



Supplemental Operational Performance Data

Set forth below are tables that provide supplemental information regarding the operational performance results for the three months ended March 31, 2019, as well as the prior eight quarterly reporting periods for the payment programs of Mastercard International Incorporated and Mastercard Europe SA (collectively, "Mastercard"), the principal operating subsidiaries of Mastercard Incorporated.

1. Branded Volume and Transactions

The tables below set forth the gross dollar volume ("GDV"), purchase volume, cash volume and the number of purchase transactions, cash transactions, and cards on a regional basis for Mastercard™-branded cards. Growth rates over prior periods are provided for volume-based data.

GDV (\$ Billions)												
All Mastercard Credit,												
Charge, Debit and Prepaid Programs												
	Q1'17	Q2'17	Q3'17	Q4'17	Q1'18	Q2'18	Q3'18	Q4'18	Q1'19		FY 2017	FY 2018
APMEA	\$370	\$388	\$407	\$431	\$440	\$454	\$447	\$471	\$460		\$1,595	\$1,812
Canada	34	39	41	43	39	44	44	46	39		157	173
Europe	311	356	395	413	407	435	438	458	429		1,475	1,738
Latin America	86	92	97	106	102	100	99	111	105		382	412
Worldwide less United States	801	875	941	994	988	1,033	1,028	1,086	1,033		3,610	4,135
United States	379	404	407	422	419	442	442	465	451		1,613	1,769
Worldwide	1,181	1,279	1,347	1,416	1,408	1,475	1,470	1,551	1,484		5,223	5,904
Mastercard Credit and Charge Programs												
Worldwide less United States	444	475	508	530	528	546	535	560	530		1,957	2,169
United States	178	196	198	207	194	211	213	228	212		780	846
Worldwide	623	671	705	737	722	756	748	788	742		2,736	3,015
Mastercard Debit and Prepaid Programs												
Worldwide less United States	357	400	433	464	460	487	493	526	503		1,654	1,966
United States	201	208	209	215	225	232	229	238	239		833	923
Worldwide	558	608	642	679	685	719	722	763	742		2,487	2,889

GDV Local Growth												
All Mastercard Credit,												
Charge, Debit and Prepaid Programs												
	Q1'17	Q2'17	Q3'17	Q4'17	Q1'18	Q2'18	Q3'18	Q4'18	Q1'19		FY 2017	FY 2018
APMEA	8.1%	7.0%	8.2%	12.2%	13.1%	14.2%	13.1%	13.6%	10.4%		8.9%	13.5%
Canada	12.3%	10.2%	8.6%	9.6%	9.5%	9.2%	10.3%	11.6%	5.8%		10.0%	10.2%
Europe	1.3%	5.0%	14.8%	16.0%	18.8%	19.6%	18.6%	19.8%	17.5%		9.6%	19.2%
<i>Europe adjusted for Article 8</i>	<i>14%</i>	<i>15%</i>	<i>16%</i>	<i>17%</i>							<i>16%</i>	
Latin America	15.5%	15.1%	14.6%	16.4%	17.0%	17.1%	16.2%	16.8%	13.4%		15.4%	16.8%
Worldwide less United States	6.2%	7.1%	11.5%	14.1%	15.6%	16.5%	15.6%	16.4%	13.4%		9.9%	16.0%
<i>WW less USA adjusted for Article 8</i>	<i>11%</i>	<i>11%</i>	<i>12%</i>	<i>15%</i>							<i>12%</i>	
United States	1.9%	3.5%	6.2%	9.1%	10.5%	9.4%	8.7%	10.2%	7.6%		5.2%	9.7%
Worldwide	4.8%	5.9%	9.9%	12.6%	14.1%	14.3%	13.4%	14.4%	11.6%		8.4%	14.1%
<i>Worldwide adjusted for Article 8</i>	<i>8%</i>	<i>9%</i>	<i>10%</i>	<i>13%</i>							<i>10%</i>	
Mastercard Credit and Charge Programs												
Worldwide less United States	7.2%	6.8%	8.7%	10.3%	11.7%	12.8%	11.7%	12.8%	9.0%		8.3%	12.3%
United States	5.3%	6.6%	8.6%	10.0%	9.0%	7.6%	7.7%	9.8%	9.3%		7.7%	8.5%
Worldwide	6.6%	6.7%	8.7%	10.2%	11.0%	11.3%	10.5%	11.9%	9.0%		8.1%	11.2%
Mastercard Debit and Prepaid Programs												
Worldwide less United States	5.1%	7.5%	15.0%	18.8%	20.5%	20.9%	20.1%	20.4%	18.4%		11.8%	20.5%
United States	-1.0%	0.8%	4.0%	8.3%	11.9%	11.2%	9.6%	10.6%	6.2%		3.0%	10.8%
Worldwide	2.8%	5.1%	11.2%	15.3%	17.5%	17.6%	16.6%	17.2%	14.2%		8.7%	17.2%

