digital content including music, e-books, videos, additional app features, and subscription services. Apple agreed to allow developers of certain media apps to provide users with an in-app link to their website to manage their accounts, which would be implemented for all apps worldwide in early 2022. According to a September 2021 report by Kyodo News, the announced changes would allow app developers to bypass Apple's in-app payment system and its commission fees. Mobile gaming apps were reportedly not included.

According to a September 2021 report by the Australian Financial Review, the Australian Competition and Consumer Commission (ACCC) has opened an investigation on Apple Pay. The ACCC was looking into potential breaches of competition laws related to Apple's restriction of certain payment options, such as banking apps, from making 'tap and go' payments using iPhones unless the transactions were routed through Apple Pay.

In October 2021, the U.S. Consumer Financial Protection Bureau (CFPB) ordered several large technology companies including Apple to provide information on their payment system plans as part of its monitoring of consumer protection risks such as user data surveillance and access restrictions.

UPDATES: 09 Dec 2021: Company communication. (Apple Inc.)

21 Oct 2021: CFPB Orders Tech Giants to Turn Over Information on their Payment System Plans. (U.S. Consumer Financial Protection Bureau)





LAST UPDATE: December 28, 2021

07 Oct 2021: Apple App Store payment rules anti-competitive, says Netherlands anti-trust authority. (Economic Times)

13 Sep 2021: ACCC to investigate Apple Pay restrictions. (Australian Financial Review)

10 Sep 2021: UPDATE 6-Apple must ease App Store rules, U.S. judge orders, in a blow to iPhone maker. (Reuters)

02 Sep 2021: Apple to let apps bypass commissions by linking to websites. (Kyodo News)

02 Sep 2021: Closing the investigation on Suspected Violation of the Antimonopoly Act by Apple Inc. (Japan Fair Trade Commission)

02 Sep 2021: EXCLUSIVE Apple hit with antitrust case in India over in-app payments issues. (Reuters) According to the report, a nonprofit group has filed an antitrust complaint with the Competition Commission of India regarding Apple's requirements for app developers to use its in-app purchases system and pay its commission fees.

30 Aug 2021: FAS Russia issued a warning to Apple. (Federal Antimonopoly Service of the Russian Federation) The Russian regulator ordered Apple to allow app developers to inform users of alternative payment options outside of the App Store.

27 Aug 2021: Apple loosens App Store payment rules in lawsuit settlement. (Associated Press)

21 Jun 2021: German watchdog probes Apple's market dominance. (BBC)

15 Jun 2021: UK regulator investigates Apple and Google's dominance of mobile platforms. (The Guardian) The Competition and Markets Authority was reportedly investigating potential anticompetitive practices related to its App Store.

02 Jun 2021: European consumer group joins EU antitrust case against Apple. (Reuters)

11 May 2021: Apple's UK users deserve app price compensation, claim says. (BBC)

10 May 2021: ACCC seeks leave to appear in Epic v Apple appeal. (Australian Competition and Consumer Commission)

30 Apr 2021: EU says Apple's App Store breaks competition rules after Spotify complaint. (CNBC)

30 Apr 2021: Statement by Executive Vice-President Margrethe Vestager on the Statement of Objections sent to Apple on App Store rules for music streaming providers. (European Commission)

26 Apr 2021: Apple hit with German antitrust complaint as it prepares to roll out new iPhone software. (CNBC)

08 Apr 2021: Company communication. (Apple Inc.)

31 Mar 2021: Epic Games files complaint against Apple with UK regulator. (Reuters)

08 Mar 2021: Apple and Google face new antitrust battle over Arizona app store bill. (The Guardian)

05 Mar 2021: Exclusive: Apple faces EU charges over Spotify complaint - sources. (Reuters)

04 Mar 2021: EXCLUSIVE-EU antitrust regulators ready Apple charges on Spotify complaint – sources. (Reuters) Reuters reported the EC is finalizing formal antitrust charges against Apple which stemmed from a complaint filed in March 2019 by digital music service provider Spotify over alleged restrictions in Apple's agreements with developers that want to distribute their apps to users of Apple devices. The complaint specifically alleged Apple's requirement for developers to use its proprietary in-app purchase system for paid digital content, which charges a 30% commission on all subscription fees, caused rivals to either disable in-app payment option or raise subscription prices then pass on costs to customers.

04 Mar 2021: CMA investigates Apple over suspected anti-competitive behaviour. (UK Competition and Markets Authority)

26 Feb 2021: Dutch competition regulators nearing draft decision in Apple investigation. (Reuters)

23 Jan 2021: EU lawmakers want Amazon, Apple, Facebook, Google CEOs at February 1 hearing. (Hindustan Times)

24 Sep 2020: Apple may face EU rules to open up payment technology. (Hindustan Times

16 Jun 2020: EU authorities open twin Apple antitrust investigations. (Associated Press)

29 Oct 2019: Apple Pay in EU antitrrust spotlight as regulators seek details. (Reuters)

11 Apr 2019: Apple in Dutch antitrust spotlight for allegedly promoting own apps. (Reuters)

11 Apr 2019: ACM launches investigation into abuse of dominance by Apple in its App Store. (Authority for Consumers and Markets)

Source: 09 Dec 2021 (Apple Inc.)

Date: December 2021

Assessment: Moderate Status: Ongoing

France: Court order to pay EUR 30,000 in damages over alleged unfair terms in the general conditions and privacy policy of iTunes and Apple Music; appeal filed

In June 2020, the Paris Court of Justice ruled that several terms in the general conditions and privacy policy of Apple's iTunes and Apple Music were unfair and ordered the company to pay EUR 30,000 to French consumer group UFC-Que Choisir to compensate for damages and legal costs for the group's initiation of court proceedings of the matter in 2016. The court cited that clauses related to Apple's responsibility in the event of breach of contract and termination of access to the services and user data security were illegal and abusive. The court cited that Apple does not consider users' IP address, postal code, geolocation, and other identifiers as personal data and were therefore not protected by the General Data Protection Regulation (GDPR). According to regulations and e-privacy directives, where user must give explicit consent to collect data, the information are considered personal data. The clauses also allegedly suggest that users cannot exercise their right to oppose the exploitation of their data and do not explain clearly what the company does on the data collected.

UFC-Que Choisir stated that Apple would be required to revise the clauses in question if the company does not appeal the court's

UPDATES: 09 Dec 2021: Company communication. (Apple Inc.)

08 Apr 2021: Company communication. (Apple Inc.)

15 Jun 2020: Apple condamné en France pour les conditions abusives d'iTunes et Apple Music [Apple condemned in France for the abusive conditions of iTunes and Apple Music]. (Le Monde)





LAST UPDATE: December 28, 2021

12 Jun 2020: Clauses abusives - L'UFC-Que Choisir fait condamner Apple [Unfair terms - UFC-Que Choisir condemns Apple]. (UFC-Que Choisir)

Source: 09 Dec 2021 (Apple Inc.)

Date: December 2021
Assessment: Moderate
Status: Ongoing

Italy: Investigation over alleged anti-competitive restrictions on the online sales of certain branded products

In July 2020, the Italian Competition Authority (AGCM) launched an investigation into Amazon.com, Inc. and Apple Inc. over alleged anti-competitive practices related to the online sales of Apple and Beats electronic products. The AGCM was looking to determine whether the companies had restricted competition by agreeing to exclude unofficial retailers from selling the said products in the online marketplace.

UPDATES: 09 Dec 2021: Company communication. (Apple Inc.)

22 Jul 2020: I842 - ICA: investigation launched against Apple and Amazon for banning the sale of Apple- and Beats-branded products to retailers who do not join the official programme. (Autorita Garante della Concorrenza e del Mercato)

Source: 09 Dec 2021 (Apple Inc.)

Date: December 2021
Assessment: Moderate
Status: Ongoing

EC antitrust inquiry into potential competition issues within the Internet of Things (IoT) sector

In July 2020, the European Commission (EC) launched an antitrust inquiry into the Internet of Things (IoT) sector for consumer-related products and services within the European Union (EU). The inquiry would look into the nature and effects of possible competition issues within the sector after the EC identified indications of restrictive business practices related to data access, interoperability, and use of proprietary standards which could result to a monopoly. The EU competition commissioner cited voice assistants such as Amazon's Alexa, Apple's Siri, Deutsche Telekom's Magenta, and Google Assistant as the center of the inquiry. The commission would also send questionnaires to about 400 big and small companies based in Europe, Asia, and America that sell smart home appliances, wearables, and voice assistants to gather related information.

UPDATES: 09 Dec 2021: Company communication. (Apple Inc.)

16 Jul 2020: Siri et Alexa dans le viseur de Vestager [Siri and Alexa in Vestager's viewfinder]. (Les Echos)

16 Jul 2020: Statement by Executive Vice-President Margrethe Vestager on the launch of a Sector Inquiry on the Consumer Internet of Things. (European Commission)

16 Jul 2020: Antitrust: Commission launches sector inquiry into the consumer Internet of Things (IoT). (European Commission)

Source: 09 Dec 2021 (Apple Inc.)

Date: December 2021

Assessment: Moderate **Status:** Ongoing

Russia: RUB 906.3 million penalty over alleged anticompetitive practices in the mobile applications market for iOS devices; appeal pending

In August 2020, the Federal Antimonopoly Service (FAS) of Russia concluded in its antitrust investigation into Apple Inc. that the company had restricted competition on the applications market for iOS application devices. The FAS alleged that the company had told third-party developers of parental control apps to remove certain functions to be allowed on its App Store. The FAS said that it would also order the company to discontinue the practice of excluding third-party applications from the App Store at its own discretion.

In April 2021, the FAS imposed a RUB 906.3 million (approximately USD 12.1 million) turnover penalty on Apple for its alleged antitrust violations in relation to its App Store rules.

In May 2021, Apple filed an appeal before the Moscow Arbitration Court against the FAS penalty.

UPDATES: 09 Dec 2021: Company communication. (Apple Inc.)

10 May 2021: Apple filed a lawsuit against FAS after a fine of \$ 12 million. (Kommersant)

27 Apr 2021: UPDATE 1-Russia fines Apple \$12 mln for apps market abuse. (REUTERS)

31 Aug 2020: The Federal Antimonopoly Service of the Russian Federation issued a remedy to apple inc. to eliminate the violation. (Federal Antimonopoly Service of the Russian Federation) The FAS asked Apple to remove provisions giving itself sole discretion to reject third-party apps by November 30, 2020.

10 Aug 2020: Russian watchdog says Apple abused dominance of mobile app market, orders US tech giant to stop restricting competition. (RUSSIA TODAY)

Source: 09 Dec 2021 (Apple Inc.)

Date: December 2021 **Assessment:** Moderate **Status:** Ongoing

Italy: Regulator investigation into alleged unfair commercial practices and unfair clauses in contracts

In September 2020, the Italian Competition Authority (AGCM) opened an investigation into the alleged unfair commercial practices of companies providing cloud storage services including Apple Inc. The AGCM was looking into potential inadequate disclosure on the collection and commercial use of customer data and presence of unfair conditions in the terms of service with regards to its iCloud services.

The other companies under regulatory investigation include Dropbox and Google.

UPDATES: 09 Dec 2021: Company communication. (Apple Inc.)

08 Apr 2021: Company communication. (Apple Inc.)

07 Sep 2020: CV194-CV195-CV196-PS11147-PS11149-PS11150 - Avviate istruttorie nei confronti di Google, Apple e Dropbox per i servizi di cloud computing. [Investigation initiated against Google, Apple and Dropbox for cloud computing services]. (Autorita Garante della Concorrenza e del Mercato)

Source: 09 Dec 2021 (Apple Inc.)





LAST UPDATE: December 28, 2021

Date: December 2021

Assessment: Moderate **Status:** Ongoing

Criticisms over supplier's alleged excessive overtime work, abusive working environment, and other labor violations including student worker program violations

Pegatron Corporation, a supplier for Apple Inc. has been subject to allegations of labor violations according to reports by non-government organizations. Two reports published by China Labor Watch (CLW) in 2015 alleged that workers in Pegatron's Shanghai factory were subjected to excessive overtime hours. According to CLW's investigation, the average work hours for employees reached over 60 hours per week, which exceeded the 44-hour threshold of China's Labor Law. Approximately half of its workers reportedly worked over 90 hours of overtime per month, which exceeded 36-hour monthly legal limits.

In August 2016, CLW's reported that despite the raise in minimum wages from USD 1.85 to USD 2.00 per hour, workers had effectively received only USD 1.6 per hour due to deductions. Additionally, it was purported that workers were forced to work overtime hours which have reached up to 109 per month in extreme cases.

In January 2018, an article by Supply Chain Dive mentioned that Apple had started purchasing social insurance for workers in Pegatron Shanghai to improve work conditions in its supply chain.

In September 2020, CLW wrote a letter to Apple, a customer of Pegatron, alleging similar labor violations at its supplier's Kunshan Pegatron factory. The letter raised concerns on the treatment of employees after videos emerged allegedly of Pegatron staff throwing factory cards to the ground for workers to pick up, to the workers' humiliation, and refusing to approve workers' resignation. CLW also highlighted issues within the Kunshan factory regarding inadequate rest days and breaks, added work on Sundays and at the end of shifts, additional fees and processes for resignation, delays in payment of promised rewards, and mistreatment of student and dispatch workers, among the findings. CLW later again reached out to Apple informing of a student's experience working in Pegatron factory as part of the student's school graduation requirement. The student was reportedly forced to leave his role as an office clerk and be assigned to an assembly line job after non-student workers allegedly bribed the recruiters to get the easier job within the factory. The student resigned after receiving verbal abuse from the team leader for requesting a transfer to another position after enduring 2.5 to 3 hours of overtime work a day and working on weekends. The student reportedly did not get paid for services rendered because he resigned.

In November 2020, Apple informed CLW that it placed Pegatron under probation and will not enter into news contracts after discovering Pegatron allegedly falsified paperwork and covered up violations in relation to Apple's student worker program in misclassifying students as regular workers in its Shanghai and Kunshan factories. An investigative report also emerged that thousands of student interns were subjected to overtime work and night shifts to assemble iPhones, an Apple product, which is in violation of Chinese laws. Report also of a death of a Kunshan factory employee emerged in October where family members of the deceased employee protested in front of Pegatron Kunshan factory and demanded an investigation but were only taken away by the police.

UPDATES: 09 Dec 2021: Company communication. (Apple Inc.)

08 Apr 2021: Company communication. (Apple Inc.)

31 Dec 2020:Apple Supplier Pegatron Workers in Kunshan Stage Protest Over Owed Wages. (China Labor Watch)

11 Nov 2020: China: Apple suspends new business with supplier Pegatron over use of illegal student labour. (Business and Human Rights Resource Centre)

09 Nov 2020: Improvement or just Public Relations? China Labor Watch challenges Apple's statement on Pegatron. (China Labor Watch)

09 Nov 2020: Apple puts iPhone supplier on probation for labour violations. (BBC)

14 Sep 2020: Videos Prove the Failure of Apple's Audit. (China Labor Watch)

23 Jan 2018: Labor and health violations rampant at Apple supplier in China. (Supply Chain Dive) Apple attempted to improve working conditions in its supply chain. One of the actions the company took is the purchase of social insurance for all laborers working in Pegatron Shanghai.

25 Aug 2016: iPhone or iExploit? Rampant Labor Violations in Apple's Supply Chain. (China Labor Watch) CLW stated that workers at its Shanghai facility allegedly worked more than legally permitted and the wage after deductions was lower than that before pay raise.

24 Feb 2016: Apple supplier Pegatron charged with overworking employees. (China Labor Watch) CLW stated that workers at its Shanghai facility allegedly worked more than 10 hours a day for 6 days a week, and over 83% of workers allegedly had over 80 hours of overtime work per month.

22 Oct 2015: Chinese Factory Producing Apple's iPhone 6s Exposed Again for Ongoing Labor Abuses. (China Labor Watch) According to CLW and the Future in Our Hands' report, poor conditions persists at Pegatron's Shanghai iPhone factory.

