

# THIRD QUARTER 2020 FINANCIAL RESULTS

OCTOBER 27, 2020

#### CAUTIONARY STATEMENT

This presentation contains forward-looking statements concerning Advanced Micro Devices, Inc. (AMD) such as the features, functionality, performance, availability, timing and expected benefits of AMD products including Radeon™ RX 6000 series GPUs and next generation "Milan" server processors; semi-custom shipments and revenue expectations; AMD's financial outlook for the fourth guarter of 2020 and fiscal 2020. including, revenue, non-GAAP gross margin, non-GAAP operating expenses, non-GAAP operating expenses as a percentage of revenue, non-GAAP interest expense, taxes and other, non-GAAP taxes, and diluted share count; and AMD's leadership roadmaps, execution excellence, sustained market share gains and strong financial returns, which are made pursuant to the Safe Harbor provisions of the Private Securities Litigation Reform Act of 1995. Forward looking statements are commonly identified by words such as "would," "may," "expects," "believes," "plans," "intends," "projects" and other terms with similar meaning. Investors are cautioned that the forward-looking statements in this presentation are based on current beliefs, assumptions and expectations, speak only as of the date of this presentation and involve risks and uncertainties that could cause actual results to differ materially from current expectations. Such statements are subject to certain known and unknown risks and uncertainties, many of which are difficult to predict and generally beyond AMD's control, that could cause actual results and other future events to differ materially from those expressed in, or implied or projected by, the forward-looking information and statements. Material factors that could cause actual results to differ materially from current expectations include, without limitation, the following: Intel Corporation's dominance of the microprocessor market and its aggressive business practices; the ability of third party manufacturers to manufacture AMD's products on a timely basis in sufficient quantities and using competitive technologies; expected manufacturing yields for AMD's products; AMD's ability to introduce products on a timely basis with features and performance levels that provide value to its customers; global economic uncertainty; the loss of a significant customer; AMD's ability to generate revenue from its semi-custom SoC products: the impact of the COVID-19 pandemic on AMD's business, financial condition and results of operations; political, legal, economic risks and natural disasters; the impact of government actions and regulations such as export administration regulations, tariffs and trade protection measures; potential security vulnerabilities; potential IT outages, data loss, data breaches and cyber-attacks; uncertainties involving the ordering and shipment of AMD's products; guarterly and seasonal sales patterns; the restrictions imposed by agreements governing AMD's notes and the secured credit facility; the competitive markets in which AMD's products are sold; AMD's ability to generate sufficient revenue and operating cash flow or obtain external financing for research and development or other strategic investments; the potential dilutive effect if the 2.125% Convertible Senior Notes due 2026 are converted; market conditions of the industries in which AMD products are sold; AMD's reliance on third-party intellectual property to design and introduce new products in a timely manner; AMD's reliance on third-party companies for the design, manufacture and supply of motherboards, software and other computer platform components; AMD's reliance on Microsoft Corporation and other software vendors' support to design and develop software to run on AMD's products; AMD's reliance on third-party distributors and add-in-board partners; future impairments of goodwill and technology license purchases; AMD's ability to attract and retain gualified personnel; AMD's indebtedness; AMD's ability to generate sufficient cash to service its debt obligations or meet its working capital requirements; AMD's ability to repurchase its outstanding debt in the event of a change of control; the cyclical nature of the semiconductor industry; the impact of acquisitions, joint ventures and/or investments on AMD's business; the impact of modification or interruption of AMD's internal business processes and information systems; the availability of essential equipment, materials or manufacturing processes; compatibility of AMD's products with some or all industry-standard software and hardware; costs related to defective products; the efficiency of AMD's supply chain; AMD's ability to rely on third party supply-chain logistics functions; AMD's stock price volatility; worldwide political conditions; unfavorable currency exchange rate fluctuations; AMD's ability to effectively control the sales of its products on the gray market; AMD's ability to adequately protect its technology or other intellectual property; current and future claims and litigation; potential tax liabilities; and the impact of environmental laws, conflict minerals-related provisions and other laws or regulations. Investors are urged to review in detail the risks and uncertainties in AMD's Securities and Exchange Commission filings, including but not limited to AMD's Quarterly Report on Form 10-Q for the quarter ended June 27, 2020.