Purchase Volume (\$ Billions)												
All Mastercard Credit,												
Charge, Debit and Prepaid Programs												
	Q1'17	Q2'17	Q3'17	Q4'17	Q1'18	Q2'18	Q3'18	Q4'18	Q1'19		FY 2017	FY 2018
APMEA	\$250	\$258	\$275	\$291	\$297	\$308	\$304	\$319	\$306		\$1,075	\$1,227
Canada	32	37	39	42	37	42	42	45	37		150	166
Europe	199	226	252	266	269	286	289	304	287		943	1,147
Latin America	55	57	61	67	65	64	62	71	68		240	262
Worldwide less United States	537	578	628	666	668	699	697	738	698		2,408	2,802
United States	324	348	347	366	359	384	385	408	392		1,385	1,536
Worldwide	860	926	975	1,032	1,028	1,083	1,082	1,146	1,090		3,793	4,338
Mastercard Credit and Charge Programs												
Worldwide less United States	407	435	466	489	488	505	495	520	492		1,797	2,009
United States	170	187	188	198	185	202	205	219	203		743	811
Worldwide	577	622	654	687	673	708	700	739	695		2,540	2,820
Mastercard Debit and Prepaid Programs												
Worldwide less United States	129	143	161	177	180	194	202	218	206		611	793
United States	154	161	160	168	175	182	180	189	189		642	725
Worldwide	283	303	321	345	355	376	382	407	394		1,253	1,519

Purchase Volume Local Growth												
All Mastercard Credit,												
Charge, Debit and Prepaid Programs												
	Q1'17	Q2'17	Q3'17	Q4'17	Q1'18	Q2'18	Q3'18	Q4'18	Q1'19		FY 2017	FY 2018
APMEA	9.4%	6.6%	8.5%	10.2%	11.6%	14.8%	13.3%	13.6%	9.1%		8.7%	13.3%
Canada	13.1%	11.6%	9.2%	9.9%	9.7%	9.6%	10.4%	11.5%	5.7%		10.8%	10.3%
Europe	-3.3%	1.9%	16.0%	17.6%	22.0%	23.2%	22.2%	22.9%	18.4%		8.3%	22.6%
<i>Europe adjusted for Article 8</i>	<i>16%</i>	<i>17%</i>	<i>18%</i>	<i>20%</i>							<i>18%</i>	
Latin America	18.2%	18.6%	18.2%	20.7%	22.1%	22.0%	21.4%	21.6%	17.8%		19.0%	21.8%
Worldwide less United States	5.3%	6.1%	12.4%	14.0%	16.5%	18.4%	17.3%	17.9%	13.4%		9.6%	17.5%
<i>WW less USA adjusted for Article 8</i>	<i>13%</i>	<i>12%</i>	<i>13%</i>	<i>15%</i>							<i>13%</i>	
United States	2.3%	3.8%	6.4%	10.0%	11.1%	10.5%	10.7%	11.4%	9.1%		5.7%	10.9%
Worldwide	4.2%	5.2%	10.2%	12.6%	14.5%	15.5%	14.9%	15.5%	11.8%		8.1%	15.1%
<i>Worldwide adjusted for Article 8</i>	<i>9%</i>	<i>9%</i>	<i>11%</i>	<i>13%</i>							<i>10%</i>	
Mastercard Credit and Charge Programs												
Worldwide less United States	7.6%	7.1%	9.1%	11.1%	12.8%	13.9%	12.7%	13.5%	9.3%		8.8%	13.2%
United States	4.9%	6.1%	7.9%	10.0%	8.8%	8.2%	9.0%	10.4%	10.0%		7.3%	9.1%
Worldwide	6.8%	6.8%	8.8%	10.8%	11.7%	12.2%	11.6%	12.6%	9.5%		8.4%	12.0%
Mastercard Debit and Prepaid Programs												
Worldwide less United States	-1.3%	2.9%	23.0%	22.9%	27.8%	32.0%	30.7%	29.8%	24.5%		12.0%	30.1%
United States	-0.3%	1.3%	4.7%	9.9%	13.5%	13.2%	12.7%	12.6%	8.1%		3.9%	13.0%
Worldwide	-0.8%	2.0%	13.2%	16.2%	20.4%	22.2%	21.5%	21.2%	16.1%		7.7%	21.3%