12 Feb 2015: Apple's inability to monitor standards lets Pegatron pay low wages, NGO says. (China Labor Watch) CLW alleged that Apple Inc allegedly allows its suppliers, including Pegatron Corp, keep base wages below local living expense in China.

17 Jan 2015: BBC Says Apple Suppliers Continue to Violate Labor Standards. (China Labor Watch) BBC reported that workers at a Pegatron factory were forced to take excessive overtime work and lived in overcrowded company dormitories. The workers allegedly worked for 18 days in succession and were repeatedly denied to take a day off.

20 Dec 2014: Apple labour conditions: Chinese workers who make products for tech giant 'work 16 hours a day, 18 days in a row', BBC claims. (Business & Human Rights Resource Centre)

09 Sep 2013: Student workers making iPhone must do unpaid overtime and have wages unfairly deducted. (China Labor Watch)

Source: 09 Dec 2021 (Apple Inc.)





LAST UPDATE: December 28, 2021

Date: December 2021 Assessment: Moderate Status: Ongoing

Karnataka, India: iPhone factory riot over supplier's alleged unpaid overtime and delayed payment of wages

In December 2020, approximately 150 workers at an Indian iPhone factory belonging to an Apple supplier, Wistron, were arrested following a violent protest over alleged unpaid overtime hours and delays to the payment of wages. According to a First Information Report filed by local police, up to 7,000 unidentified people including 5,000 contract workers may have been involved in the violence and vandalism at the facility. The company said that the incident resulted in around INR 520 million (approximately USD 7 million) in damages.

According to the preliminary report by the Karnataka labor office, multiple labor violations were found at the facility including the failure to maintain proper employment, salary and attendance records, the introduction of 12-hour shifts without overtime pay, and the exceeding of permitted hiring guotas by recruitment agencies.

Wistron apologized for the labor management issues that occurred during its expansion and vowed to take corrective actions. Apple Inc. announced that it would suspend further business with Wistron until it has adequately addressed the issues.

In March 2021, Wistron resumed operations at the iPhone facility after it fully paid all employees and implemented new hiring and payroll systems. Apple previously stated in February that all workers in the facility would be trained on understanding their rights and on how to raise concerns.

UPDATES: 09 Dec 2021: Company communication. (Apple Inc.)

11 Mar 2021: Violence-hit iPhone maker Wistron resumes operations in Karnataka. (Business Standard)

27 Dec 2020: Riot-hit Wistron plant to resume production soon: Labour minister Shivaram Hebbar. (Indo-Asian News Service (IANS))

21 Dec 2020: Karnataka government may make Apple party to inquiry into violence at Wistron. (The Economic Times)

19 Dec 2020: Wistron removes VP overseeing India operations, finds fault in process at factory. (The Economic Times)

19 Dec 2020: Apple puts supplier Wistron on notice after Indian factory violence. (Reuters) 18 Dec 2020: Initial investigation of Wistron India violence finds 'labour violations'. (Reuters)

16 Dec 2020: Labour Department constitutes team to probe Wistron violence. (THE HINDU)

16 Dec 2020: Karnataka iPhone plant clashes: Wistron's loss may be Rs 52 crore, not Rs 437 crore. (The Times of India)

15 Dec 2020: FIR against 7,000 people in connection with violence at Wistron facility in Karnataka. (Asian News International) 13 Dec 2020: Arrests as Indian workers ransack iPhone plant over wages. (BBC)

Source: 09 Dec 2021 (Apple Inc.)

Date: December 2021
Assessment: Moderate
Status: Ongoing

France: Advertisers' complaint over new mobile applications privacy requirements; regulator investigation pending

In October 2020, four French advertising associations filed an antitrust complaint against Apple over the company's new privacy features for mobile devices. Under the new changes in Apple's iOS 14 operating system, mobile users would be asked whether to allow applications to track their usage for targeted advertising purposes. The advertising associations, IAB France, MMAF, SRI and UDECAM claimed that Apple was abusing its market position by imposing the user consent requirements to third-party applications.

In March 2021, the French Competition Authority refused the advertisers' request to block Apple's privacy changes but said that it would investigate whether the company was imposing stricter privacy requirements on third-party applications than on itself.

UPDATES: 09 Dec 2021: Company communication. (Apple Inc.)

17 Mar 2021: Apple Scores Legal Win in France Over App-Privacy Changes. (MORNINGSTAR.COM)

29 Oct 2020: France's online ad lobbies file antitrust complaint against Apple. (Reuters)

Source: 09 Dec 2021 (Apple Inc.)

Date: December 2021
Assessment: Moderate
Status: Ongoing

France: Complaint over alleged tracking of user data without prior consent for targeted advertising purposes

In March 2021, Les Echos reported that a start-up association, France Digitale, filed a complaint against Apple before the French data protection authority (CNIL). According to France Digitale, Apple enabled the tracking of its device users' data for targeted advertising purposes in its own apps by default settings. Later in the same month, a Politico report claimed that CNIL, in its internal document, raised concerns about Apple's consent collection practices for targeted advertising.

UPDATES: 09 Dec 2021: Company communication. (Apple Inc.)

23 Mar 2021: French data protection watchdog casts doubt on Apple's privacy compliance. (Politico)

09 Mar 2021: L'association de start-up France Digitale porte plainte contre Apple devant la CNIL. [The start-up association France Digitale files a complaint against Apple before the CNIL] (Les Echos)

Source: 09 Dec 2021 (Apple Inc.)

Date: December 2021 **Assessment:** Moderate **Status:** Ongoing

China: Criticism over customer data storage and app removal practices due to censorship and surveillance concerns

In May 2021, the New York Times reported that Apple stored Chinese customers' personal data on computer servers run by state-owned firms, used state-approved encryption technologies, and stored digital keys for unlocking the information in the same data centers in order to comply with Chinese cybersecurity laws. The report also said that the Chinese customers were required to accept iCloud terms and conditions which listed Guizhou-Cloud Big Data (GCBD), a Guizhou province-owned firm, as a service provider and would allow GCBD to access and share iCloud data with Apple under applicable laws. The report noted that the documents the Times reviewed did not indicate that the Chinese government has accessed the data; only that Apple has made compromises that made it easier to do so.





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The New York Times also reported that Apple created an internal system which removed certain apps from the Chinese App Store, which may contain banned topics or go against government regulations. According to the Times, approximately 55,000 apps were removed from the Chinese App Store since 2017, and that the discrepancy between its analysis and Apple's disclosures were partly due to Apple's removal of some apps before Chinese authorities complain.

UPDATES: 09 Dec 2021: Company communication. (Apple Inc.)

20 May 2021: Apple criticised for storing data inside China. (BBC)

17 May 2021: Censorship, Surveillance and Profits: A Hard Bargain for Apple in China. (The New York Times)

Source: 09 Dec 2021 (Apple Inc.)

Date: December 2021 **Assessment:** Moderate **Status:** Ongoing

France: Finance ministry's lawsuit over allegedly abusive contractual terms imposed on app developers

In June 2021, Reuters reported that the French Ministry of Finance filed a lawsuit against Apple in Paris' commercial court over its allegations that it imposed abusive contractual terms on app developers seeking to sell software in Apple's App Store.

According to Reuters, the ministry's lawsuit followed a three-year investigation by the General Directorate for Competition Policy, Consumer Affairs and Fraud Control France (DGCCRF).

UPDATES: 09 Dec 2021: Company communication. (Apple Inc.)

23 Jun 2021: French Court Sets Date in Apple Case Over App Store Developer Contracts. (Reuters)

Source: 09 Dec 2021 (Apple Inc.)

Date: December 2021 **Assessment:** Moderate **Status:** Ongoing

Spain: Regulatory investigation into potential anticompetitive practices in the online sales of Apple products

In July 2021, the National Commission of Markets and Competition (CNMC) opened disciplinary proceedings against several companies including Apple Distribution International Ltd., Apple Retail Spain SL, and Apple Marketing Iberia SA (collectively, Apple) for potential anti-competitive practices in the internet retail market for electronic products.

According to the CNMC, the companies may have agreed to trade restrictions on the Amazon online platform in Spain which affected the retail sales of Apple electronic products by third-parties and the advertising of competing Apple products.

The other companies under investigation include Amazon Services Europe S.À.RL, Amazon Europe Core S.A.RL, Amazon EU S.À.RL, and Amazon Online Spain SL.

UPDATES: 09 Dec 2021: Company communication. (Apple Inc.)

02 Jul 2021: Spain looks into antitrust practices by Apple and Amazon. (ECONOMIC TIMES)

01 Jul 2021: The CNMC initiates disciplinary proceedings against Apple and Amazon for possible restrictive competition practices. (Comisión Nacional de los Mercados y la Competencia)

Source: 09 Dec 2021 (Apple Inc.)

Date: December 2021 **Assessment:** Moderate **Status:** Ongoing

Japan: Antitrust investigation in the mobile operating systems market

In October 2021, Nikkei reported that the Japanese Fair Trade Commission (JFTC) launched an investigation on Apple's iOS and Alphabet's Android to determine whether the companies used their dominant positions in the mobile operating systems to restrict competition and limit consumers' options. The JFTC was reportedly working with the government's Digital Market Competition Council which was proceeding with its own market probe.

UPDATES: 09 Dec 2021: Company communication. (Apple Inc.)

07 Oct 2021: Apple and Google under antitrust scrutiny in Japan for mobile OS. (NIKKEI ASIAN REVIEW)

Source: 09 Dec 2021 (Apple Inc.)

Date: November 2021 **Assessment:** Moderate **Status:** Ongoing

United States: Hundreds of workers filed online complaints over allegation of harassment and discrimination

According to a New York Times report in November 2021, more than 500 former and current employees of Apple Inc filed complaints with an employee-led activist group called AppleToo over allegations of sexual harassment and discriminatory practices in the workplace. Other complaints included verbal abuse, retaliation and unequal pay. The employees also criticized Apple's secrecy culture which discouraged them to voice their concerns.

UPDATES: 02 Nov 2021: Tim Cook Faces Surprising Employee Unrest at Apple. (The New York Times)
15 Oct 2021: Apple worker says she was fired after leading movement against harassment. (REUTERS)

Source: 02 Nov 2021 (The New York Times)

Date: October 2021

Brazil and China: BRL 10.5 million penalty over alleged abusive sales and misleading marketing practices including sales of iPhones without chargers; consumer lawsuit pending in China

Assessment: Moderate Status: Ongoing

In March 2021, the Brazilian consumer protection authority, Procon-SP, imposed a BRL 10.5 million (approximately USD 1.9 million) penalty on Apple Computer Brasil (Apple), a subsidiary of Apple Inc., over its alleged abusive sales and misleading marketing practices for certain iPhone models. According to Procon-SP, Apple sold iPhone 12 separately from its chargers which were necessary for their continued operation. The regulator also received consumer complaints related to misleading advertisements of iPhone 11 Pro devices' water resistance, and other device issues after software updates. Procon-SP also claimed that Apple included unfair warranty terms and did not provide for repairs for devices purchased abroad but were also sold in Brazil.





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According to a Financial Express report in October 2021, five consumers in China filed a lawsuit at Beijing Internet Court against Apple for not providing a charger for iPhone 12 products.

UPDATES: 29 Oct 2021: Apple sued by Chinese students for not including charger with iPhone. (FINANCIAL EXPRESS)

22 Mar 2021: Procon-SP multa Apple [Procon-SP fines Apple]. (Procon-SP)

02 Dec 2020: Notificação Apple [Apple notification]. (Procon-SP) The Brazilian regulator notified Apple of its investigation into the sales of iPhones without chargers.

Source: 29 Oct 2021 (FINANCIAL EXPRESS)

Date: October 2021 **Assessment:** Moderate **Status:** Ongoing

US: Regulator inquiry on potential data surveillance and other consumer protection risks in payment systems

In October 2021, the U.S. Consumer Financial Protection Bureau (CFPB) ordered several large technology companies including Apple Inc. to provide information on their payment system plans as part of its monitoring of consumer protection risks such as user data surveillance and access restrictions. Among the concerns raised by the CFBP was the potential misalignment of consumers' expectations and payment companies' data harvesting and monetization practices.

UPDATES: 21 Oct 2021: CFPB Orders Tech Giants to Turn Over Information on their Payment System Plans. (U.S. Consumer Financial Protection Bureau)

Source: 21 Oct 2021 (U.S. Consumer Financial Protection Bureau)

Date: October 2021 **Assessment:** Moderate **Status:** Ongoing

Austin, US: Former employee alleged unfair dismissal for organizing activism actions

In October 2021, a program manager, who was also a leader of AppleToo movement against wage disparity, discrimination and harassment, was terminated by Apple Inc. The company said she was terminated for deleting information on her company computer and phone when she was under suspension and internal investigation. The employee alleged she only deleted personal information and the dismissal was a retaliation of her role in the AppleToo activism.

UPDATES: 15 Oct 2021: Leader of Apple activism movement says she was fired.. (THE NEW YORK TIMES)

15 Oct 2021: Apple worker says she was fired after leading movement against harassment. (REUTERS)

Source: 15 Oct 2021 (THE NEW YORK TIMES)

Date: September 2021 **Assessment:** Moderate **Status:** Concluded

Ireland: EUR 4,500 compensation to former customer relations advisor for alleged constructive dismissal

In October 2021, the Irish Times reported that the Irish Workplace Relations Commission (WRC) adjudicator ordered Apple Inc. subsidiary, Apple Distribution International Ltd. (Apple), to pay EUR 4,500 (approximately USD 5,300) for the alleged constructive dismissal of a former customer relations adviser.

The adjudicator said that Apple's unauthorized surveillance of the former employee's personal emails and dealings which led to his resignation in October 2020 adequately proved his constructive dismissal claim, despite Apple's argument that the former employee's resignation was voluntary as he was already searching for a new job before he left.

UPDATES: 29 Sep 2021: Apple's Cork unit ordered to pay EUR 4,500 over dismissal claim. (THE IRISH TIMES)

Source: 29 Sep 2021 (THE IRISH TIMES)

Date: September 2021 Assessment: Moderate Status: Concluded

Reports of spyware attacks on journalists related to security vulnerabilities in previous iPhone operating systems

In December 2020, researchers at the University of Toronto's Citizen Lab reportedly found security vulnerabilities in previous versions of iPhone operating systems prior to iOS 14 that were allegedly used by suspected government operatives to spy on journalists. According to the report, in July and August 2020, 36 iPhones owned by Al Jazeera journalists were purportedly compromised with a spyware developed by a certain cyber intelligence company. One of the journalists said that the 'zero-click' attack which infects phones without user input, allowed the hackers to access cameras, track the device, steal its contents for blackmail purposes, and send death threats to its users.

In September 2021, the Associated Press reported that Apple has released a software update that fixed the security vulnerability that could allow hackers to infect iPhones without user input. Citizen Lab researchers believed that the said vulnerability was previously used by a suspected nation state-hired firm to target Al Jazeera journalists and a Saudi Arabia-based activist.

UPDATES: 09 Dec 2021: Company communication. (Apple Inc.)

23 Nov 2021: Apple sues NSO Group to curb the abuse of state-sponsored spyware. (Apple Inc.)

13 Sep 2021: Apple fixes security hole reportedly used to hack an iPhone. (Associated Press)

21 Dec 2020: Al Jazeera journalists hacked using Israeli firm's spyware. (Al Jazeera)

21 Dec 2020: Dozens of Al Jazeera journalists' iPhones were hacked using spyware from Israeli security company NSO Group, report claims. (Business Insider)

20 Dec 2020: The Great iPwn: Journalists Hacked with Suspected NSO Group iMessage 'Zero-Click' Exploit. (The Citizen Lab)

Source: 09 Dec 2021 (Apple Inc.)





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Date: May 2021

Assessment: Moderate **Status:** Concluded

Date: May 2021
Assessment: Moderate
Status: Ongoing

Date: April 2021
Assessment: Moderate
Status: Ongoing

California, US: USD 9.75 million settlement of class action alleging misrepresentation of water resistance and battery life of PowerBeats earphones

In August 2020, Apple Inc. agreed to pay USD 9.75 million to settle a class action lawsuit alleging that the company had misrepresented its Powerbeats 2 earphones' water and sweat resistance, and battery durability. The plaintiffs estimate thousands of consumers have been affected by the misleading marketing of the purportedly defective product. The settlement agreement, which is pending final court approval, provided for refunds of up to USD 189 per eligible claim.