#### NON-GAAP FINANCIAL MEASURES

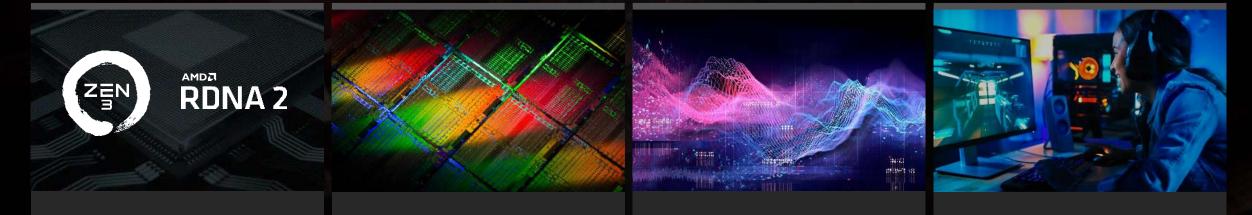
In this presentation, in addition to GAAP financial results, AMD has provided non-GAAP financial measures including non-GAAP gross margin, non-GAAP operating expenses, non-GAAP operating income, non-GAAP net income, non-GAAP earnings per share and free cash flow. AMD uses a normalized tax rate in its computation of the non-GAAP income tax provision to provide better consistency across the reporting periods. For fiscal 2020, AMD uses a projected non-GAAP tax rate, which excludes the direct tax impacts of pre-tax non-GAAP adjustments, of approximately 3%, reflecting currently available information. AMD is providing these financial measures because it believes this non-GAAP presentation makes it easier for investors to compare its operating results for current and historical periods and also because AMD believes it assists investors in comparing AMD's performance across reporting periods on a consistent basis by excluding items that it does not believe are indicative of its core operating performance. The non-GAAP financial measures disclosed in this presentation should be viewed in addition to and not as a substitute for or superior to AMD's reported results prepared in accordance with GAAP and should be read only in conjunction with AMD's Consolidated Financial Statements prepared in accordance with GAAP. These non-GAAP financial measures concerning AMD's financial outlook such as gross margin, operating expenses, interest expense, taxes and other. These forward-looking non-GAAP measures concerning AMD's financial outlook such as gross margin, operating expenses, interest expense, taxes and other. These forward-looking non-GAAP measures are based on current expectations as of October 27, 2020 and assumptions and beliefs that involve numerous risks and uncertainties. AMD undertakes no intent or obligation to publicly update or revise its outlook statements as a result of new information, future events or otherwise, except as may be required by law.

# AMDZ OUR JOURNEY

High-Performance Computing Leadership Disruptive Solutions Combining CPUs and GPUs