Purchase Transactions (Millions)											
All Mastercard Credit,											
Charge, Debit and Prepaid Programs	Q1'17	Q2'17	Q3'17	Q4'17	Q1'18	Q2'18	Q3'18	Q4'18	Q1'19	FY 2017	FY 2018
APMEA	4,038	4,301	4,553	4,798	4,757	5,216	5,463	5,852	5,544	17,691	21,289
Canada	502	571	582	599	554	635	651	698	611	2,254	2,538
Europe	4,993	5,607	6,021	6,461	6,460	7,327	7,779	8,413	8,299	23,082	29,978
Latin America	1,802	1,819	1,929	2,087	2,062	2,186	2,300	2,530	2,474	7,637	9,077
Worldwide less United States	11,335	12,299	13,084	13,944	13,833	15,364	16,192	17,493	16,927	50,663	62,882
United States	5,781	6,254	6,315	6,510	6,359	6,865	6,930	7,241	6,894	24,861	27,395
Worldwide	17,116	18,553	19,399	20,455	20,192	22,229	23,122	24,734	23,821	75,523	90,277
Mastercard Credit and Charge Programs											
Worldwide less United States	6,540	6,996	7,307	7,640	7,445	8,091	8,427	9,013	8,610	28,483	32,976
United States	1,885	2,095	2,136	2,220	2,020	2,248	2,321	2,484	2,250	8,336	9,073
Worldwide	8,425	9,090	9,444	9,860	9,465	10,339	10,748	11,497	10,860	36,820	42,050
Mastercard Debit and Prepaid Programs											
Worldwide less United States	4,795	5,303	5,777	6,304	6,387	7,273	7,765	8,480	8,317	22,179	29,906
United States	3,896	4,159	4,179	4,290	4,339	4,617	4,609	4,757	4,644	16,525	18,321
Worldwide	8,691	9,463	9,956	10,595	10,727	11,890	12,374	13,237	12,961	38,704	48,227