UPDATES: 19 May 2021: Apple Powerbeats 2 headphone customers receive payout (BBC)

28 Aug 2020: Apple agrees to pay \$9.75M settlement over alleged Powerbeats 2 'design defect'. (The Verge)

26 Jun 2017: Simmons, et al. v. Apple Inc., 17cv312251. (Superior Court of California, County of Santa Clara) Class action complaint.

Source: 19 May 2021 (BBC)

Texas, US: Purported class action over alleged fire and explosion risk due to iPhone 6 battery defects

In May 2021, a Texas customer filed a purported class action against Apple for alleged defects in iPhone 6 batteries which increase the risk of explosion and fire. According to the plaintiff, his iPhone 6 exploded in August 2019 which resulted in injuries to his eyes and right wrist.

UPDATES: 06 May 2021: Franklin v. Apple Inc., 4:21-cv-00354. (Texas Eastern District Court)

Source: 06 May 2021 (Texas Eastern District Court)

Investigations and consumer class actions over allegations of planned iPhone obsolescence

In December 2017, French prosecutors launched an investigation against Apple, Inc. over allegations that the company intentionally slowed down the performance of certain iPhone products in order to have consumers buy new products. The practice of planned obsolescence was formally banned in France in 2015. In early 2018, South Korean advocacy group Citizens United for Consumer Sovereignty filed an official complaint against Apple and the U.S. Department of Justice and the Securities and Exchange Commission announced investigations related to the allegations. A related consumer lawsuit was also filed in California. The criticism came after Apple admitted that its iPhones' operating system slowed down performance as batteries aged.

In January 2018, Apple announced that an upcoming product update will allow customers to disable the feature that causes phones to slow down as batteries age.

In October 2018, Italy's anti-trust authority AGCM imposed a maximum penalty of EUR 10 million (approximately USD 11.5 million) on Apple Inc. over alleged planned obsolescence after AGCM launched an investigation in January 2018.

In January 2020, French authorities announced that Apple agreed to pay a EUR 25 million (approximately USD 27 million) penalty over alleged failure to inform iPhone users about the effects of software updates on older iPhone devices.

In July 2020, Reuters reported that according to a document obtained by a tech watchdog group, multiple U.S. states led by Arizona were investigating Apple for potential violation of deceptive trade practice laws, including through the alleged deliberate slowdown of older iPhones. Reuters also reported that the Texas attorney general may sue Apple in connection with the multi-state investigation. No additional details were provided by the document.

In November 2020, Apple reportedly agreed to pay USD 113 million to settle the lawsuit by several U.S. state attorney generals over the alleged performance and battery issues of older iPhones.

In December 2020, the non-government organization, Euroconsumers announced that it would file class action lawsuits against Apple in Belgium, Italy, Portugal, and Spain over similar allegations regarding the software updates and their effects on the performance and battery life of older iPhones. Italian consumer association, Altroconsumo, also reportedly launched a class action against Apple in the U.S. in January 2021 over similar allegations.

In March 2021, the U.S. District Court for the Northern District of California granted final approval for the USD 500 million settlement of a consumer class action lawsuit alleging performance issues in iPhone 6, 6 Plus, 6s Plus, 7, 7 Plus and SE and throttling of devices' performance through iOS 10.2.1 and iOS 11.2 software updates. According to the final approval over 2.2 million claims have been approved (pending de-duplication) as of January 2021.

In April 2021, Apple agreed to pay USD 3.4 million to settle a class action by approximately 150,000 users of iPhone 6, 6 Plus, 6s Plus, 7, 7 Plus and SE in Chile.

UPDATES: 09 Apr 2021: Apple to pay \$3.4-M over iPhone obsolescence in Chile. (Agence France-Presse)

08 Apr 2021: Company communication. (Apple Inc.)

17 Mar 2021: In Re: Apple Inc. Device Performance Litigation, MDL 2827. (California Northern District)

25 Jan 2021: Italy consumer association sues Apple for planned iPhone obsolescence. (Reuters)

03 Dec 2020: Apple faces lawsuits in Europe over slowing down older iPhones. (CNN)

02 Dec 2020: Apple iPhone, la class action di Altroconsumo: «Obsolescenza programmata, risarcisca i clienti». [Apple iPhone, the class action by Altroconsumo: "Planned obsolescence, compensate customers"] (L'Economia)

18 Nov 2020: Apple Reaches \$113 Million Settlement With State Attorney Generals Over iPhone Throttling. (MORNINGSTAR.COM)

04 Sep 2020: Lerman, et al. v. Apple Inc., 15-cv-07381. (U.S. District Court, Eastern District of New York)

30 Jul 2020: Exclusive: Arizona leads multi-state probe into older iPhones slowing, shutting down. (Reuters)

24 Jul 2020: Apple faces deceptive trade practices probe by multiple U.S. states: document. (Reuters)

31 May 2020: Italian court dismisses Apple's appeal against 10mn euro fine. (ETTelecom.com)

15 May 2020: \$500M iPhone Deal Gets Nod, But Virus Delays Final OK. (LAW360)





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02 Mar 2020: Apple to pay up to \$500 million to settle U.S. lawsuit over slow iPhones. (Reuters)

07 Feb 2020: Apple Fined EUR25 Million In France Over iPhone-Slowing Software. (ALLIANCE NEWS)

16 Oct 2019: Gonzales, et al. v. Apple Inc., 5:19cv06646. (U.S. District Court, Northern District of California)

03 May 2019: Castelli, et al. v. Apple Inc., 1:19cv03026. (U.S. District Court, Northern District of Illinois)

04 Feb 2019: Emerson v. Apple Inc., 2:19cv00829. (U.S. District Court, Central District of California)

24 Oct 2018: Italy fines Apple, Samsung for slowing phones. (AGENCE FRANCE PRESSE -- ENGLISH)

14 May 2018: Harvey v. Apple Inc., 5:17cv07274. (U.S. District Court, Northern District of California) Notice of voluntary dismissal.

30 Mar 2018: Korean law firm representing 63,767 iPhone users sues Apple. (The Korea Herald)

28 Feb 2018: Apple Faces Canadian Class Action for Throttling Down iPhones Without Warning or Consent from Consumers. (PLUS COMPANY UPDATES(PCU))

30 Jan 2018: U.S. government reportedly investigating Apple's iPhone slowdown. (Xinhua Net)

19 Jan 2018: South Korean group files complaint against Apple CEO over iPhone slowdown. (Reuters)

18 Jan 2018: Apple update will let users stop iPhone battery slowdowns, Tim Cook says. (The Telegraph, UK)

17 Jan 2018: Apple facing slew of Russian lawsuits over slow iPhones. (AGENCE FRANCE PRESSE -- ENGLISH)

11 Jan 2018: Apple now faces 30 class-action lawsuits over iPhone slowdown. (Silicon Valley Business)

09 Jan 2018: France starts criminal probe into Apple over 'obsolescence'. (RFI - English)

04 Jan 2018: Honigman v. Apple Inc., 2:18cv00046. (U.S. District Court, Eastern District of New York)

02 Jan 2018: iPhone suit draws 180,000 in four days amid deliberate performance degrading claims. (The Hankyoreh)

25 Dec 2017: Israelis launch class action lawsuit against Apple. (ARUTZ SHEVA)

21 Dec 2017: Apple sued by more iPhone owners over software that slowed older phones. (USA Today)

Source: 09 Apr 2021 (Agence France-Presse)

Date: April 2021 Assessment: Moderate

Status: Ongoing

Complaints over allegations of defective batteries in iPhone products

In November 2016, China Consumers Association asked Apple, Inc. to investigate allegations of defective batteries in the company's iPhone 6 smartphone. Apple responded to the allegations by setting up a defective battery replacement program for the iPhone 6 and also agreed to reimburse customers that had their iPhones repaired by a third party. Korean customers also lodged complaints claiming quality issues regarding iPhone 6 batteries adding that Apple did not have adequate numbers of batteries in its inventory for

In October 2017, similar allegations were lodged against Apple in China, Taiwan and Japan regarding defective batteries in its iPhone 8 and in January 2018, Brazil's consumer issues agency Procon-SP formally notified Apple that it was required to explain to Brazilian consumers how replacement batteries could be obtained at lower prices or face possible penalties. In July 2019, Quebec Superior Court approved a class action lawsuit against Apple over non-durable battery life of iPhones and other Apple products.

UPDATES: 08 Apr 2021: Company communication. (Apple Inc.)

17 Jul 2019: Class action lawsuit against Apple approved by Quebec Superior Court. (POSTMEDIA BREAKING NEWS)

16 Jul 2019: Class action lawsuit against Apple approved by Quebec Superior Court. (Montreal Gazette)

14 Sep 2018: Apple iPhone Battery Class Claims Proceed. (Big Law Business)

31 Jul 2018: Apple, retailer asked to pay compensation for faulty phone. (MIRROR PUBLICATIONS)

03 Jan 2018: Brazilian agency requires Apple to inform consumers on batteries. (Reuters)

06 Oct 2017: Chinese state media report bloated battery in Apple's iPhone 8. (Reuters)

27 Nov 2016: Apple faces complaints for slow customer service in Korea. (THE KOREA HERALD)

25 Nov 2016: Apples Replacement Program for iPhone 6s Defective Batteries. (ENERGY MONITOR WORLDWIDE)

Source: 08 Apr 2021 (Apple Inc.)

Date: April 2021

Assessment: Moderate Status: Ongoing

Oregon, United States: Lawsuit over alleged unfair dismissal and failure to protect employee from customers' racial discrimination

In October 2019, a former employee of African-American descent at an Apple store branch in Washington Square mall in Portland, Orlando, U.S.A. filed a lawsuit seeking compensation of USD 750,000 for the company managers' alleged failure to support him despite customers' racially discriminatory treatment over the span of several years and for his allegedly unfair dismissal.

UPDATES: 08 Apr 2021: Company communication. (Apple Inc.)

30 Oct 2019: Black worker sues Apple, claiming complaints about racism resulted in his firing. (THE OREGONIAN)

Source: 08 Apr 2021 (Apple Inc.)





LAST UPDATE: December 28, 2021

Date: April 2021

Assessment: Moderate Status: Concluded

Pennsylvania, United States: Lawsuit over alleged unexpected explosion of iPhone 6 resulting in injuries; lawsuit dismissed

In April 2020, Apple Inc. faced a product liability lawsuit alleging that its iPhone 6 product had burst into flames unexpectedly which resulted in second and third degree burns to the plaintiff. The lawsuit against Apple was dismissed in October 2020.

The other companies named defendants are subsidiaries AT&T Inc.

UPDATES: 08 Apr 2021: Company communication. (Apple Inc.)

23 Oct 2020: Case No. 2:20-cv-01978. (U.S. District Court, Pennsylvania Eastern District)

21 Apr 2020: Apple, AT&T Hit With Suit Over Exploding iPhone Injury. (LAW360)

Source: 08 Apr 2021 (Apple Inc.)

Date: March 2021

Assessment: Moderate **Status:** Concluded

New York, US: Investigation over alleged gender discrimination in credit limit algorithms of Apple Cards; no discrimination found

In November 2019, the New York Department of Financial Services (NYDFS) said that it would investigate a customer complaint over alleged gender discrimination in the setting of credit limits by algorithms used for the Apple Card, issued by Goldman Sachs and codeveloped by Apple Inc. The customer said that his wife initially received a far lower credit limit relative to him despite their shared financial history.

In March 2021, the NYDFS investigation reportedly found no evidence of discrimination with regards to the Apple Card's application and credit-scoring processes.

UPDATES: 23 Mar 2021: New York Regulator Finds No Fair Lending Violations on Apple Card Applications. (MORNINGSTAR.COM)

10 Nov 2019: RPT-Goldman faces probe after entrepreneur slams Apple Card algorithm in tweets. (REUTERS UK)

Source: 23 Mar 2021 (MORNINGSTAR.COM)

Date: February 2021

Assessment: Moderate **Status:** Concluded

S. Korea: KRW 100 billion settlement and voluntary corrective measures for alleged violation of competition regulations

In September 2019, The Korea Fair Trade Commission (KFTC) disclosed that Apple Korea, a subsidiary of Apple Inc, submitted a revised voluntary corrective measure proposal over its alleged violation of competition law in South Korea. The KFTC said that Apple Korea unfairly required South Korean mobile phone carriers to pay for the cost of television advertisements for its iPhone products and warranty coverage.

In August 2020, the KFTC announced that it had received a proposed KRW 100 billion (approximately USD 84 million) settlement from Apple Korea. The KFTC said that it was seeking input from affected stakeholders on the provisional consent order and expects to finalize its decision in October.

In February 2021, the KFTC approved the corrective measures proposed by Apple Korea to address alleged unfair trade practices and improve contracts with local mobile carriers. The company also offered KRW 100 billion (approximately USD 84 million) for programs to support small and medium-sized enterprises (SMEs) and enhance consumer welfare, including establishing a research and development (R&D) center in Korea to provide help and various educational programs to SMEs in the smartphone manufacturing industry, providing digital education for innovation schools and underprivileged students, and extending discounts or refunds on warranty repair costs for iPhone users and AppleCare Plus service. The KFTC would reportedly monitor the implementation process every six months for three years and may impose penalties should the company fail to implement the corrective measures without proper reasons.

UPDATES: 09 Dec 2021: Company communication. (Apple Inc.)

04 Feb 2021: KFTC finalizes the consent resolution with Apple Korea. (Korea Fair Trade Commission)

03 Feb 2021: Apple Korea freed from 'gapjil' controversy. (The Korea Times)

25 Aug 2020: Apple to spend W100 bil. to avoid FTC punishment. (The Korea Times)

25 Aug 2020: The Fair Trade Commission initiates the process of collecting opinions on the provisional agreement resolution of Apple Korea. (Korea Fair Trade Commission)

18 Jun 2020: KFTC commences the consent order process for Apple Korea. (Korea Fair Trade Commission)

30 Sep 2019: Apple to propose revised measures over alleged violation of competition law. (The Korea Herald)

Source: 09 Dec 2021 (Apple Inc.)

Minor Controversies

Date: November 2021

Assessment: Minor Status: Ongoing

California, US: Proposed class action over alleged unauthorized recording of audio communications with Siri virtual assistant

UPDATES: 02 Nov 2021: Case No. 4:19-cv-04577. (U.S. District Court, Northern District of California)

03 Sep 2021: Hey, Siri? Apple can't hang up on users' eavesdropping suit. (LAW360) Plaintiffs filed an amended complaint.

12 Feb 2021: Apple Wins Dismissal in Siri Eavesdropping Suit. (Law Street)

25 Aug 2019: Apple contractors reveal they listened to 1,000 Siri recordings per shift. (Indian Express)

08 Aug 2019: Apple sued for listening to unauthorised Siri conversations. (Hindustan Times)

Source: 02 Nov 2021 (U.S. District Court, Northern District of California)





LAST UPDATE: December 28, 2021

Date: October 2021

Status: Ongoing

Maryland, US: Putative class action filed by one consumer over allegation of allowing phishing application Toast Plus on it AppStore that allegedly led to loss of cryptocurrency

Assessment: Minor UPDATES: 26 Oct 2021: No new information available.