Strong and Predictable Execution Best-in-Class Growth Franchise

# **OUR LEADERSHIP TECHNOLOGY**



#### **INDUSTRY-LEADING IP**

Delivering Multi-generational Leadership CPU and GPU Roadmaps

#### ADVANCED TECHNOLOGY

Leadership Process, Packaging and Interconnect Technology

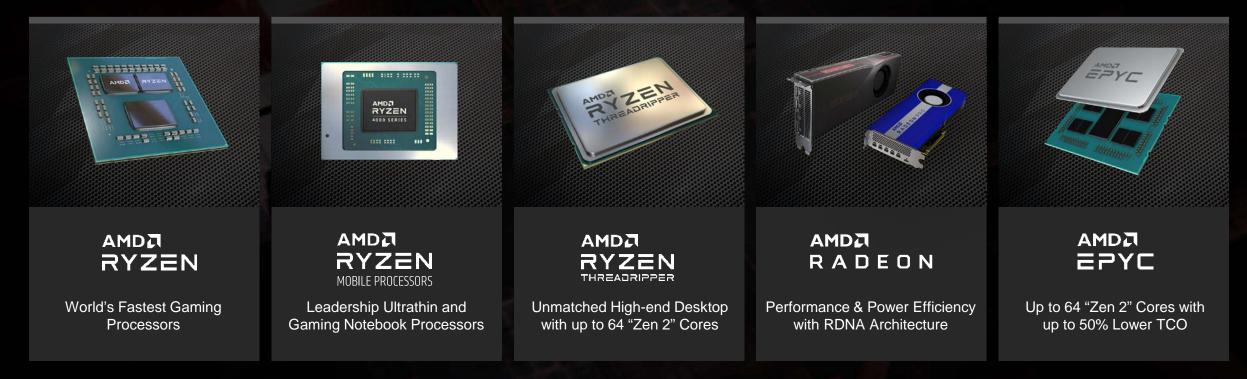
#### DATA CENTER LEADERSHIP

Innovation in Cloud, Enterprise and Accelerated Computing

#### **PC/GAMING SOLUTIONS**

Driving Leadership PC Experiences and Gaming Solutions

# **OUR BEST EVER PRODUCT PORTFOLIO**



## PERFORMANCE LEADERSHIP FROM NOTEBOOK TO DESKTOP TO DATA CENTER

# **FINANCIAL SUMMARY Q3 2020<sup>1</sup>**

#### Quarterly Revenue (\$B)

+56% y/y \$2.80 \$1.80 O3 2019 03 2020

- Revenue of \$2.80 billion, up 56% y/y and 45% q/q
  - Growth driven by higher revenue in both the Enterprise, Embedded and Semi-Custom and Computing and Graphics segments
- Gross margin of 44%
  - Up 1 percentage point y/y driven by EPYC<sup>™</sup> and Ryzen<sup>™</sup> processor sales
  - Flat q/q as an increase in Ryzen and EPYC processor sales was offset by a higher percentage of semi-custom revenue
- Operating expenses of \$781 million; non-GAAP OpEx of \$706 million
- Strong profitability
  - Gross profit of \$1.23B; non-GAAP gross profit also \$1.23B
  - Operating income of \$449 million; non-GAAP operating income of \$525 million
  - Operating margin of 16%; non-GAAP operating margin of 19%
  - Net income of \$390 million; non-GAAP net income of \$501 million
  - Diluted EPS of \$0.32; non-GAAP diluted EPS of \$0.41
- Cash, cash equivalents and short-term investments of \$1.77 billion
- Operating cash flow of \$339 million; Free cash flow of \$265 million

# **COMPUTING AND GRAPHICS SEGMENT Q3 2020**

- Revenue of \$1.67 billion
  - Up 31% y/y driven by a significant increase in Ryzen processor sales partially offset by lower graphics revenue
  - Up 22% q/q driven by a significant increase in Ryzen processor sales and an increase in graphics revenue
- Average Selling Price (ASP)
  - Client processor ASP lower y/y due to a higher mix of mobile processor sales
  - Client processor ASP higher q/q driven by higher desktop and mobile processor ASPs
  - GPU ASP lower y/y due to product cycle timing; GPU ASP higher q/q due to product mix
- Operating income of \$384 million
  - Up \$205 million y/y and \$184 million q/q driven by higher Ryzen revenue
- Strategic news and highlights
  - Record quarterly Client processor revenue driven by highest ever quarterly mobile processor unit shipments and revenue
  - Number of AMD-based commercial and gaming notebooks each more than doubled y/y
  - Announced Ryzen 5000 desktop processors featuring our newest "Zen 3" core
  - Radeon<sup>™</sup> RX 6000 series GPUs featuring RDNA 2 graphics coming in Q4'20 for the high-end graphics market

# ENTERPRISE, EMBEDDED AND SEMI-CUSTOM SEGMENT Q3 2020

- Revenue of \$1.13 billion
  - Up 116% y/y and 101% q/q due to higher semi-custom product sales and increased EPYC processor sales
- Operating income of \$141 million
  - Up \$80 million y/y and \$108 million q/q primarily driven by higher revenue
- Strategic news and highlights
  - Record quarterly server processor revenue; sales more than doubled y/y driven by cloud and enterprise adoption
  - On track to begin shipments of next-generation "Milan" server processors to cloud and select HPC customers in Q4'20 with OEM availability in Q1'21
  - Ramped production and shipments of next-generation game console SoCs to support the November launches of the PlayStation® 5 and Xbox® Series X and Series S consoles
  - Expect semi-custom shipments and revenue to increase q/q in Q4'20 based on strong demand