Purchase Transactions Growth											
All Mastercard Credit,											
Charge, Debit and Prepaid Programs	Q1'17	Q2'17	Q3'17	Q4'17	Q1'18	Q2'18	Q3'18	Q4'18	Q1'19	FY 2017	FY 2018
APMEA	25.4%	22.0%	22.2%	16.7%	17.8%	21.3%	20.0%	22.0%	16.5%	21.3%	20.3%
Canada	12.4%	11.8%	10.5%	10.3%	10.5%	11.1%	11.8%	16.6%	10.2%	11.2%	12.6%
Europe	2.8%	8.8%	23.7%	25.9%	29.4%	30.7%	29.2%	30.2%	28.5%	15.3%	29.9%
<i>Europe adjusted for Article 8</i>	22%	24%	26%	28%						25%	
Latin America	21.5%	16.4%	17.7%	19.8%	14.4%	20.2%	19.2%	21.2%	20.0%	18.8%	18.9%
Worldwide less United States	13.3%	14.4%	21.6%	21.0%	22.0%	24.9%	23.8%	25.4%	22.4%	17.7%	24.1%
<i>WW less USA adjusted for Article 8</i>	23%	21%	23%	22%						22%	
United States	0.1%	1.4%	4.3%	8.4%	10.0%	9.8%	9.7%	11.2%	8.4%	3.6%	10.2%
Worldwide	8.5%	9.6%	15.4%	16.7%	18.0%	19.8%	19.2%	20.9%	18.0%	12.6%	19.5%
<i>Worldwide adjusted for Article 8</i>	14%	14%	16%	17%						15%	
Mastercard Credit and Charge Programs											
Worldwide less United States	13.2%	12.5%	13.8%	13.7%	13.8%	15.7%	15.3%	18.0%	15.6%	13.3%	15.8%
United States	2.3%	3.9%	5.9%	7.5%	7.1%	7.3%	8.6%	11.9%	11.4%	5.0%	8.8%
Worldwide	10.5%	10.4%	11.9%	12.3%	12.3%	13.7%	13.8%	16.6%	14.7%	11.3%	14.2%
Mastercard Debit and Prepaid Programs											
Worldwide less United States	13.5%	16.9%	33.2%	31.0%	33.2%	37.1%	34.4%	34.5%	30.2%	23.8%	34.8%
United States	-0.9%	0.2%	3.5%	8.9%	11.4%	11.0%	10.3%	10.9%	7.0%	2.9%	10.9%
Worldwide	6.5%	8.9%	18.9%	21.1%	23.4%	25.7%	24.3%	24.9%	20.8%	13.9%	24.6%

Cash Volume (\$ Billions)											
All Mastercard Credit,											
Charge, Debit and Prepaid Programs	Q1'17	Q2'17	Q3'17	Q4'17	Q1'18	Q2'18	Q3'18	Q4'18	Q1'19	FY 2017	FY 2018
APMEA	\$119	\$130	\$132	\$140	\$143	\$146	\$143	\$152	\$154	\$521	\$585
Canada	2	2	2	2	2	2	2	2	2	7	7
Europe	112	131	143	147	138	149	149	154	143	533	591
Latin America	32	35	36	39	37	37	37	40	37	142	150
Worldwide less United States	265	297	313	328	320	334	331	348	336	1,202	1,333
United States	56	57	59	56	60	58	57	57	59	228	233
Worldwide	320	353	372	384	380	392	388	406	395	1,430	1,566
Mastercard Credit and Charge Programs											
Worldwide less United States	37	39	41	41	40	40	39	40	38	159	160
United States	8	9	10	9	9	9	8	9	9	37	35
Worldwide	46	48	52	50	49	49	48	49	47	196	195
Mastercard Debit and Prepaid Programs											
Worldwide less United States	227	257	272	287	280	294	291	308	297	1,043	1,173
United States	47	48	49	47	50	50	49	49	50	191	198
Worldwide	275	305	321	334	331	343	340	357	347	1,234	1,371

Cash Volume Local Growth											
All Mastercard Credit,											
Charge, Debit and Prepaid Programs	Q1'17	Q2'17	Q3'17	Q4'17	Q1'18	Q2'18	Q3'18	Q4'18	Q1'19	FY 2017	FY 2018
APMEA	5.6%	7.7%	7.4%	16.7%	16.4%	13.0%	12.8%	13.6%	13.1%	9.4%	13.9%
Canada	-2.6%	-13.0%	-2.0%	2.2%	4.5%	-1.0%	9.3%	13.8%	8.6%	-4.1%	6.6%
Europe	10.5%	11.0%	12.6%	13.3%	13.0%	13.2%	12.4%	14.1%	15.6%	11.9%	13.2%
Latin America	11.2%	9.8%	9.0%	9.8%	8.9%	9.6%	8.3%	9.3%	6.3%	9.9%	9.0%
Worldwide less United States	8.2%	9.2%	9.8%	14.2%	14.0%	12.6%	12.1%	13.3%	13.3%	10.5%	13.0%
United States	-0.4%	1.5%	4.8%	4.0%	7.4%	2.8%	-3.2%	2.2%	-1.3%	2.5%	2.2%
Worldwide	6.6%	7.9%	9.0%	12.6%	12.9%	11.1%	9.5%	11.6%	10.9%	9.1%	11.3%
Mastercard Credit and Charge Programs											
Worldwide less United States	2.5%	3.2%	4.3%	1.4%	0.2%	0.6%	0.7%	4.7%	4.4%	2.9%	1.5%
United States	16.0%	17.5%	23.4%	9.1%	12.4%	-4.7%	-17.3%	-3.3%	-5.2%	16.5%	-3.9%
Worldwide	4.8%	5.6%	7.6%	2.7%	2.4%	-0.4%	-3.0%	3.1%	2.5%	5.2%	0.5%
Mastercard Debit and Prepaid Programs											
Worldwide less United States	9.2%	10.2%	10.7%	16.4%	16.3%	14.5%	13.8%	14.6%	14.5%	11.7%	14.8%
United States	-2.9%	-1.0%	1.6%	3.1%	6.5%	4.3%	-0.3%	3.3%	-0.5%	0.1%	3.4%
Worldwide	6.9%	8.3%	9.2%	14.3%	14.7%	12.9%	11.5%	12.9%	12.1%	9.8%	13.0%