16 Sep 2021: Case 8:21-cv-02359-CBD. (U.S. District Court, District of Maryland)

Source: 16 Sep 2021 (U.S. District Court, District of Maryland)

Date: October 2021

United States: Former employee filed complaint with NLRB over CEO's alleged violation of labor laws in comment related to information leakage

Assessment: Minor Status: Ongoing

UPDATES: 12 Oct 2021: Former Apple employee alleges a Tim Cook email saying leakers 'do not belong' at the company violates worker-protection laws. (BUSINESS INSIDER)

Source: 12 Oct 2021 (BUSINESS INSIDER)

Date: September 2021

Assessment: Minor Status: Ongoing

California, US: Proposed class action lawsuits over alleged cracking and display malfunction defects in M1 MacBook

scree

UPDATES: 28 Sep 2021: Almeida v. Apple Inc., 3:21-cv-07109. (California Northern District Court)

14 Sep 2021: Pareas v. Apple Inc., 5:21-cv-07112. (California Northern District Court)

Source: 28 Sep 2021 (California Northern District Court)

Date: September 2021

Russia: Criticism over compliance with government's order to remove apps used by supporters of political opposition

Assessment: Minor

UPDATES: 23 Sep 2021: Russia's Navalny criticises Apple, Google over app removal, social media posts say. (Reuters)

oing Source: 23 Sep 2021 (Reuters)

Status: Ongoing

Date: September 2021

US: Two employees filed complaints with labor regulator over company's alleged efforts to prevent discussions on ...

Assessment: Minor UPDATES: 03

UPDATES: 03 Sep 2021: U.S. labor agency probes two complaints from Apple workers. (Reuters)

31 Aug 2021: Apple is doing everything it can to keep employees from talking about pay equity. (Business Insider)

Source: 03 Sep 2021 (Reuters)

Status: Ongoing

NGOs criticisms over planned device-scanning measures against child abuse material over privacy concerns and potential misuse by governments for censorship and surveillance

Assessment: Minor Status: Ongoing

Date: August 2021

UPDATES: 23 Aug 2021: Apple's reportedly scanned iCloud e-mail for child abuse material since 2019. (CNET NEWS)

19 Aug 2021: Policy groups ask Apple to drop plans to inspect iMessages, scan for abuse images. (Reuters)

07 Aug 2021: Apple to scan U.S. iPhones for images of child sexual abuse. (Associated Press)

05 Aug 2021: Apple's Plan to 'Think Different' About Encryption Opens a Backdoor to Your Private Life. (Electronic Frontier Foundation)

Source: 23 Aug 2021 (CNET NEWS)

Date: August 2021 Assessment: Minor Status: Ongoing California, US: Lawsuit over managers' alleged discrimination against female Sindhi employee

UPDATES: 12 Aug 2021: Apple faces setback in 2020 bias suit filed by South Asian ex-employee. (BusinessToday.In)

25 Mar 2021: Apple faces Silicon Valley's second South Asian bias lawsuit. (THESTAR.COM.MY)

Source: 12 Aug 2021 (BusinessToday.In)

Date: July 2021 Assessment: Minor Status: Ongoing California, US: Purported class action over alleged display cable defects in 2016 MacBook Pro devices

UPDATES: 20 Jul 2021: Apple Sees Defective Laptop Display Claims Tossed, For Now. (LAW360)

01 Apr 2021: Apple assumed to have knowingly sold defective Macs, says judge, in 'stage light' case. (9to5Mac)

31 Mar 2021: Apple Must Face Trimmed Defective Laptop Display Suit. (LAW360)

02 Mar 2021: Ocampo v. Apple Inc., 5:20-cv-05857. (California Northern District Court) Order denying defendant's motions to strike and dismiss as moot

17 Jan 2021: Apple extends 13-inch MacBook Pro service program for 'stage light' issue. (Apple Insider)

19 Aug 2020: Ocampo v. Apple Inc., 5:20-cv-05857. (California Northern District Court)

02 Jul 2020: Apple Seeks To Ditch Suit Over Laptop Displays. (LAW360)

06 May 2020: Apple Sued Over Allegedly Defective Laptop Displays. (LAW360)

Source: 20 Jul 2021 (LAW360)





LAST UPDATE: December 28, 2021

Date: June 2021 Assessment: Minor Status: Ongoing Illinois, United States: Purported class action over alleged unauthorized collection of facial recognition data

UPDATES: 17 Jun 2021: Apple Doesn't Have to Turn Over User Docs in Privacy Suit. (LAW360)

17 Nov 2020: Apple Asks Fed. Judge to Reconsider Remand of BIPA Claim. (LAW360) 12 Nov 2020: Apple Can't Duck Facial Recognition Privacy Class Action. (LAW360)

Source: 17 Jun 2021 (LAW360)

Date: June 2021

California, US: Proposed class action over alleged performance throttling and excessive battery drain on certain iPhones following iOS 14.6 software updates

Assessment: Minor Status: Ongoing

UPDATES: 07 Jun 2021: Crittenden v. Apple Inc., 5:21-cv-04322. (California Northern District Court)

02 Jun 2021: Some iPhone users report horrible battery drain issue after updating to iOS 14.6. (INDIA TODAY ONLINE)

Source: 07 Jun 2021 (California Northern District Court)

Date: June 2021

California, US: Confidential settlement over alleged unauthorized distribution of customer's private data by contractors' repair technicians

UPDATES: 06 Jun 2021: Apple pays millions to woman after explicit photos posted online. (The Telegraph)

Source: 06 Jun 2021 (The Telegraph)

Assessment: Minor **Status:** Concluded

Date: May 2021

California, US: Purported class action over unfair termination of customers' Apple ID accounts resulting in lost access to purchased content and unspent funds

UPDATES: 31 May 2021: No new information available.

20 Apr 2021: Man sues Apple for terminating Apple ID with \$24K worth of content. (Apple Insider)

20 Apr 2021: Price v. Apple Inc., 5:21-cv-02846. (California Northern District Court)

Source: 20 Apr 2021 (California Northern District Court)

Assessment: Minor Status: Ongoing

Date: May 2021

Assessment: Minor Status: Ongoing

United States: Purported class action over alleged misrepresentations of iCloud service and storage of user data in third-party servers

UPDATES: 28 May 2021: Williams v. Apple Inc., 5:19-cv-04700. (California Northern District Court) Order granting in part and denying in part motion for class certification.

12 Jan 2021: Apple Users Eye Class Cert. In iCloud Storage Suit. (LAW360)

19 Nov 2020: IN BRIEF: Judge offers mixed ruling in class action over Apple's iCloud storage. (Reuters)

12 Aug 2019: Williams v. Apple Inc., 5:19-cv-04700. (California Northern District Court) Class action complaint filed.

Source: 28 May 2021 (California Northern District Court)

Date: May 2021

Assessment: Minor Status: Concluded

Employees' concerns raised over the hiring of advertising platform engineer who wrote a book allegedly containing discriminatory comments; engineer reportedly dismissed

UPDATES: 14 May 2021: Fired engineer says Apple was previously aware of his writing about women that led to his dismissal. (Los Angeles Times)

13 May 2021: Apple Parts With Prominent Exec After Employees Complain Over Comments About Women. (The Wall Street Journal)

Source: 14 May 2021 (Los Angeles Times)

Date: May 2021

Assessment: Minor Status: Ongoing

California, US: Purported class actions over alleged refusal to stop iTunes gift card scams and retention of transaction commissions

UPDATES: 03 May 2021: Shay v. Apple Inc., et al., 3:20-cv-01629. (California Southern District Court) Order granting defendants' partial motion to dismiss plaintiff's second amended complaint.

08 Jan 2021: Shay v. Apple Inc., et al., 3:20-cv-01629. (California Southern District Court) Order granting in part and denying in part defendants' motion to dismiss.

21 Aug 2020: Shay v. Apple Inc., et al., 3:20-cv-01629. (California Southern District Court) Notice of removal.

17 Jul 2020: Barrett, et al. v. Apple Inc., et al., 5:20-cv-04812. (California Northern District Court) Class action complaint.

Source: 03 May 2021 (California Southern District Court)

Date: April 2021 Assessment: Minor Status: Ongoing New York, US: Purported class action over alleged misrepresentations of water resistance features of certain iPhones UPDATES: 26 Apr 2021: Apple Sued for iPhone Water Resistance Claims. (Law Street)

24 Apr 2021: Smith v. Apple Inc., 1:21-cv-03657. (New York Southern District Court)

Source: 26 Apr 2021 (Law Street)





LAST UPDATE: December 28, 2021

Date: April 2021 Assessment: Minor Status: Ongoing

Date: April 2021 Assessment: Minor Status: Ongoing

Date: March 2021

Assessment: Minor Status: Concluded

Date: March 2021

Assessment: Minor Status: Ongoing

Date: March 2021

Assessment: Minor Status: Ongoing

Date: March 2021 Assessment: Minor Status: Ongoing California, US: Purported class action over alleged misleading purchase option of digital content through Apple TV

UPDATES: 19 Apr 2021: Andino v. Apple Inc., 2:20-cv-01628. (California Eastern District Court) Order granting in part and denying in part defendant's motion to dismiss.

13 Aug 2020: Andino v. Apple Inc., 2:20-cv-01628. (California Eastern District Court)

Source: 19 Apr 2021 (California Eastern District Court)

US: Purported class action lawsuits over alleged sale of mobile games with mechanics similar to gambling

UPDATES: 07 Apr 2021: Apple faces mounting lawsuits over casino-style games. (Thomson Reuters Westlaw Today)

30 Mar 2021: In re: Apple Inc. App Store simulated casino-style games litigation, MDL 2985. (US Judicial Panel on Multidistrict Litigation) The panel ordered for the transfer and consolidation of 6 related actions to the Northern District of California.

17 Feb 2021: Apple slapped with class action suit over gambling apps. (Apple Insider)

22 Oct 2020: Payton v. Apple Inc., 1:20-cv-04326. (U.S. District Court, Northern District of Georgia)

22 Oct 2020: Workman v. Apple Inc., 3:20-cv-01595. (U.S. District Court, District of Connecticut)

21 Oct 2020: Larsen v. Apple Inc., 2:20-cv-01652. (U.S. District Court, Northern District of Alabama)

17 Jun 2020: United States: Players Sue Apple Over Loot Boxes. (MONDAQ BUSINESS BRIEFING)

Source: 07 Apr 2021 (Thomson Reuters Westlaw Today)

California, US: USD 18 million settlement of class action over alleged disabling of FaceTime app in older iPhone and iOS versions; final approval granted

UPDATES: 31 Mar 2021: Grace, et al. v. Apple Inc., 5:17-cv-00551. (California Northern District Court) Order granting final approval of class action settlement.

04 Jan 2021: Grace, et al. v. Apple Inc., 5:17-cv-00551. (California Northern District Court) Motion for final approval of class action settlement.

28 Apr 2020: Apple inks \$18M deal in iPhone FaceTime failure suit. (LAW360)

14 Apr 2020: Fla. judge cuts cord on class claims over iPhone updates. (LAW360) The proposed class action in Florida was dismissed.

19 Sep 2018: Calif. iPhone users win cert. in 'broken' FaceTime suit. (LAW360)

29 Aug 2019: Florida iPhone 4 users dial Apple into FaceTime suit. (LAW360) A separate proposed class action over similar allegations was filed in Florida.

31 Jul 2017: Apple must face claims it broke FaceTime, Judge Koh says. (LAW360)

Source: 31 Mar 2021 (California Northern District Court)

United States: Class action lawsuit over alleged defective Macbook keyboards despite claims of better keyboard upgrades

UPDATES: 25 Mar 2021: Lawsuit over Apple's faulty MacBook butterfly keyboards gets class-action status in California. (Business Insider)

09 Oct 2020: APPLE INC: Class Certification Sought in Macbook Keyboard Case. (CLASS ACTION REPORTER)

24 Feb 2020: APPLE INC: Bid to Dismiss 1st Amended MacBook Keyboard Suit Denied. (CLASS ACTION REPORTER)

02 Dec 2019: Apple fails to end MacBook 'butterfly' keyboard class action. (REUTERS INDIA)

31 May 2019: APPLE INC: Plaintiffs in Keyboard Litig. Directed to Amend Suit. (CLASS ACTION REPORTER)

24 Apr 2019: Apple instructs its stores to complete keyboard repairs within one day: Report. (INDIAN EXPRESS)

23 Apr 2019: Apple Must Face Trimmed Faulty 'Butterfly' Keyboard Suit. (Law360)

10 Aug 2018: APPLE INC: Turner et al. Allege Defective MacBook Keyboard. (CLASS ACTION REPORTER)

Source: 25 Mar 2021 (Business Insider)

California, US: Purported class action over alleged unauthorized reading of copied text by mobile application found in App Store

UPDATES: 17 Mar 2021: No new information available.

21 Jan 2021: Mastel v. Apple Inc., et al., 2:28-cv-01332. (U.S. District Court, Eastern District of California)

Source: 21 Jan 2021 (U.S. District Court, Eastern District of California)

User complaints over color fading issues on exteriors of iPhone devices

UPDATES: 16 Mar 2021: Some iPhone 11 and iPhone 12 units are experiencing colour fading issue. (INDIA TODAY ONLINE)

Source: 16 Mar 2021 (INDIA TODAY ONLINE)





LAST UPDATE: December 28, 2021

Date: March 2021

Assessment: Minor

Status: Ongoing

Date: March 2021 Assessment: Minor Status: Ongoing

Date: February 2021

Assessment: Minor Status: Ongoing

Date: January 2021

Assessment: Minor Status: Ongoing

Date: December 2020 Assessment: Minor Status: Ongoing

Date: November 2020

Assessment: Minor Status: Concluded

Date: October 2020

Assessment: Minor Status: Concluded

United States: Purported class action over alleged security defect in processors of Apple devices; lawsuit dismissal

UPDATES: 05 Mar 2021: No new information available.

18 Nov 2020: In Re Apple Processor Litigation 19-16720. (U.S. Court of Appeals for the Ninth Circuit) The appellate court partly reversed the dismissal of the lawsuit.

15 Jan 2020: Apple Buyers Bring Faulty Security Patch Suit To 9th Circ.. (CLASS ACTION REPORTER)

23 Oct 2019: APPLE INC: Court Dismisses Processor Suit Without Leave to Amend. (CLASS ACTION REPORTER)

Source: 18 Nov 2020 (U.S. Court of Appeals for the Ninth Circuit)

Australia: Lawsuits over injuries from alleged explosion of iPhone X and overheating of Apple Watch devices

UPDATES: 02 Mar 2021: Apple taken to court as iPhone 'explodes' in pocket. (THE GOLD COAST BULLETIN (AUSTRALIA))

Source: 02 Mar 2021 (THE GOLD COAST BULLETIN (AUSTRALIA))

California, US: Class action lawsuit over alleged unpaid wages for time spent on exit searches of employees' belongings

UPDATES: 03 Feb 2021: Frlekin v. Apple Inc., 3:21-cv-03451. (U.S. District Court, Northern District of California) Motion for joint stipulation regarding class period.

02 Sep 2020: Frlekin v. Apple Inc., 15-17382. (U.S. Court of Appeals, Ninth Circuit) The appellate court reversed an earlier district court decision granting defendant's motion for summary judgement.

21 Apr 2020: APPLE INC: Must Compensate Workers for Time Spent on Searches. (CLASS ACTION REPORTER)

Source: 03 Feb 2021 (U.S. District Court, Northern District of California)

California, United States: Purported class action over alleged increased cellular data consumption due to iOS 13

UPDATES: 05 Jan 2021: No new information available.

24 Oct 2020: Turner v. Apple Inc., 5:20-cv-07495. (U.S. District Court, Northern District of California)

Source: 24 Oct 2020 (U.S. District Court, Northern District of California)

China: NGO criticism over alleged removal of politically-sensitive software from App Store

UPDATES: 23 Dec 2020: TTP Investigation: Apple is Censoring Political Apps in its China App Store. (Campaign for Accountability)

Source: 23 Dec 2020 (Campaign for Accountability)

Italy: EUR 10 million penalty over alleged misleading marketing practices related to water resistance of certain

In November 2020, the Italian Competition Authority (AGCM) imposed an EUR 10 million (approximately USD 12 million) on Apple Inc. subsidiaries, Apple Distribution International and Apple Italia S.r.l., over their alleged misleading and unfair marketing practices related to its iPhones. The AGCM found that the companies made potentially misleading claims regarding the water resistance of its iPhone 8, iPhone 8 Plus, iPhone XR, iPhone XS, iPhone XS Max, iPhone 11, iPhone 11 Pro and iPhone 11 Pro Max devices under normal conditions of use. The AGCM also said that the company did not include water or liquid damage in its warranty coverage for the said products.