## **GROSS MARGIN TREND**

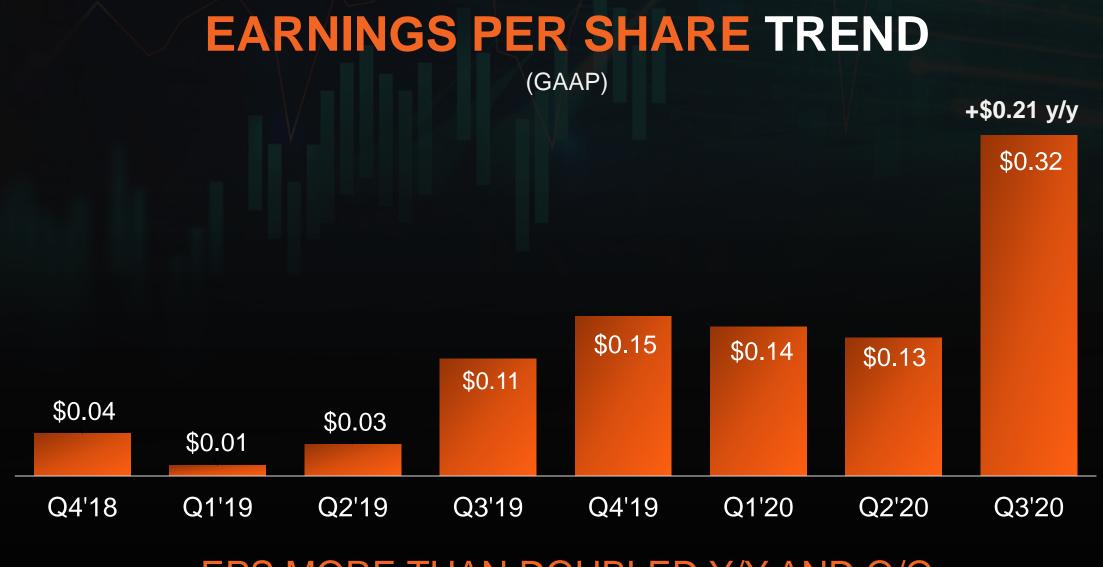
(GAAP AND NON-GAAP)<sup>1</sup>



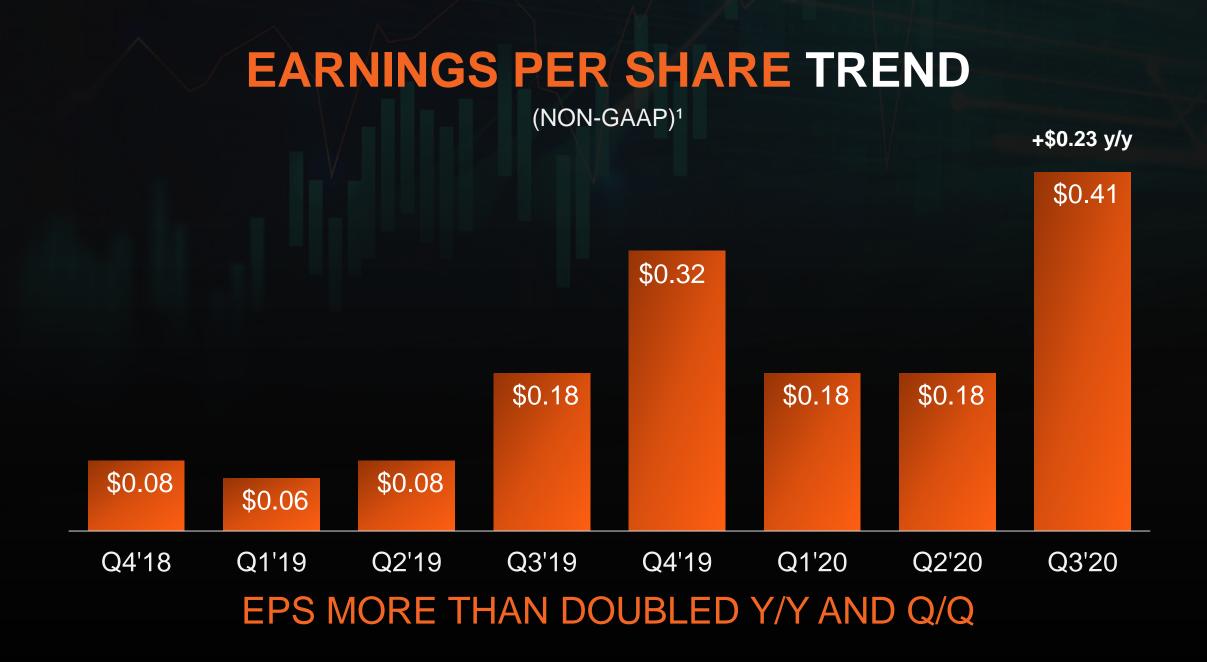
1. See Appendices for GAAP to Non-GAAP reconciliation