Cash Transactions (Millions)

All Mastercard Credit,											
Charge, Debit and Prepaid Programs	Q1'17	Q2'17	Q3'17	Q4'17	Q1'18	Q2'18	Q3'18	Q4'18	Q1'19	FY 2017	FY 2018
APMEA	1,276	1,363	1,374	1,468	1,470	1,532	1,572	1,674	1,665	5,481	6,247
Canada	6	6	6	5	6	6	6	6	6	22	24
Europe	861	958	977	1,001	938	1,054	1,067	1,101	1,044	3,797	4,159
Latin America	254	259	261	279	264	272	273	298	278	1,054	1,106
Worldwide less United States	2,397	2,586	2,618	2,753	2,677	2,863	2,918	3,078	2,993	10,354	11,536
United States	320	338	346	326	328	340	337	328	323	1,329	1,333
Worldwide	2,717	2,924	2,964	3,079	3,005	3,203	3,255	3,406	3,316	11,684	12,870
Mastercard Credit and Charge Programs											
Worldwide less United States	175	186	185	183	170	181	182	187	173	729	719
United States	8	9	9	9	8	8	9	9	8	35	34
Worldwide	183	195	195	192	178	189	191	196	181	765	754
Mastercard Debit and Prepaid Programs											
Worldwide less United States	2,222	2,400	2,433	2,570	2,507	2,683	2,736	2,891	2,820	9,625	10,817
United States	312	329	336	317	320	331	329	320	315	1,294	1,299
Worldwide	2,534	2,729	2,769	2,887	2,827	3,014	3,064	3,211	3,135	10,919	12,116

Cash Transactions Growth

All Mastercard Credit,											
Charge, Debit and Prepaid Programs	Q1'17	Q2'17	Q3'17	Q4'17	Q1'18	Q2'18	Q3'18	Q4'18	Q1'19	FY 2017	FY 2018
APMEA	5.9%	8.5%	5.9%	13.5%	15.2%	12.4%	14.4%	14.0%	13.3%	8.5%	14.0%
Canada	2.6%	-3.0%	-0.4%	0.0%	2.9%	14.7%	8.8%	15.2%	-3.5%	-0.2%	10.4%
Europe	6.1%	5.3%	6.6%	8.2%	8.8%	10.0%	9.3%	9.9%	11.4%	6.6%	9.5%
Latin America	5.7%	3.3%	3.6%	5.8%	4.0%	4.7%	4.4%	6.7%	5.4%	4.6%	5.0%
Worldwide less United States	6.0%	6.7%	5.9%	10.7%	11.7%	10.7%	11.5%	11.8%	11.8%	7.4%	11.4%
United States	-5.4%	-3.3%	-1.3%	0.5%	2.4%	0.5%	-2.4%	0.8%	-1.4%	-2.4%	0.3%
Worldwide	4.5%	5.5%	5.0%	9.5%	10.6%	9.5%	9.8%	10.6%	10.4%	6.2%	10.2%
Mastercard Credit and Charge Programs											
Worldwide less United States	-0.9%	-1.1%	-0.6%	-3.2%	-2.7%	-3.1%	-1.7%	2.0%	1.9%	-1.5%	-1.4%
United States	-4.7%	-5.2%	-1.4%	-2.9%	0.2%	-5.0%	-8.1%	0.4%	-1.4%	-3.5%	-3.3%
Worldwide	-1.1%	-1.3%	-0.6%	-3.2%	-2.6%	-3.2%	-2.0%	1.9%	1.8%	-1.6%	-1.5%
Mastercard Debit and Prepaid Programs											
Worldwide less United States	6.5%	7.4%	6.5%	11.9%	12.8%	11.8%	12.5%	12.5%	12.5%	8.1%	12.4%
United States	-5.4%	-3.2%	-1.3%	0.6%	2.5%	0.7%	-2.3%	0.8%	-1.4%	-2.4%	0.4%
Worldwide	4.9%	6.0%	5.5%	10.5%	11.6%	10.5%	10.7%	11.2%	10.9%	6.7%	11.0%