UPDATES: 30 Nov 2020: PS11578 - ICA: Apple fined 10 million for misleading and aggressive commercial practices. (Autorita Garante della Concorrenza e del Mercato)

Source: 30 Nov 2020 (Autorita Garante della Concorrenza e del Mercato)

California, United States: Putative class action over alleged misleading claims on RF radiation of smartphones; lawsuit dismissed

In August 2019, Apple Inc. was named a defendant in a putative class action lawsuit over alleged misleading marketing claims regarding the radio frequency (RF) radiation emissions of its iPhone X and iPhone 8 products. Plaintiffs alleged that the said products have potentially exposed users to RF radiation exceeding federal limits when carried or used in close proximity to the human body.

The other company named in the lawsuit was Samsung Electronics America, Inc.

UPDATES: 30 Oct 2020: FCC Preemption Shuts Down iPhone Radiation Suit. (LAW360)

03 Apr 2020: APPLE INC: Dismissal Bid Denied, Discovery Ordered in Cohen Suit. (CLASS ACTION REPORTER)

27 Aug 2019: Apple, Samsung Falsely Market Their Phones as RF Exposure-Safe, Alleges Complaint. (CONSUMER ELECTRONICS DAILY)

Source: 30 Oct 2020 (LAW360)





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GOVERNANCE CONTROVERSIES

Moderate Controversies

Date: April 2021
Assessment: Moderate
Status: Ongoing

Europe: Investigation over allegations of tax evasion deals with Ireland

In June 2014, the European Commission (EC) launched investigations into Ireland and its tax agreements with Apple over allegations that Ireland gave unfair tax benefits to the company. In August 2016, the EC ordered Apple to pay EUR13 billion (approximately USD 14.5 billion) over alleged underpayment of taxes. The EC claimed that the state of Ireland colluded with Apple to pay much less that the corporate standard tax rate. Apple launched an appeal against the penalty ruling and stating that the EC made certain calculation errors when determining the penalty. In November 2017, it was revealed through a leak of financial documents called the Paradise Papers that Apple had moved much of its cash reserve to a Channel Island tax haven after being made aware of the EC investigation in 2014. The EC announced that it would look into the Paradise Papers allegations as part of its ongoing investigation of Apple's tax structure.

In September 2019, an EU court heard the appeal on the decision to order Ireland to recover approximately USD 14.5 billion of unpaid taxes from Apple Inc.

In September 2020, the EC announced that it would appeal a previous EU general court decision in July 2020, which ruled against Apple's payment of taxes to Ireland.

UPDATES: 08 Apr 2021: Company communication. (Apple Inc.)

02 Feb 2021: Case C-465/20 P. (Official Journal of the European Union) The EU published a copy of the European Commission's appeal filing dated September 25, 2020.

12 Nov 2020: Apple fund remains in place pending appeal. (IRISH EXAMINER)

25 Sep 2020: Irish government considers EU Commission appeal over Apple tax case. (Belfast Telegraph)

18 Sep 2019: State says EU case on EUR 13bn in tax aid for Apple is 'fundamentally flawed'; Lawyers maintain commission's view is 'confused and inconsistent'. (THE IRISH TIMES)

31 May 2019: Apple tax case cost to State is (EURO)7m and rising. (IRISH INDEPENDENT)

18 Sep 2018: Ireland collects disputed Apple taxes in full ahead of appeal. (Reuters)

07 Nov 2017: Apple used Jersey for new tax haven after Ireland crackdown, Paradise Papers reveal. (The Independent)

06 Nov 2017: Paradise Papers: Apple's secret tax bolthole revealed. (BBC News)

21 Feb 2017: Apple says EU made errors in Irish tax ruling. (THE IRISH TIMES)

19 Dec 2016: Apple appeals against EU tax ruling, Brussels says no cause for low tax bill. (Reuters)

21 Sep 2016: What's next for Apple's €13bn tax battle? (The Guardian)

30 Aug 2016: Apple should repay Ireland 13bn euros. (BBC)

15 Jan 2016: Apple may owe \$8bn in back taxes after European commission ruling. (The Guardian)

05 May 2015: EU Delays Decisions on Tax Probes into Apple, Amazon: Bloc's antitrust chief cites difficulties in obtaining details from countries involved. (The Wall Street Journal)

29 Apr 2015: Apple warns of 'material' financial damage from Irish tax probe. (Financial Times)

18 Dec 2014: EU to Widen Sweetheart Tax Deal Probe. (The Wall Street Journal)

30 Sep 2014: EU says Apple gets illegal tax benefits in Ireland. (Seattle Times)

Source: 08 Apr 2021 (Apple Inc.)

Date: March 2021
Assessment: Moderate
Status: Ongoing

S. Korea: KRW 300 million potential penalty over alleged obstruction of antitrust investigation

In March 2021, the Korea Fair Trade Commission (KFTC) reportedly referred Apple Korea and one of its executives for prosecution over allegations of impeding its antitrust investigation. According to the KFTC, Apple Korea disrupted internet access during a the KFTC's onsite investigation in 2016 and refused to submit documents in relation to the incident, and one executive attempted to deter an investor's related probe in 2017. The KFTC reportedly planned to impose a KRW 300 million (approximately USD 265,000) penalty on Apple Korea.

UPDATES: 31 Mar 2021: Regulator to refer Apple Korea to prosecution for hampering investigation. (KOREA TIMES)

Source: 31 Mar 2021 (KOREA TIMES)

Minor Controversies

Date: June 2021

Assessment: Minor Status: Concluded

California, US: Head of security indicted over alleged bribery of Santa Clara sheriff's office to obtain four gun permits for employees; charges dismissed

UPDATES: 02 Jun 2021: Bribery charge against Apple executive who offered iPads to Santa Clara Sheriff's Office dismissed. (The San Francisco Chronicle)

23 Nov 2020: Apple Security Chief Offered iPads to Police as a Bribe for Gun Permits, Prosecutors Allege. (The Wall Street Journal)

Source: 02 Jun 2021 (The San Francisco Chronicle)





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Date: February 2021

Maine, United States: State court order to pay USD 530,000 in taxes and penalties for certain discounted iPhone sales from 2010 to 2013

Assessment: Minor UPDATES: 19 Feb 2021: Court: Apple owes more than \$500K in sales taxes in Maine. (AP News)

Status: Ongoing Source: 19 Feb 2021 (AP News)





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KEY METRIC & SCORE CHANGES

ALL KEY METRIC & SCORE CHANGES (SINCE AUGUST 2020)

Key Metric	Key Metric Change	Date	Score Change*	Change Notes
Asset-Liability Valuation	Score Change	Dec 23, 2021	-0.05	Updates to data for accounting peer group member(s)
CEO Pay Total Awarded	Flag Removed	Nov 12, 2021	0.20	
Asset-Liability Valuation	Score Change	Sep 17, 2021	0.02	Updates to data for accounting peer group member(s)
Asset-Liability Valuation	Score Change	Aug 06, 2021	0.01	Updates to data for accounting peer group member(s)
CEO Pay Perks & Other Comp	Flag Added	Jul 29, 2021	-0.20	
CEO Pay Perks & Other Comp	Flag Removed	Jul 23, 2021	0.20	
CEO Pay Total Realized	Flag Added	Jun 21, 2021	-0.20	
Asset-Liability Valuation	Score Change	Jun 21, 2021	-0.16	Updates to data for accounting peer group member(s)
Revenue Recognition	Flag Removed	Feb 18, 2021	-0.04	Updates to data for accounting peer group member(s)
Expense Recognition	Score Change	Feb 18, 2021	-0.21	Updates to data for accounting peer group member(s)
Asset-Liability Valuation	Flag Removed	Feb 18, 2021	-0.03	Updates to data for accounting peer group member(s)
Revenue Recognition	Flag Added	Feb 15, 2021	0.04	Updates to data for accounting peer group member(s)
Expense Recognition	Flag Added	Feb 15, 2021	0.21	Updates to data for accounting peer group member(s)
Asset-Liability Valuation	Score Change	Feb 15, 2021	0.41	Updates to data for accounting peer group member(s)
Short-Term Pay Performance	Flag Removed	Jan 21, 2021	0.20	
Not 30% Female Directors	Flag Removed	Jan 21, 2021	0.10	
Entrenched Board	Score Change	Jan 21, 2021	0.20	
CEO Pay Total Awarded	Flag Added	Jan 21, 2021	-0.20	
CEO Equity Changes	Flag Removed	Jan 21, 2021	0.20	
CEO Pay Total Fixed	Flag Added	Dec 04, 2020	-0.20	
CEO Pay Total Fixed	Flag Removed	Nov 17, 2020	0.20	
CEO Pay Perks & Other Comp	Flag Added	Nov 17, 2020	-0.20	
CEO Pay Perks & Other Comp	Flag Removed	Oct 23, 2020	0.20	
Expense Recognition	Flag Removed	Oct 09, 2020	0.04	Updates to data for accounting peer group member(s)
Asset-Liability Valuation	Score Change	Oct 09, 2020	0.02	Updates to data for accounting peer group member(s)
CEO Pay Total Fixed	Flag Added	Sep 23, 2020	-0.20	

^{*}Score change available in respect of changes dated on or after 13 December 2017.





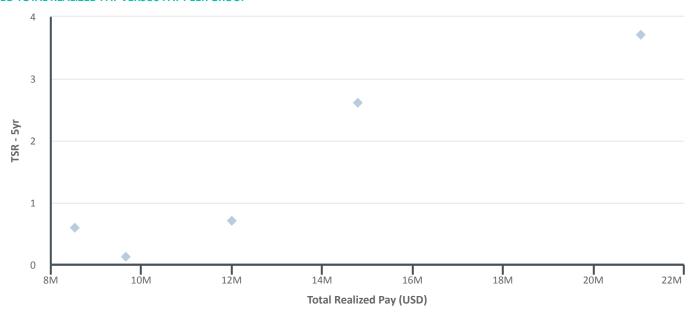
CEO PAY CHARTS

CEO TOTAL AWARDED PAY VERSUS PAY PEER GROUP



Pay Peers (*) are used in the calculation of the Key Metric CEO Pay Total Summary and selected as set out in the MSCI Governance Metrics Methodology Document.

CEO TOTAL REALIZED PAY VERSUS PAY PEER GROUP



Pay Peers (*) are used in the calculation of the Key Metric CEO Pay Total Summary and selected as set out in the MSCI Governance Metrics Methodology Document.





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DIRECTOR VOTES

Proxy Year	Name	Age	Tenure	Votes For	Votes Against, Withheld and / or Abstained
2021	Albert (Al) Gore Jr.	72	18	93.6%	6.4%
2021	Andrea Jung	62	13	92.4%	7.6%
2021	Arthur (Art) Levinson	70	21	94.1%	5.9%
2021	James Bell	73	6	99%	1%
2021	Monica Lozano	64	0.98289	99.1%	0.9%
2021	Ronald (Ron) Sugar	72	11	90.6%	9.4%
2021	Susan (Sue) Wagner	59	7	97.8%	2.2%
2021	Timothy (Tim) Cook	60	10	98.2%	1.8%

SHAREHOLDER/MANAGEMENT PROPOSALS

MANAGEMENT PROPOSALS

Proxy Year	Proposal	Proposal Summary	Outcome	Votes For	Votes Against	Abstain/ Withheld%
2021	Auditor Ratification	A management proposal to ratify the appointment of Ernst & Young LLP as Apple's independent registered public accounting firm for 2021 was approved.	Approved	98.5%	1.2%	0.3%
2021	Advisory Vote on Executive Compensation	An advisory resolution to approve executive compensation was approved.	Approved	94.3%	5.1%	0.6%
2020	Auditor Ratification	A management proposal to ratify the appointment of Ernst & Young LLP as Apple's independent registered public accounting firm for 2020 was approved.	Approved	98.4%	1.4%	0.3%
2020	Advisory Vote on Executive Compensation	3. An advisory resolution to approve executive compensation was approved.	Approved	93.8%	5.7%	0.4%
2019	Advisory Vote Frequency	Proposal 3. Advisory vote to approve executive compensation	Approved			
2019	Auditor Ratification	Proposal 2. The ratification of the appointment of Ernst & Young LLP as Apple's independent registered public accounting firm for 2019	Approved	98.1%	1.6%	0.3%

^{*}For Management Proposals at AGM's held more than three years ago, please refer to the Screener tool on ESG Manager.





SHAREHOLDER PROPOSALS

Proxy Year	Proposal	Proposal Summary	Proposal Proponent	Outcome	Votes For	Votes Against	Abstain/ Withheld%
2021	Executive Compensation - Link to Social Factors	A shareholder proposal entitled "Shareholder Proposal to Improve Executive Compensation Program" was not approved.	A shareholder or shareholders who have represented to Apple that they are a beneficial owner of at least \$2,000 in market value of Apple's common stock	Defeated	5.5%	93.2%	1.3%
2021	Other	4 A shareholder proposal entitled "Shareholder Proxy Access Amendments" was not approved.	A shareholder or shareholders who have represented to Apple that they are a beneficial owner of at least \$2,000 in market value of Apple's common stock	Defeated	26.4%	72.6%	1%
2020	Other	4. A shareholder proposal entitled "Shareholder Proxy Access Amendments" was not approved.	Shareholder or shareholders who have represented to Apple that they are a beneficial owner of at least \$2,000 in market value of Apple's common stock	Defeated	30.9%	68.4%	0.7%
2020	Executive Compensation - Link to Social Factors	5. A shareholder proposal relating to sustainability and executive compensation was not approved.	Shareholder or shareholders who have represented to Apple that they are a beneficial owner of at least \$2,000 in market value of Apple's common stock	Defeated	12%	87.2%	0.9%
2020	Human Rights	6. A shareholder proposal relating to policies on freedom of expression was not approved.	Shareholder or shareholders who have represented to Apple that they are a beneficial owner of at least \$2,000 in market value of Apple's common stock	Defeated	38.4%	56.1%	5.5%
2019	Board Diversity	Proposal 5. Shareholder proposal entitled "True Diversity Board Policy"	National Center for Public Policy Research	Defeated	1.7%	97%	1.4%
2019	Board Elections - Shareholder Nominations	Proposal 4. Shareholder Proposal entitled "Shareholder Proxy Access Amendments"	Mr. James McRitchie	Defeated	29.3%	70%	0.7%

^{*}For Shareholder Proposals at AGM's held more than three years ago, please refer to the Screener tool on ESG Manager.





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CALIFORNIA



CURRENCY: UNITED STATES DOLLAR (USD)

In the United States, most governance principles are governed by state laws that are not uniform or nationally enforced. However, the majority of states have adopted the Model Business Corporation Act (MBCA) as the basis of their own laws by modifying some of the provisions of the MBCA. The MBCA is a body of laws designed to regulate corporate affairs uniformly across different states. It is the basis for business corporation statutes in 32 states and the District of Columbia and is the source of many provisions in the general corporation statutes of other states. Further, the Securities and Exchange Commission (SEC) regulates certain governance related matters on a federal level.

The majority of large U.S. businesses are listed on either the New York Stock Exchange (NYSE) or the Nasdaq Stock Market (Nasdaq), and therefore are subject to their listing rules. The U.S. has not adopted a national corporate governance code.

The California Corporations Code (CCC) is a legislative framework for corporate law in California.

Companies adopt a unitary board structure in the U.S. The NYSE and Nasdaq listing rules require the majority of directors to be independent. The SEC rules require public companies to disclose and explain their chair-CEO structure and whether one or two people hold the roles. If the roles are combined, the company must further disclose whether it has a lead independent director and specify their role within the company leadership.

Unless stated otherwise in the articles of association, directors may appoint inspectors in advance of any shareholder meeting to determine the number of shares outstanding, voting rights, shares represented at the meeting, existence of a quorum, authenticity and validity of proxies, and take all other actions with regards to the annual shareholders' meeting.

Related party transactions (RPTs) are valid if the transaction was conducted on reasonable and fair terms when it was approved, and the RPT is approved in good faith by the majority of independent directors. If the number of independent directors is less than a guorum, then it must be approved by shareholders.