2. Gross margin for both GAAP and Non-GAAP are the same for all periods except as indicated for Q4 2018

AM	DA
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EPS MORE THAN DOUBLED Y/Y AND Q/Q



## Q3 2020 SUMMARY P&L – GAAP

	Q3 2020	Q3 2019	Y/Y	Q2 2020	Q/Q
Revenue	\$2,801M	\$1,801M	Up 56%	\$1,932M	Up 45%
Gross Profit	\$1,230M	\$777M	Up 58%	\$848M	Up 45%
Gross Margin %	44%	43%	Up 1pp	44%	Flat
Operating Expenses	\$781M	\$591M	Up 32%	\$675M	Up 16%
Operating Expense/Revenue %	28%	33%	Down 5pp	35%	Down 7pp
Operating Income	\$449M	\$186M	Up 141%	\$173M	Up 160%
Operating Margin %	16%	10%	Up 6pp	9%	Up 7pp
Net Income	\$390M	\$120M	Up 225%	\$157M	Up 148%
Earnings Per Share <sup>1</sup>	\$0.32	\$0.11	Up 191%	\$0.13	Up 146%

## PROFITABILITY MORE THAN DOUBLED Y/Y AND Q/Q



# Q3 2020 SUMMARY P&L – NON-GAAP<sup>1</sup>

	Q3 2020	Q3 2019	Y/Y	Q2 2020	Q/Q
Revenue	\$2,801M	\$1,801M	Up 56%	\$1,932M	Up 45%
Gross Profit	\$1,231M	\$779M	Up 58%	\$850M	Up 45%
Gross Margin %	44%	43%	Up 1pp	44%	Flat
Operating Expenses	\$706M	\$539M	Up 31%	\$617M	Up 14%
Operating Expense/Revenue %	25%	30%	Down 5pp	32%	Down 7pp
Operating Income	\$525M	\$240M	Up 119%	\$233M	Up 125%
Operating Margin %	19%	13%	Up 6pp	12%	Up 7pp
Net Income	\$501M	\$219M	Up 129%	\$216M	Up 132%
Earnings Per Share <sup>1</sup>	\$0.41	\$0.18	Up 128%	\$0.18	Up 128%

## PROFITABILITY MORE THAN DOUBLED Y/Y AND Q/Q



# Q3 2020 SEGMENT RESULTS

	Q3 2020	Q3 2019	Y/Y	Q2 2020	Q/Q
Computing and Graphics					
Net Revenue	\$1,667M	\$1,276M	Up 31%	\$1,367M	Up 22%
Operating Income	\$384M	\$179M	Up 115%	\$200M	Up 92%
Enterprise, Embedded and Semi-Custom					
Net Revenue	\$1,134M	\$525M	Up 116%	\$565M	Up 101%
Operating Income (Loss)	\$141M	\$61M	Up 131%	\$33M	Up 327%
All Other Category					
Operating Loss	\$(76M)	\$(54M)	Down 41%	\$(60M)	Down 27%
TOTAL					
Net Revenue	\$2,801M	\$1,801M	Up 56%	\$1,932M	Up 45%
Operating Income	\$449M	\$186M	Up 141%	\$173M	Up 160%

# **Q3 2020 SUMMARY BALANCE SHEET ITEMS**

	Q3 2020	Q3 2019	Y/Y	Q2 2020	Q/Q
Cash, Cash Equivalents and Short-term Investments	\$1,771M	\$1,209M	Up \$562M	\$1,775M	Down \$4M
Accounts Receivable, Net	\$2,134M	\$1,393M	Up \$741M	\$1,789M	Up \$345M
Inventories	\$1,292M	\$1,040M	Up \$252M	\$1,324M	Down \$32M
Total Debt (principal amount) <sup>1</sup>	\$398M	\$1,087M	Down \$689M	\$763M	Down \$365M
Total Debt, Net <sup>1</sup>	\$373M	\$872M	Down \$499M	\$690M	Down \$317M

## STRONG BALANCE SHEET



## **TOTAL CASH BALANCE<sup>1</sup>**

(\$ IN MILLIONS)