The CCC requires listed companies to have at least one female director. No later than 2021, the CCC imposes that if a company has six directors, then the minimum required female directors must be three, if the number of directors is five, the company should have a minimum of two female directors, and if the company's number of directors is four or less, the company must have at least one female director.

Employees are not entitled to board representation. Directors can be held personally liable for unpaid employee wages and other wage violations (California's Fair Day's Pay Act, 2016).

The board of directors may fix director and officer pay, although most companies delegate the responsibility for defining executive pay to independent directors, usually upon the recommendation of the pay or nominating/governance committee. Officers are executive directors that are responsible for the daily management of the company.

The Dodd-Frank Act requires listed companies to hold an advisory vote every three years on "say on pay" policies, as well as disclose additional information regarding "golden parachute" arrangements linked to merger transactions.

Listed companies must annually disclose the pay of directors and officers, including stock and option awards. Disclosure must be made in a tabular format, along with a descriptive summary of the information in the table. Companies listed on Nasdag must also disclose pay arrangements between directors or nominees and third parties.

The U.S. market is known for having widely dispersed ownership, but founder-led companies are common. There are multiple share classes with unequal voting rights and voting right limits.

Shareholders with at least 10% voting rights can request to convene a general meeting.

A notice of the meeting, specifying the date, time, place and purpose must be given no less than seven days and no more than 60 days in advance. Special meeting of shareholders may be convened by shareholders owning at least 10% of shares. Typically, each share is entitled to one vote and fractional shares are entitled to proportionate votes. Shareholders do not have preemptive rights unless specifically provided in the bylaws or articles. Dissenting shareholders are entitled to appraisal rights.

Unless otherwise stipulated in the articles, a corporation is not obligated to offer shareholders any shares, option rights or securities when issuing them.

There are no mandatory takeover bid provisions in the U.S.

There are many provisions in the Federal Sarbanes-Oxley Act that govern the audit process. A listed company's annual financial statements must be audited by a registered, independent auditing firm. Listed companies prepare two annual reports, one for SEC (Form 10-K) and one for their shareholders. The reports to shareholders, as required by SEC, must contain certified financial statements of two-year audited balance sheets, and three-year audited statement of income and cash flows.





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Directors and officers of the corporation must also be identified. Interim financial statements are not audited, only reviewed by the company's auditors. If an auditor has not reviewed the interim financial report, it must be accompanied with a notice indicating the interim financial report has not been reviewed by an auditor. Audit firm rotation is not required but lead audit partners are subject to rotation every five years.





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DIRECTOR PROFILES

ALBERT (AL) GORE JR.

Age: 72 Financial: Yes Gender: M Risk: No

Nationality: Not Disclosed Industry: Diversified Financials - Capital Markets

BIOGRAPHICAL INFORMATION

APPLE INC. - Board Member Source Date: 01/05/2021

Al Gore has served as Chairman of Generation Investment Management, an investment management firm, since 2004, and as a partner of Kleiner Perkins Caufield & Byers, a venture capital firm, since November 2007. Mr. Gore is also Chairman of The Climate Reality Project. Mr. Gore was elected to the U.S. House of Representatives four times, to the U.S. Senate two times, and served two terms as Vice President of the United States. Among other qualifications, Mr. Gore brings to the Board executive leadership experience, a valuable and different perspective due to his extensive background in digital communication and technology policy, politics, and environmental rights, along with experience in asset management and venture capital

CORPORATE BOARDS

Company	Role	Tenure	Appointed	Resigned	Independent of Management	Independent of Other Interests	Attendance
APPLE INC.	Board Member	18	Mar 19, 2003		Yes	Yes	

BOARD COMMITTEES

Company	Committee Type	Position
APPLE INC.	Pay	Member
APPLE INC.	Corporate Governance	Member
APPLE INC.	Nomination	Member

VOTING RESULTS

Company	Year	For %	Against, Withheld and / or Abstained %
APPLE INC.	2021	93.6%	6.4%

Company	Role	Tenure	Pay Year	Cash Fees	Total Awarded Pay	Shares Held
APPLE INC.	Non-Executive	18	2020	100,000	358,321	463,472





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ALEX GORSKY

Age: 60 Financial: No Gender: M Risk: No

Nationality: Not Disclosed Industry: Pharmaceuticals, Biotechnology & Life Sciences -

Pharmaceuticals

BIOGRAPHICAL INFORMATION

JOHNSON & JOHNSON - Executive, Board Member, Chairman, CEO Source Date: 03/10/2021

Mr. Gorsky, was appointed as Chairman, Board of Directors in December 2012. He was named Chief Executive Officer, Chairman of the Executive Committee and joined the Board of Directors in April 2012. Mr. Gorsky began his Johnson & Johnson career with Janssen Pharmaceutica Inc. in 1988. Over the next 15 years, he advanced through positions of increasing responsibility in sales, marketing and management. In 2001, Mr. Gorsky was appointed President of Janssen Pharmaceutical Inc., and in 2003 he was named Company Group Chairman of the Johnson & Johnson hparmaceutical business in Europe, the Middle East and Africa. Mr. Gorsky left Johnson & Johnson in 2004 to join Novartis Pharmaceuticals Corporation, where he served as head of the pharmaceutical business in North America. Mr. Gorsky returned to Johnson & Johnson in 2008 as Company Group Chairman for Ethicon. In early 2009, he was appointed Worldwide Chairman of the Surgical Care Group and member of the Executive Committee. In September 2009, he was appointed Worldwide Chairman of the Medical Devices and Diagnostics Group. Mr. Gorsky became Vice Chairman of the Executive Committee in January 2011. Mr. Gorsky serves on the Boards of the Travis Manion Foundation, the National Academy Foundation and the Wharton Board of Advisors. He is a Member of the Board of the Business Roundable and serves as the Chairman of its Corporate Governance Committee.

INTERNATIONAL BUSINESS MACHINES CORPORATION - Board Member Source Date: 03/08/2021

Mr. Alex Grosky joined Johnson & Johnson in 1988. In 2003, he was named company group chairman of the Johnson & Johnson pharmaceutical business in Europe, the Middle East and Africa. Mr. Gorsky left Johnson & Johnson in 2004 to join the Novartis Pharmaceuticals Corporation, where he served as head of the company's pharmaceutical business in North America. Mr. Gorsky returned to Johnson & Johnson in 2008 as company group chairman for Ethicon. In early 2009, he was appointed worldwide chairman of the Surgical Care Group and member of the executive committee. In September 2009, he was appointed worldwide chairman of the Medical Devices and Diagnostics Group. Mr. Gorsky became vice chairman of the executive committee in January 2011. He was named chief executive officer and joined the board of directors in April 2012, and was named chairman in December 2012. Mr. Gorsky is a member of the Business Roundtable's Board of Directors and Chairman of its Corporate Governance Committee. Mr. Gorsky also serves on the boards of the Travis Manion Foundation, the National Academy Foundation and the Wharton Board of Overseers. Qualifications: Global business and technology experience as chairman and chief executive officer of Johnson & Johnson; Affiliation with leading business and public policy associations (member of the Business Roundtable and The Business Council); Experience as a university trustee; Relevant experience.

CORPORATE BOARDS

Company	Role	Tenure	Appointed	Resigned	Independent of Management	Independent of Other Interests	Attendance
APPLE INC.	Board Member		Nov 09, 2021		Yes	Yes	
INTERNATIONAL BUSINESS MACHINES CORPORATION	Board Member	7	Sep 01, 2014		Yes	Yes	
JOHNSON & JOHNSON	Executive, Board Member, Chairman, CEO	9	Apr 26, 2012		No	Yes	

BOARD COMMITTEES

Company	Committee Type	Position
APPLE INC.	Corporate Governance	Member
APPLE INC.	Nomination	Member
INTERNATIONAL BUSINESS MACHINES CORPORATION	Pay	Chair

VOTING RESULTS

Company	Year	For %	Against, Withheld and / or Abstained %
INTERNATIONAL BUSINESS MACHINES CORPORATION	2021	85.6%	14.4%
JOHNSON & JOHNSON	2021	92.8%	7.2%





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EXECUTIVE PAY (all values USD)

Company	Role	Tenure	Pay Year	Total Annual Pay	Total Awarded Pay	Total Realized Pay	Shares Held
JOHNSON & JOHNSON	CEO,Chair	9	2020	11,435,325	29,575,974	27,536,952	477,885

Company	Role	Tenure	Pay Year	Cash Fees	Total Awarded Pay	Shares Held
INTERNATIONAL BUSINESS MACHINES CORPORATION	Non-Executive	7	2020	345,000	434,629	8,464





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ANDREA JUNG

Age: 62 Financial: No Gender: F Risk: No

Nationality: United States of America Industry: Household & Personal Products - Household

Products

BIOGRAPHICAL INFORMATION

APPLE INC. - Board Member Source Date: 01/05/2021

Andrea Jung has served as the President and Chief Executive Officer of Grameen America LLC, a nonprofit microfinance organization, since April 2014, where she also serves on the Board of Directors. Ms. Jung previously served as Executive Chairman of Avon Products, Inc., a personal care products company, from April 2012 to December 2012, and as Chairman of the Board of Avon from September 2001 to April 2012. Ms. Jung served as Chief Executive Officer of Avon from November 1999 to April 2012, and served as a member of the Board of Avon from January 1998 to December 2012. Among other qualifications, Ms. Jung brings to the Board executive leadership experience, including her service as a board chair and chief executive officer of a large international public company, along with extensive brand marketing and consumer products experience, and a global business perspective from her service on other boards. Other Current Public Company Directorships Unilever PLC and Unilever N.V. Wayfair Inc. Selected Directorships and Memberships Board of Directors, Rockefeller Capital Management Board of Directors, JUST Capital Former Public Company Directorships Within the Last Five Years Daimler AG General Electric Company

UNILEVER PLC - Board Member Source Date: 03/10/2021

Andrea Jung - Previous experience: Avon Products Inc (CEO); General Electric (Board Member); Daimler AG (Board Member). Current external appointments: Grameen America Inc (President and CEO); Apple Inc (NED); Wayfair Inc (NED).

GENERAL ELECTRIC COMPANY - Board Member Source Date: 03/22/2021

President and CEO, Grameen America, a non-profit microfinance organization (since 2014), New York, NY

PRIOR BUSINESS EXPERIENCE

- -Chairman and CEO, Avon Products, a global consumer products company with a large and complex sales and marketing network (CEO 1999–2012; Chairman 2001–2012) Leadership, Global, Marketing, Talent Development
- -Joined Avon in 1994
- -Previously served as EVP, Neiman Marcus, and SVP, I. Magnin

CURRENT PUBLIC COMPANY BOARDS

- -General Electric
- -Apple (former co-lead director), a leading technology company Technology
- -Daimler, a global European automaker Global, Technology

PAST PUBLIC COMPANY BOARDS

-Avon

OTHER POSITIONS

- -Member, Committee for Economic Development of the Conference Board
- -Director, Grameen America
- -Former trustee, New York Presbyterian Hospital
- -Former chairman, World Federation of Direct Selling Associations

EDUCATION

-Princeton University

Daimler AG - Supervisory Board Member Source Date: 02/18/2021

Andrea Jung, born 1958 in Toronto, Ontario, is a graduate of Princeton University.

Andrea Jung is the President and CEO of Grameen America, Inc. She joined Grameen America with the goal of scaling the organization to solve economic issues for women and their families across the country. She is the former Chairman and Chief Executive Officer of Avon Products, Inc., where she served as CEO from 1999 through April 2012, and as Chairman from 2011 through December 2012.





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Throughout her professional career, Andrea Jung ranked consistently among the top leaders on lists including Fortune magazine's "Most Powerful Women in Business," Forbes magazine's "Most Powerful Women in the World," and Financial Times' "Top Women in World Business."

Andrea Jung is a member of the following further legally mandatory supervisory boards and comparable supervisory bodies:

Apple Inc. (listed)

General Electric Company (listed)

She also serves on the Committee for Economic Development, an independent, nonprofit, nonpartisan American think tank.

WAYFAIR INC. - Board Member Source Date: 03/30/2021

Andrea Jung has served as a member of our Board since May 2018. Ms. Jung has served as the President and Chief Executive Officer of Grameen America LLC, a nonprofit microfinance organization, since April 2014, where she also serves on the board of directors. Ms. Jung previously served as Executive Chairman of Avon Products, Inc., a personal care products company, from April 2012 to December 2012, and as Chairman of the board of directors of Avon from September 2001 to April 2012. Ms. Jung served as Chief Executive Officer of Avon from November 1999 to April 2012, and served as a member of the board of directors of Avon from January 1998 to December 2012. Ms. Jung has served on the board of directors of Apple Inc. since January 2008 and Unilever PLC and Unilever N.V. since May 2018, and previously served on the boards of General Electric Company from July 1998 to March 2018 and Daimler AG from April 2013 to April 2018. Ms. Jung is a graduate of Princeton University. We believe Ms. Jung is qualified to serve on our Board due to her board and executive-level experience in retail, technology and other businesses

CORPORATE BOARDS

Company	Role	Tenure	Appointed	Resigned	Independent of Management	Independent of Other Interests	Attendance
WAYFAIR INC.	Board Member	3	May 16, 2018		Yes	Yes	
UNILEVER PLC	Board Member, Lead Director, Deputy Chairman	3	May 02, 2018		Yes	Yes	
APPLE INC.	Board Member	13	Jan 04, 2008		Yes	Yes	

BOARD COMMITTEES

Company	Committee Type	Position
APPLE INC.	Pay	Chair
APPLE INC.	Corporate Governance	Member
APPLE INC.	Nomination	Member
UNILEVER PLC	Pay	Chair
UNILEVER PLC	Corporate Governance	Member
UNILEVER PLC	Nomination	Member
WAYFAIR INC.	Pay	Member
WAYFAIR INC.	Corporate Governance	Member
WAYFAIR INC.	Nomination	Member

VOTING RESULTS

Company	Year	For %	Against, Withheld and / or Abstained %
APPLE INC.	2021	92.4%	7.6%
UNILEVER PLC	2021	97.6%	2.4%
WAYFAIR INC.	2021	99.6%	0.4%





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Company	Role	Tenure	Pay Year	Cash Fees	Total Awarded Pay	Shares Held
APPLE INC.	Non-Executive	13	2020	130,000	402,205	137,608
UNILEVER PLC	Lead Director, Deputy Chair	3	2020	165,179	165,179	4,576
WAYFAIR INC.	Non-Executive	3	2020		103,559	2,070





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ARTHUR (ART) LEVINSON

Age: 70 Financial: No Gender: M Risk: No

Nationality: Not Disclosed Industry: Health Care Equipment & Services - Health Care

Providers & Services, Pharmaceuticals,

Biotechnology & Life Sciences - Biotechnology

BIOGRAPHICAL INFORMATION

APPLE INC. - Board Member, Chairman Source Date: 01/05/2021

Art Levinson has served as the Chief Executive Officer of Calico, a company focused on health, aging, and well-being, since September 2013. Dr. Levinson previously served as Chief Executive Officer of Genentech, Inc., a medical drug developer, from July 1995 to April 2009, and served as Genentech's Chairman from September 1999 to September 2014. Among other qualifications, Dr. Levinson brings to the Board executive leadership experience, including his service as a board chair and chief executive officer of a large international public company, along with extensive financial expertise and brand marketing experience. Selected Directorships and Memberships Board of Directors, Broad Institute of Harvard and MIT Board of Scientific Consultants, Memorial Sloan Kettering Cancer Center Industrial Advisory Board, California Institute for Quantitative Biomedical Research Science Advisory Board, Chan Zuckerberg Initiative

CORPORATE BOARDS

Company	Role	Tenure	Appointed	Resigned	Independent of Management	Independent of Other Interests	Attendance
APPLE INC.	Board Member, Chairman	21	Aug 15, 2000		Yes	Yes	

BOARD COMMITTEES

Company	Committee Type	Position
APPLE INC.	Pay	Member

VOTING RESULTS

Company	Year	For %	Against, Withheld and / or Abstained %	
APPLE INC.	2021	94.1%	5.	9%

Company	Role	Tenure	Pay Year	Cash Fees	Total Awarded Pay	Shares Held
APPLE INC.	Chair	21	2020	300,000	578,145	4,592,140





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JAMES BELL

Age: 73 Financial: Yes Gender: M Risk: No

Nationality: United States of America Industry: Capital Goods - Aerospace & Defense

BIOGRAPHICAL INFORMATION

APPLE INC. - Board Member Source Date: 01/05/2021

James Bell is the retired Executive Vice President, Corporate President and Chief Financial Officer of The Boeing Company, an aerospace company. Mr. Bell served in this role from June 2008 to April 2012, having previously served as Executive Vice President, Finance and Chief Financial Officer from November 2003 to June 2008, and as Senior Vice President of Finance and Corporate Controller from October 2000 to November 2003. From 1992 to 2000, Mr. Bell held a series of positions with increasing responsibility at Boeing. Among other qualifications, Mr. Bell brings to the Board financial and accounting expertise as a former chief financial officer of a large international public company, experience in strategic planning and leadership of complex organizations, and a global business perspective from his service on other boards. Other Current Public Company Directorships CDW Corporation Dow Inc. Selected Directorships and Memberships Board of Trustees, Rush University Medical Center Former Public Company Directorships Within the Last Five Years DowDupont Inc. JPMorgan Chase & Co.

JPMORGAN CHASE & CO. - Board Member Source Date: 04/07/2021

Over a four-decade corporate career, Mr. Bell led global businesses in a highly regulated industry, oversaw successful strategic growth initiatives and developed extensive experience in finance, accounting, risk management and controls. While Chief Financial Officer, he oversaw two key Boeing businesses: Boeing Capital Corporation, the company's customer-financing subsidiary and Boeing Shared Services, an 8,000 person, multi-billion dollar business unit that provides common internal services across Boeing's global enterprise. Career Highlights The Boeing Company, an aerospace company and manufacturer of commercial jetliners and military aircraft; Corporate President (2008–2012); Executive Vice President (2003–2012) ;Chief Financial Officer (2003–2012); Senior Vice President of Finance and Corporate Controller (2000–2003) Other Public Company Directorships; Apple Inc. (since 2015);CDW Corporation (since 2005); Dow DuPont Inc. (formerly Dow Chemical Company Inc.) (since 2005) Other Experience;Trustee, Rush University Medical Center Education; Graduate of California State University at Los Angeles

DOW INC. - Board Member Source Date: 03/05/2021

Mr. Bell was the Executive Vice President, Corporate President and Chief Financial Officer of The Boeing Company, an aerospace company and manufacturer of commercial jetliners and military aircraft, from 2008 to 2012. Mr. Bell joined Rockwell International, a predecessor of The Boeing Company, in 1972, and subsequently held various executive positions. Mr. Bell served as a Director of TDCC from 2005 until the effective date of the Merger Transaction when he became a director of DowDuPont. Mr. Bell resigned from the DowDuPont Board upon Separation. Qualifications: Mr. Bell possesses global business and leadership experience in industrials and in a highly regulated industry as the former Chief Financial Officer of The Boeing Company. Mr. Bell also has a strong expertise in finance, accounting, risk management and controls. Additionally, his experience on other public company boards provides him with strong knowledge in corporate governance. Mr. Bell is experienced in strategic planning, technology, regulatory issues and has developed significant expertise in manufacturing. Other Public Company Directorships: Apple, Inc. (since 2015), CDW Corporation (since 2015), JPMorgan Chase & Co. (since 2011).

DUPONT DE NEMOURS, INC. - Board Member Source Date: 03/12/2021

Ms. Chandy was the President of the Industrial Division of Pall Corporation, a leading supplier of filtration, separation, and purification technologies, from April 2012 to November 2015. Prior to her time at Pall, Ms. Chandy held leadership positions with several major, global companies including The Dow Chemical Company, Rohm and Haas Corporation, Thermo Fisher Scientific Corporation and Boston Scientific Corporation. Ms. Chandy currently serves on the boards of Ametek Inc. and Flowserve Corporation. She also sits on the Executive Advisory Board of Gryphon Investors, a private equity investment firm and is an executive board member of MIT Sloan. Ms. Chandy joined the Specialty Products Advisory Committee in April of 2018 and has served as an ex-officio member of the DowDuPont Board since that time. Ms. Chandy is expected to be appointed to the Board of Directors of DuPont as of June 1, 2019.

CDW CORPORATION - Board Member Source Date: 04/08/2021

James Bell currently serves as a member of our Board of Directors and as a manager of CDW LLC, our wholly owned subsidiary. Bell retired as Executive Vice President of The Boeing Company, an aerospace company and manufacturer of commercial jetliners and military aircraft in April 2012. Bell served as Boeing's Executive Vice President, Corporate President and Chief Financial Officer from 2008 until February 2012. Prior to this position, he served as Boeing's Executive Vice President, Finance and Chief Financial Officer from 2003-2008; Senior Vice President of Finance and Corporate Controller from 2000-2003, and Vice President of Contracts and Pricing for Boeing Space and Communications from 1996-2000. Bell serves on the boards of directors of Apple Inc. and The Dow Chemical Company. During the past five years, Bell also served as a director of JPMorgan Chase & Co., Rush University Medical Center, the Chicago Urban League, the Chicago Infrastructure Trust, The Economic Club of Chicago and World Business Chicago. Bell is a graduate of California State University at Los Angeles where he earned a bachelor's degree.

CORPORATE BOARDS

Company	Role	Tenure	Appointed	Resigned	Independent of Management	Independent of Other Interests	Attendance
APPLE INC.	Board Member	6	Oct 01, 2015		Yes	Yes	
CDW CORPORATION	Board Member	6	Mar 25, 2015		Yes	Yes	





BOARD COMMITTEES

Company	Committee Type	Position
APPLE INC.	Audit	Member
APPLE INC.	Risk	Member
CDW CORPORATION	Audit	Member
CDW CORPORATION	Corporate Governance	Member
CDW CORPORATION	Nomination	Member

VOTING RESULTS

Company	Year	For %	Against, Withheld and / or Abstained %
APPLE INC.	2021	99%	1%
CDW CORPORATION	2021	99.7%	0.3%

Company	Role	Tenure	Pay Year	Cash Fees	Total Awarded Pay	Shares Held
APPLE INC.	Non-Executive	6	2020	100,000	359,102	34,280
CDW CORPORATION	Non-Executive	6	2020	102,500	255,000	18,101
DOW INC.	Non-Executive		2020	152,500	342,278	7,374
JPMORGAN CHASE & CO.	Non-Executive		2020	53,461	318,857	0





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MONICA LOZANO

Age: 64 Financial: No Gender: F Risk: No

Nationality: United States of America Industry: Media - Media

BIOGRAPHICAL INFORMATION

APPLE INC. - Board Member Source Date: 01/05/2021

Monica Lozano has served as the President and Chief Executive Officer of The College Futures Foundation, a charitable foundation working to increase the rate of college graduation for low-income California students, since December 2017. Ms. Lozano previously served as Chair of the Board of Directors of U.S. Hispanic Media, Inc., the parent company of ImpreMedia, LLC, a Hispanic news and information company, from June 2014 to January 2016. Ms. Lozano previously served as Chair of ImpreMedia, LLC, from July 2012 to January 2016, and Chief Executive Officer of ImpreMedia, LLC, from May 2010 to May 2014. Among other qualifications, Ms. Lozano brings to the Board executive leadership experience, including her service as a board chair and chief executive officer, experience in operations, strategic planning and marketing, and a global business perspective from her service on other boards. Other Current Public Company Directorships Bank of America Corporation Target Corporation Selected Directorships and Memberships Board of Directors, Weingart Foundation Member, American Academy of Arts and Sciences Former Public Company Directorships Within the Last Five Years The Walt Disney Company

APPLE INC. - Board Member Source Date: 01/05/2021

Monica Lozano has served as the President and Chief Executive Officer of The College Futures Foundation, a charitable foundation working to increase the rate of college graduation for low-income California students, since December 2017. Ms. Lozano previously served as Chair of the Board of Directors of U.S. Hispanic Media, Inc., the parent company of ImpreMedia, LLC, a Hispanic news and information company, from June 2014 to January 2016. Ms. Lozano previously served as Chair of ImpreMedia, LLC, from July 2012 to January 2016, and Chief Executive Officer of ImpreMedia, LLC, from May 2010 to May 2014. Among other qualifications, Ms. Lozano brings to the Board executive leadership experience, including her service as a board chair and chief executive officer, experience in operations, strategic planning and marketing, and a global business perspective from her service on other boards. Other Current Public Company Directorships Bank of America Corporation Target Corporation Selected Directorships and Memberships Board of Directors, Weingart Foundation Member, American Academy of Arts and Sciences Former Public Company Directorships Within the Last Five Years The Walt Disney Company

BANK OF AMERICA CORPORATION - Board Member Source Date: 03/08/2021

Ms. Monica Lozano's roles as the Chief Executive Officer of College Futures Foundation, a Officer, College charitable foundation working to increase the rate of college graduation for Futures Foundation low-income California students, and as the former Chairman and Chief Executive Officer of ImpreMedia LLC (ImpreMedia), a leading Hispanic news and information Former Chairman, company, enable her to bring her experience in broad leadership management over US Hispanic Media areas such as operations, marketing, and strategic planning to our Board. Inc. Ms. Lozano has a deep understanding of issues that are important to the Hispanic Other U.S.-Listed community, a growing U.S. demographic. Her public company board service for Company Boards: Target Corporation, her past public company board service for The Walt Disney Target Corporation Corporation, and her past roles with the University of California and the University of Past Five Years: The Southern California give her board-level experience overseeing large organizations Walt Disney with diversified operations on matters such as governance, executive compensation, Company risk management, and financial reporting. Ms. Lozano's experience as a member of President Obama's Council on Jobs and Competitiveness also provided her with valuable perspective on important public policy, societal, and economic issues relevant to our company. Professional highlights: Chief Executive Officer of College Futures Foundations since December 2017. College Futures Foundation is a charitable foundation focused on increasing the rate of bachelor's degree completion among California student populations who are low-income and have had a historically low college success rate Served as Chair of the Board of Directors of U.S. Hispanic Media Inc., the parent company of ImpreMedia, a leading Hispanic news and information company, from June 2014 to January 2016 Served as Chairman of ImpreMedia from July 2012 to January 2016, Chief Executive Officer from May 2010 to May 2014, and Senior Vice President from January 2004 to May 2010 Served as Publisher of La Opinión, a subsidiary of ImpreMedia and the leading Spanish-language daily print and online newspaper in the U.S., from 2004 to May 2014, and Chief Executive Officer from 2004 to July 2012 Member of the Board of Directors of Target Corporation and its Audit and Finance Committee, and Nominating and Governance Committee Other leadership experience and service: Served as a member of President Obama's Council on Jobs and Competitiveness from 2011 to 2012 and served on President Obama's Economic Recovery Advisory Board from 2009 to 2011 Currently serves as Chair of the Board of Directors of the Weingart Foundation; served as the Chair of the Board of Regents of the University of California, as a member of the Board of Trustees of The Rockefeller Foundation, as a member of the Board of Trustees of the University of Southern California, and as a member of the State of California Commission on the 21st Century Economy.

TARGET CORPORATION - Board Member, Lead Director Source Date: 04/26/2021

Monica C. Lozano is President and Chief Executive Officer of The College Futures Foundation, a position she has held since December 2017. She also co-founded The Aspen Institute Latinos and Society Program and served as Chair of its Advisory Board from January 2015 to October 2019. Ms. Lozano previously served as Chairman of U.S. Hispanic Media, Inc., a leading Hispanic news and information company. Ms. Lozano previously served in the roles of Chair and Chief Executive Officer of ImpreMedia, LLC, a wholly owned subsidiary of U.S. Hispanic Media, Inc. Ms. Lozano also served as Chief Executive Officer and Publisher of La Opinion, a subsidiary of ImpreMedia, LLC, and in several management-level roles with the company. Qualifications Ms. Lozano possesses substantial senior management experience in areas such as operations, strategic planning and marketing, including multi-media content. She also has a deep understanding of issues that are important to Hispanics, a growing U.S. demographic. Ms. Lozano has board-level experience overseeing large organizations with diversified operations on matters such as governance, risk management, and financial reporting.





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CORPORATE BOARDS

Company	Role	Tenure	Appointed	Resigned	Independent of Management	Independent of Other Interests	Attendance
APPLE INC.	Board Member		Jan 04, 2021		Yes	Yes	
TARGET CORPORATION	Board Member, Lead Director	5	Mar 09, 2016		Yes	Yes	
BANK OF AMERICA CORPORATION	Board Member	15	Apr 01, 2006		Yes	Yes	

BOARD COMMITTEES

Company	Committee Type	Position
APPLE INC.	Audit	Member
APPLE INC.	Risk	Member
BANK OF AMERICA CORPORATION	Pay	Chair
BANK OF AMERICA CORPORATION	Risk	Member
TARGET CORPORATION	Pay	Chair
TARGET CORPORATION	Corporate Governance	Member
TARGET CORPORATION	Nomination	Member

VOTING RESULTS

Company	Year	For %	Against, Withheld and / or Abstained %
APPLE INC.	2021	99.1%	0.9%
BANK OF AMERICA CORPORATION	2021	95.5%	4.5%
TARGET CORPORATION	2021	98%	2%

Company	Role	Tenure	Pay Year	Cash Fees	Total Awarded Pay	Shares Held
BANK OF AMERICA CORPORATION	Non-Executive	15	2020	130,000	385,500	3,000
TARGET CORPORATION	Lead Director	5	2020	128,333	308,364	12,655





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RONALD (RON) SUGAR

Age: 72 Financial: Yes Gender: M Risk: No

Nationality: Not Disclosed Industry: Capital Goods - Aerospace &

Defense, Automobiles & Components - Auto

Components

BIOGRAPHICAL INFORMATION

APPLE INC. - Board Member Source Date: 01/05/2021

Ron Sugar is the retired Chairman of the Board and Chief Executive Officer of Northrop Grumman Corporation, a global security company. Dr. Sugar served in this role from April 2003 to June 2010 and served as President and Chief Operating Officer from 2001 to 2003. Previous to Northrop Grumman, he held executive positions at Litton Industries and TRW Inc., where he served as Chief Financial Officer. Among other qualifications, Dr. Sugar brings to the Board executive leadership experience as a board chair and chief executive officer of a large international public company, financial expertise as a former chief financial officer, understanding of advanced technology, experience with government relations and public policy, and a global business perspective from his service on other boards. Other Current Public Company Directorships Amgen Inc. Chevron Corporation Uber Technologies, Inc. Selected Directorships and Memberships Member, National Academy of Engineering Board of Trustees, University of Southern California Board of Directors, Los Angeles Philharmonic Association Operating Advisor, Ares Management Corporation Member, Temasek Americas Advisory Panel Former Public Company Directorships Within the Last Five Years Air Lease Corporation

CHEVRON CORPORATION - Board Member, Lead Director Source Date: 04/08/2021

Dr. Sugar is a senior advisor to various businesses and organizations, including Ares Management LLC, a private investment firm; Bain & Company, a global consulting firm; Temasek Americas Advisory Panel, a private investment company based in Singapore; and the G100 and World 50 peer-to-peer exchanges for current and former senior executives and directors from some of the world's largest companies. He is also an advisor to Northrop Grumman Corporation ("Northrop Grumman"), a global aerospace and defense company, and was previously Northrop Grumman's Chairman and Chief Executive Officer, from 2003 until his retirement in 2010, and President and Chief Operating Officer, from 2001 until 2003. He joined Northrop Grumman in 2001, having previously served as President and Chief Operating Officer of Litton Industries, Inc., a developer of military products, and earlier as an executive of TRW Inc., a developer of missile systems and spacecraft.