## Q4 2020 AND FY 2020 FINANCIAL OUTLOOK – NON-GAAP<sup>1</sup>

	Q4 2020	FY 2020
Revenue	~\$3.0 Billion +/- \$100 Million	Growth of ~41% y/y
Gross Margin %	~45%	~45%
Operating Expenses Operating Expenses/Revenue %	~\$750 Million	~28%
Interest Expense, Taxes and Other	~\$30 Million	
Taxes		~3% of pre-tax income
Diluted Share Count <sup>2</sup>	1.23 billion shares	1.23 billion shares

See Cautionary Statement on Slide 2. These forward-looking outlook statements and non-GAAP measures are based on current expectations as of October 27, 2020 and assumptions and beliefs that involve numerous risks and uncertainties. AMD undertakes no intent or obligation to publicly update or revise its outlook statements as a result of new information, future events or otherwise, except as may be required by law. All items, except revenue are on a non-GAAP basis. Adjustments to arrive at the GAAP financial outlook typically include stock-based compensation, non-cash interest expense related to convertible debt, income tax provision, equity (income) loss in investee, and other non-recurring items such as loss on debt redemption/conversion, impairment charges, and loss contingency on legal matters. The timing and impact of such adjustments are dependent on future events that are typically uncertain or outside of AMD's control; therefore, a reconciliation to equivalent GAAP measures is not practicable at this time.

2. Refer to Diluted Share Count overview in the Appendices

# Q3 2020 EXECUTION

Strong Record Quarterly Revenue Increased 56% Y/Y Growth Driven by Ryzen, EPYC and Semi-Custom Continued Y/Y Gross Margin Expansion Profitability & EPS More than Doubled Y/Y and Q/Q

# AMDZ BUILDING THE BEST

Leadership Roadmaps

# Execution Excellence

Sustained Market Share Gains

Strong Financial Returns

#### **Reconciliation of GAAP to Non-GAAP Gross Profit and Gross Margin**

(Millions)	Q	4'18	Q	1'19	Q	2'19	Q	3'19	Q4	4'19	C	21'20	C	2'20		Q3'20
GAAP gross profit	\$	537	\$	521	\$	621	\$	777	\$	949	\$	818	\$	848	\$	1,230
GAAP gross margin %		38%		41%		41%		43%		45%		46%		44%	, D	44%
Impairment of technology licenses		45		_		_		_		_		_		_		_
Stock-based compensation		1		1		2		2		1		2		2		1
Non-GAAP gross profit	\$	583	\$	522	\$	623	\$	779	\$	950	\$	820	\$	850	\$	1,231
Non-GAAP gross margin %		41%		41%		41%		43%		45%		46%		44%		44%

#### **Reconciliation of GAAP to Non-GAAP Operating Expenses**

(Millions)	Q	3'20	C.	3'19	C	22'20
GAAP operating expenses	\$	781	\$	591	\$	675
GAAP Operating Expenses/Revenue %		28%		33%		35%
Stock-based compensation		75		52		58
Non-GAAP operating expenses	\$	706	\$	539	\$	617
Non-GAAP Operating Expenses/Revenue %		25%		30%		32%

#### **Reconciliation of GAAP Operating Income to Non-GAAP Operating Income**

(Millions)	Q3	3'20		Q3'19	Q2'20
GAAP operating income	\$	449	\$	186	\$ 173
GAAP operating margin %		16%	b	10%	9%
Stock-based compensation		76		54	60
Non-GAAP operating income	\$	525	\$	240	\$ 233
Non-GAAP operating margin %		19%	5	13%	12%