AMGEN INC. - Board Member Source Date: 04/06/2021

Ronald D. Sugar is the retired Chairman of the Board and Chief Executive Officer of Northrop Grumman Corporation, a global aerospace and defense company, having held these posts from 2003 through 2009. Dr. Sugar has been a director of Chevron Corporation, a petroleum, exploration, production and refining company, since 2005, serving as the lead director and on the Management Compensation Committee and chairing the Board Nominating and Governance Committee. Dr. Sugar has been a director of Apple Inc., a manufacturer and seller of, among other things, personal computers, mobile communication and media devices, since 2010, chairing the Audit and Finance Committee. Dr. Sugar has been a director of Uber Technologies, Inc., a personal mobility, meal delivery and logistics technology platform, since 2018, serving as the Chair of the board of directors and chairing the Nominating and Governance Committee and serving on the Compensation Committee. Dr. Sugar served as a director of Air Lease Corporation, an aircraft leasing company, from 2010 to May 2020, and chaired its Compensation Committee and served on the Nominating and Corporate Governance Committee. Since 2010, he has been a senior advisor to Ares Management LLC, a privately-held asset manager and registered investment advisor. In 2014, Dr. Sugar joined the Temasek Americas Advisory Panel of Temasek Holdings (Private) Limited, a privately-held investment company based in Singapore. Dr. Sugar is a member of the National Academy of Engineering, trustee of the University of Southern California, member of the UCLA Anderson School of Management Board of Advisors, and director of the Los Angeles Philharmonic Association.

UBER TECHNOLOGIES, INC. - Board Member, Chairman Source Date: 03/29/2021

Dr. Sugar has served as the chairperson of our board of directors since July 2018. Dr. Sugar was Chairman of the board of directors and Chief Executive Officer of Northrop Grumman Corporation, a global aerospace and defense company, from 2003 until his retirement in 2010 and President and Chief Operating Officer from 2001 until 2003. He was President and Chief Operating Officer of Litton Industries, Inc. from 2000 until the company was acquired by Northrop Grumman Corporation in 2001. Prior to that time, he served as Chief Financial Officer of TRW Inc. Dr. Sugar is also an adviser to Ares Management LLC, Bain & Company, Northrop Grumman Corporation, and Singapore's Temasek Investment Company. Dr. Sugar is a trustee of the University of Southern California, board of visitors member of the University of California, Los Angeles Anderson School of Management, past Chairman of the Aerospace Industries Association, and a member of the National Academy of Engineering. Dr. Sugar has been a director of Amgen Inc. since 2010, Apple Inc. since 2010, Air Lease Corporation since 2010, and Chevron Corporation since 2005. Dr. Sugar has notified the board of directors of Air Lease Corporation that he will not stand for reelection to its board of directors at its annual meeting of stockholders in May 2020. Qualifications Dr. Sugar was selected to serve on our board of directors because of his experience as the leader of a global company, particularly as Chairman of the Board and Chief Executive Officer of Northrop Grumman Corporation, his innovation, technology, and high-growth experience, consumer and digital experience, particularly his experience on Apple's board of directors, his financial expertise, and his government, policy, and regulatory experience

AIR LEASE CORPORATION - Board Member Source Date: 03/18/2021

Dr. Sugar was Chairman of the Board and Chief Executive Officer of Northrop Grumman Corporation, a global aerospace and defense company, from 2003 until 2010 and President and Chief Operating Officer from 2001 until 2003. He was President and Chief Operating Officer of Litton Industries, Inc. from 2000 until the company was acquired by Northrop Grumman in 2001. He was earlier Chief Financial Officer of TRW Inc. He is the Chairman of Board of Directors of Uber Technologies Inc. and also serves as an adviser to Ares Management LLC, Bain & Company, Northrop Grumman Corporation and Singapore's Temasek Investment Company. He is a trustee of the University of Southern California, member of the Board of Visitors of UCLA Anderson School of Management, member of the boards of directors of the Los Angeles Philharmonic Association and Alliance College – Ready Public Schools. He is the past Chairman of the Aerospace Industries Association, and a member of the National Academy of Engineering. Qualifications: Dr. Sugar has significant executive experience in the global aerospace business. In addition to drawing on Dr. Sugar's in-depth executive and financial experience in related industries, our Board of Directors also benefits from Dr. Sugar's current experience as a board member of three Fortune 100 companies. He has particularly useful experience with risk oversight, advanced technology, and a deep understanding of legislative and regulatory processes.





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CORPORATE BOARDS

Company	Role	Tenure	Appointed	Resigned	Independent of Management	Independent of Other Interests	Attendance
UBER TECHNOLOGIES, INC.	Board Member, Chairman	3	Jul 01, 2018		Yes	Yes	
APPLE INC.	Board Member	11	Nov 16, 2010		Yes	Yes	
AMGEN INC.	Board Member	11	Jul 22, 2010		Yes	Yes	
CHEVRON CORPORATION	Board Member, Lead Director	16	Apr 27, 2005		Yes	Yes	
Northrop Grumman Corporation	Executive		Jan 01, 2001	Dec 31, 2009	No	Yes	

BOARD COMMITTEES

Company	Committee Type	Position
AMGEN INC.	Corporate Governance	Member
AMGEN INC.	Nomination	Member
APPLE INC.	Audit	Chair
APPLE INC.	Risk	Chair
CHEVRON CORPORATION	Pay	Member
CHEVRON CORPORATION	Corporate Governance	Member
CHEVRON CORPORATION	Nomination	Member
UBER TECHNOLOGIES, INC.	Pay	Member
UBER TECHNOLOGIES, INC.	Corporate Governance	Chair
UBER TECHNOLOGIES, INC.	Nomination	Chair

VOTING RESULTS

Company	Year	For %	Against, Withheld and / or Abstained %
AMGEN INC.	2021	81.5%	18.5%
APPLE INC.	2021	90.6%	9.4%
CHEVRON CORPORATION	2021	75.8%	24.2%
UBER TECHNOLOGIES, INC.	2021	95%	5%

Company	Role	Tenure	Pay Year	Cash Fees	Total Awarded Pay	Shares Held
AIR LEASE CORPORATION	Non-Executive		2020	37,117	37,117	0
AMGEN INC.	Non-Executive	11	2020	140,000	359,961	15,805
APPLE INC.	Non-Executive	11	2020	135,000	398,627	102,272
CHEVRON CORPORATION	Lead Director	16	2020	200,000	435,654	69,446
UBER TECHNOLOGIES, INC.	Chair	3	2020	40,000	40,000	189,403





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SUSAN (SUE) WAGNER

Age: 59 Financial: Yes Gender: F Risk: No

Nationality: United States of America Industry: Diversified Financials - Capital Markets

BIOGRAPHICAL INFORMATION

APPLE INC. - Board Member Source Date: 01/05/2021

Sue Wagner is a co-founder of BlackRock, Inc., an asset management company. Ms. Wagner served as BlackRock's Vice Chairman from January 2006 until her retirement in July 2012, and also served as a member of BlackRock's Global Executive Committee and Global Operating Committee. During her tenure at BlackRock, Ms. Wagner served as BlackRock's Chief Operating Officer and Head of Corporate Strategy, and led the alternative investments and international client businesses. Among other qualifications, Ms. Wagner brings to the Board operational experience, including her service as chief operating officer of a large multinational public company, along with extensive financial expertise and experience in the financial services industry, and a global business perspective from her service on other boards. Other Current Public Company Directorships BlackRock, Inc. Swiss Re Selected Directorships and Memberships Board of Directors, Color Genomics, Inc. Board of Trustees, Wellesley College Board of Directors, Samsara Networks Inc.

BLACKROCK, INC. - Board Member Source Date: 04/16/2021

Ms. Wagner retired as Vice Chairman of BlackRock after serving in that role from 2006 to 2012. Ms. Wagner also served as a member of BlackRocks Global Executive Committee and Global Operating Committee. Ms. Wagner previously served as BlackRocks Chief Operating Officer and as Head of Corporate Strategy. She serves as a member of the board of trustees of Wellesley College. Ms. Wagner also currently serves as a director of Color Health (privately held) and Samsara (privately held)

Swiss Re AG - Board Member Source Date: 03/18/2021

Susan L. Wagner was elected to the Board of Directors of SRL in 2014. She chairs the Investment Committee and is a member of the Chairman's and Governance Committee, the Nomination Committee and the Finance and Risk Committee. Professional experience Susan L. Wagner is a co-founder of BlackRock, where she served as Vice Chairman and a member of the Global Executive and Operating Committees before retiring in 2012. Over the course of her nearly 25 years at BlackRock, Susan L. Wagner served in several roles such as Chief Operating Officer, Head of Strategy, Corporate Development, Investor Relations, Marketing and Communications, Alternative Investments and International Client Businesses. Prior to founding BlackRock, Susan L. Wagner was a Vice President at Lehman Brothers, supporting the investment banking and capital markets activities of mortgage and savings institutions. Educational background • BA in English and Economics, Wellesley College, USA • MBA in Finance, University of Chicago, USA External mandates • Board member of Apple Inc.* • Board member of BlackRock, Inc.* • Board member of Color Genomics, Inc. • Member of the Board of Trustees of Wellesley College, USA.

CORPORATE BOARDS

Company	Role	Tenure	Appointed	Resigned	Independent of Management	Independent of Other Interests	Attendance
APPLE INC.	Board Member	7	Jul 15, 2014		Yes	No	
Swiss Re AG	Board Member	7	Apr 11, 2014		Yes	No	
BLACKROCK, INC.	Board Member	9	Oct 03, 2012		No	No	

BOARD COMMITTEES

Company	Committee Type	Position
APPLE INC.	Audit	Member
APPLE INC.	Corporate Governance	Chair
APPLE INC.	Nomination	Chair
APPLE INC.	Risk	Member
BLACKROCK, INC.	Audit	Member
BLACKROCK, INC.	Risk	Chair
Swiss Re AG	Corporate Governance	Member
Swiss Re AG	Nomination	Member
Swiss Re AG	Risk	Member





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VOTING RESULTS

Company	Year	For %	Against, Withheld and / or Abstained %
APPLE INC.	2021	97.8%	2.2%
BLACKROCK, INC.	2021	98.6%	1.4%
Swiss Re AG	2021	92.9%	7.1%

Company	Role	Tenure	Pay Year	Cash Fees	Total Awarded Pay	Shares Held
APPLE INC.	Non-Executive	7	2020	125,000	375,147	62,652
BLACKROCK, INC.	Non-Executive	9	2020	139,019	378,527	432,224
Swiss Re AG	Non-Executive	7	2020	410,657	684,428	17,125





TIMOTHY (TIM) COOK

Age: 60 Financial: No Gender: M Risk: No

Nationality: United States of America Industry: Technology Hardware & Equipment - Technology

Hardware, Storage & Peripherals

BIOGRAPHICAL INFORMATION

APPLE INC. - Executive, Board Member, CEO Source Date: 01/05/2021

Tim Cook has been Apple's Chief Executive Officer since August 2011 and was previously Apple's Chief Operating Officer since October 2005. Mr. Cook joined Apple in March 1998 and served as Executive Vice President, Worldwide Sales and Operations from February 2002 to October 2005. From October 2000 to February 2002, Mr. Cook served as Senior Vice President, Worldwide Operations, Sales, Service and Support. From March 1998 to October 2000, Mr. Cook served as Senior Vice President, Worldwide Operations. Among other qualifications, Mr. Cook brings to the Board extensive executive leadership experience in the technology industry, including the management of worldwide operations, sales, service, and support. Other Current Public Company Directorships NIKE, Inc. Selected Directorships and Memberships Board of Directors, The National Football Foundation & College Hall of Fame, Inc. Board of Trustees, Duke University Leadership Council, Malala Fund.

NIKE, INC. - Board Member, Lead Director Source Date: 08/09/2021

Mr. Cook is the Company's Lead Independent Director and is the Chief Executive Officer of Apple Inc. ("Apple"). Mr. Cook joined Apple in March 1998 as Senior Vice President of Worldwide Operations and also served as its Executive Vice President, Worldwide Sales and Operations and Chief Operating Officer. Mr. Cook was Vice President, Corporate Materials for Compaq Computer Corporation from 1997 to 1998. Previous to his work at Compaq, Mr. Cook served in the positions of Senior Vice President Fulfillment and Chief Operating Officer of the Reseller Division at Intelligent Electronics from 1994 to 1997. Mr. Cook also worked for International Business Machines Corporation from 1983 to 1994, most recently as Director of North American Fulfillment. Mr. Cook is a member of the Board of Directors of Apple. In addition to this public company board service, he is also a member of the Board of Directors of the National Football Foundation and Duke University Board of Trustees..

CORPORATE BOARDS

Company	Role	Tenure	Appointed	Resigned	Independent of Management	Independent of Other Interests	Attendance
APPLE INC.	Executive, Board Member, CEO	10	Aug 24, 2011		No	Yes	
NIKE, INC.	Board Member, Lead Director	16	Nov 01, 2005		Yes	Yes	

BOARD COMMITTEES

Company	Committee Type	Position
NIKE, INC.	Pay	Chair

VOTING RESULTS

Company	Year	For %	Against, Withheld and / or Abstained %
APPLE INC.	2021	98.2%	1.8%
NIKE, INC.	2021	100%	0%

EXECUTIVE PAY (all values USD)

Company	Role	Tenure	Pay Year	Total Annual Pay	Total Awarded Pay	Total Realized Pay	Shares Held
APPLE INC.	CEO	10	2020	14,769,259	14,769,259	296,690,059	9,057,470

Company	Role	Tenure	Pay Year	Cash Fees	Total Awarded Pay	Shares Held
NIKE, INC.	Lead Director	16	2021	150,000	358,969	31,433



GLOSSARY

MSCI ESG RATINGS AND SCORES

FINAL ESG RATING

• Letter ratings are relative within each MSCI ESG Ratings industry. Each Final Industry-Adjusted Company Score is converted to an equivalent rating on the AAA-CCC scale.

ESG PILLARS

- the Environment Score represents the weighted average of all Key Issues that fall under the Environment Pillar
- the Social Score represents the weighted average of all Key Issues that fall under the Social Pillar
- the Governance Score represents the sum of score deductions derived from Key Metrics included in Corporate Governance (including Board, Pay, Ownership & Control, and Accounting) and Corporate Behavior (including Business Ethics and Tax Transparency)
- the Environment Weight represents the sum of the weights of all Key Issues that fall under the Environment Pillar
- · the Social Weight represents the sum of the weights of all Key Issues that fall under the Social Pillar
- the Governance Weight represents the sum of the weights of Corporate Governance and Corporate Behavior, with a minimum weight set at 33% for all rated issuers

KEY ISSUES

For each industry and Company-Specific Key Issue that contributes to the final rating:

- Weight contribution to the final rating
- Exposure Score (available for companies published since June 2011; excluding Raw Material Sourcing Environmental)
- Management Score (available for companies published since June 2011; excluding Raw Material Sourcing Environmental)
- Overall Key Issue Score

WEIGHTED-AVERAGE KEY ISSUE SCORE VS. INDUSTRY RELATIVE SCORE

• the Weighted-Average Key Issue Score is dynamic, reflecting changes in any underlying scores as of the Last Update date, while the Industry Relative Score is more static and corresponds to the Rating Date. Issues that we determine do not present material risks or opportunities to companies in a given industry receive 0% weight and do not impact the overall ESG rating.

SCORES AND CALCULATION OF AVERAGE, PERCENTILE AND RATING DISTRIBUTION

All averages, percentiles, and rating distributions found in the report are based on companies in the relevant MSCI ESG Ratings Industry that are constituents of the MSCI ACWI and are calculated based on industry scores as of the date of publication of this report.

ESTIMATED CARBON EMISSIONS

Carbon estimates are based on carbon intensity (carbon emissions/sales). The Estimate Key represents the source of the estimated carbon emissions data. E.CSI represents Company-Specific Intensity estimates based on previously disclosed data. E.GICSSI represents estimates based on the GICS Sub-Industry average. For E.GICSSI we set five levels of confidence (High, Moderately High, Moderately Low, and Low). The Carbon Estimation Methodology document, available on ESG Manager, describes the estimation model in greater detail.





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