#### **Reconciliation of GAAP to Non-GAAP Net Income / Earnings Per Share**

(Millions, except per share data)	Q4	'18	Q1	'19	Q2	2'19	Q3	'19	Q4	'19	Q1	'20	Q2	.'20	Q3	3'20
GAAP net income / earnings per share	\$ 38	\$ 0.04	\$ 16	\$ 0.01	\$ 35	\$ 0.03	\$ 120	\$ 0.11	\$ 170	\$ 0.15	\$ 162	\$ 0.14	\$ 157	\$ 0.13	\$ 390	\$ 0.32
Loss on debt redemption/conversion	5		8	0.01			40	0.03	128	0.10	_	_	_	_	38	0.03
Non-cash interest expense related to convertible debt	6	0.01	6	0.01	6	_	6	—	4	_	2	_	2	—	2	
Stock-based compensation	36	0.03	41	0.04	45	0.04	54	0.04	57	0.05	59	0.04	60	0.05	76	0.06
Impairment of technology licenses	45	0.04	_		_		_	_	_	_	_	_	_	_	_	
Equity (income) loss in investee	—		1		_	_	(1)	_	_	_	_	_	(1)	_	(1)	
Loss contingency on legal matter	—		5		7	0.01	_	_	_	_	_	_	_	_	_	
Income tax provision (benefit)	—		(15)	(0.01)	(1)	_	_	_	24	0.02	(1)	_	(2)	_	(4)	_
Withholding tax refund including interest	(43)	(0.04)	_					_	_	_	_	_	_	_	_	
Non-GAAP net income / earnings per share	\$87	\$ 0.08	\$ 62	\$ 0.06	\$ 92	\$ 0.08	\$ 219	\$ 0.18	\$ 383	\$ 0.32	\$ 222	\$ 0.18	\$ 216	\$ 0.18	\$ 501	\$ 0.41
Shares used and net income adjustment in earnings per share calculation																
Shares used in per share calculation (GAAP) <sup>(1)</sup>		1,079		1,094		1,109		1,117		1,188		1,224		1,227		1,215
Interest expense add back to GAAP net income (1)		\$ -		\$ -		\$ -		\$ -		\$4		\$4		\$ 3		\$ 1
Shares used in per share calculation (Non-GAAP)		1,180		1,195		1,210		1,212		1,216		1,224		1,227		1,230
Interest expense add back to Non-GAAP net income		\$5		\$5		\$5		\$4		\$ 2		\$ 2		\$ 1		\$ 1

(1) Q4'19, Q1'20 and Q2'20 GAAP diluted EPS calculation includes 31 million shares related to the assumed conversion of the Company's 2026 Convertible Notes and the associated \$4 million, \$4 million and \$3 million interest expense, respectively, add-back to net income under the "if converted" method. The 53 million shares (28 million weighted-average) issued in exchange for \$428 million of convertible debt in Q4'19 were not included as their inclusion would have been anti-dilutive. Q3'20 GAAP diluted EPS calculation includes 11 million shares related to the assumed conversion of the Company's 2026 Convertible Notes and the associated \$1 million interest expense add-back to net income under the "if converted" method. The 20 million shares (15 million weighted-average) issued in exchange for \$165 million of convertible debt in Q3'20 were not included as their inclusion would have been anti-dilutive.

#### **Share Count Overview**

Shares (millions) <sup>(1)</sup>	Q1'20	Q2'20	Q3'20	Q4'20	2020
Shares (minions)	Actual	Actual	Actual	Actual Estimate	
Basic Shares	1,170	1,174	1,184	1,203	1,183
Dilutive impacts from:					
Employee Equity Grants <sup>(2)</sup>	23	22	20	17	20
Diluted Shares (without 2026 Convertible Notes)	1,193	1,196	1,204	1,220	1,203
2026 Convertible Notes – GAAP (3)	31	31	11	11	11
Diluted Shares (with 2026 Convertible Notes) – GAAP	1,224	1,227	1,215	1,231	1,214
2026 Convertible Notes – Non-GAAP (3)	31	31	26	11	25
Diluted Shares (with 2026 Convertible Notes) – Non-GAAP	1,224	1,227	1,230	1,231	1,228

The table above provides actual share count for Q1'20, Q2'20 and Q3'20, and an estimate of share count that may be used when calculating GAAP and non-GAAP diluted earnings per share for Q4'20 and FY'20.

- (1) Share counts are weighted average shares.
- (2) The dilutive impact of employee equity grants is based on the Treasury Stock method and is dependent upon the average stock price during the period. The Q3'20, Q2'20 and Q1'20 average stock price was \$73.20, \$52.87 and \$48.14, respectively. The Q3'20 average stock price of \$73.20 was assumed for the Q4'20 and FY'20 estimates.
- (3) The dilutive impact from the 2.125% Convertible Senior Notes due 2026 (2026 Convertible Notes) is based on the If-Converted method, where the interest costs associated with the 2026 Convertible Notes are added back to the Net Income and the shares underlying the 2026 Convertible Notes are assumed to be converted and are added to the share count. The impact from the 2026 Convertible Notes, if dilutive, is included in diluted EPS calculation. For the GAAP computation, the add-back to net income includes cash and non-cash interest expense, while only the cash interest expense is added back to the non-GAAP net income. The dilutive shares associated with the 2026 Convertible Notes reflect the weighted average shares subject to conversion during each period.

During Q3'20, 20 million shares of the Company's common stock were issued to convert \$165 million of the outstanding 2026 Convertible Notes.

Moving forward, assuming positive earnings per share, the potential factors we expect may impact AMD's diluted share count include:

- On-going employee equity grants, and
- The 2026 Convertible Notes, which have 11 million underlying shares.

### **Reconciliation of Operating Cash Flow to Free Cash Flow**

(Millions)	C	23'20
Operating cash flow	\$	339
Purchases of property and equipment		(74)
Free cash flow	\$	265

#### **Total Debt (Net)**

(Millions)	Q3'20		Q3'19		Q2'20	
7.50% Senior Notes due 2022	\$	312	\$	312	\$	312
7.00% Senior Notes due 2024		_		96		_
2.125% Convertible Senior Notes due 2026		86		679		251
Borrowings from revolving facility		_		_		200
Total Debt (principal amount)	\$	398	\$	1,087	\$	763
Unamortized debt discount associated with 2.125% Convertible Senior Notes due 2026		(23)		(205)		(69)
Unamortized debt issuance costs		(2)		(10)		(4)
Total Debt (net)	\$	373	\$	872	\$	690

## **ENDNOTES**

R5K-002: Testing by AMD performance labs as of 9/2/2020 based on the average FPS of 40 PC games at 1920x1080 with the High image quality preset using an AMD Ryzen<sup>™</sup> 9 5900X processor vs. Core i9-10900K. Results may vary. R5K-002

RM3-127: Ultrathin laptop processor" defined as 15W typical TDP. Testing by AMD Performance Labs as of 12/09/2019 utilizing an AMD Ryzen<sup>™</sup> 4800U reference system, a Dell XPS 7390 system with 10th Gen Intel® Core i7-1065G7 processor, and a Dell XPS 7390 with a 10th Gen Intel® Core i7-10710U processor using Cinebench R20 1T, Cinebench R20 nT and 3DMark 11 Performance. Results may vary. 3DMark is a registered trademark of Futremark Corporation. RM3-127

CPK-02: Testing by AMD performance labs on 10/07/2019 comparing an AMD Ryzen<sup>™</sup> Threadripper<sup>™</sup> 3970X and AMD Ryzen<sup>™</sup> Threadripper<sup>™</sup> 3960X vs. Intel<sup>©</sup> Core<sup>™</sup> i9-9980XE in the Cinebench R20 nT benchmark test. Results may vary. CPK-02

RX-325: Testing done by AMD performance labs 6/1/19, using the Division 2 @ 25x14 Ultra settings. Performance may vary based on use of latest drivers.

RX-362: Testing done by AMD performance labs on June 4, 2019. Systems were tested with: Intel(R) Core(TM) i7-5930K CPU @ 3.50GHz (6 core) with 16GB DDR4 @ 2133 MHz using an Asus X99-E Motherboard running Windows 10 Enterprise 64-bit (Ver. 1809, build 17763.053). Using the following graphics cards: Navi 10 (Driver 19.30\_1905161434 (CL# 1784070)) with 40 compute units, versus a Vega 64 (Driver 19.4.1) with 40 compute units enabled. Breakdown based on AMD internal data June 4, 2019. Performance may vary. RX-362

ROM-557 Estimates based on AMD Server Virtualization TCO (total cost of ownership) Estimator tool v5.5, comparing the AMD EPYC<sup>™</sup> and Intel® Xeon® server solutions required to deliver 320 total virtual machines (VM), requiring 1 core and 8GB of memory per VM, with a minimum total solution memory requirement of 2.56 TB of memory. The analysis includes both hardware and virtualization software components. For 320 VMs and 1 core per VM, the Intel \_Gold\_6250 processor requires 20 - 2P servers. The AMD EPYC\_7702P solution requires 5 - 1P servers. Virtualization software pricing as of October 2019. Third party names are for informational purposes only and may be trademarks of their respective owners. This scenario contains many assumptions and estimates and, while based on AMD internal research and best approximations, should be considered an example for information purposes only, and not used as a basis for decision making over actual testing. All pricing is in USD.

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