Cards (Millions)											
All Mastercard Credit,											
Charge, Debit and Prepaid Programs											
	Q1'17	Q2'17	Q3'17	Q4'17	Q1'18	Q2'18	Q3'18	Q4'18	Q1'19	FY 2017	FY 2018
APMEA	631	651	679	696	715	733	760	797	821	696	797
Canada	49	49	50	52	56	58	59	61	61	52	61
Europe	439	449	465	475	488	501	513	532	544	475	532
Latin America	167	168	172	176	168	172	176	182	187	176	182
Worldwide less United States	1,286	1,317	1,366	1,400	1,427	1,463	1,508	1,571	1,613	1,400	1,571
United States	391	396	399	410	415	425	436	444	454	410	444
Worldwide	1,677	1,713	1,765	1,810	1,842	1,889	1,944	2,015	2,066	1,810	2,015
Mastercard Credit and Charge Programs											
Worldwide less United States	569	576	590	600	604	616	628	643	654	600	643
United States	202	205	207	211	211	218	225	234	238	211	234
Worldwide	771	780	797	811	814	833	853	877	892	811	877
Mastercard Debit and Prepaid Programs											
Worldwide less United States	717	741	776	799	823	848	880	928	958	799	928
United States	189	192	192	199	205	208	211	210	216	199	210
Worldwide	906	933	968	998	1,028	1,056	1,091	1,138	1,174	998	1,138

Cards Growth											
All Mastercard Credit,											
Charge, Debit and Prepaid Programs											
	Q1'17	Q2'17	Q3'17	Q4'17	Q1'18	Q2'18	Q3'18	Q4'18	Q1'19	FY 2017	FY 2018
APMEA	12.2%	12.5%	14.7%	13.5%	13.3%	12.7%	11.9%	14.4%	14.8%	13.5%	14.4%
Canada	1.0%	9.8%	9.5%	8.9%	14.7%	17.5%	17.3%	16.0%	10.1%	8.9%	16.0%
Europe	9.1%	8.5%	10.4%	10.3%	11.1%	11.5%	10.4%	11.9%	11.5%	10.3%	11.9%
Latin America	2.7%	3.6%	4.9%	6.9%	0.5%	2.1%	2.5%	3.5%	11.0%	6.9%	3.5%
Worldwide less United States	9.4%	9.8%	11.7%	11.4%	11.0%	11.1%	10.4%	12.2%	13.0%	11.4%	12.2%
United States	3.0%	3.5%	4.3%	4.9%	6.2%	7.4%	9.3%	8.3%	9.2%	4.9%	8.3%
Worldwide	7.8%	8.3%	9.9%	9.8%	9.8%	10.2%	10.1%	11.4%	12.2%	9.8%	11.4%
Mastercard Credit and Charge Programs											
Worldwide less United States	0.8%	2.4%	5.7%	6.3%	6.1%	6.9%	6.5%	7.1%	8.4%	6.3%	7.1%
United States	5.4%	5.3%	5.4%	5.4%	4.2%	6.3%	8.9%	11.0%	12.9%	5.4%	11.0%
Worldwide	1.9%	3.1%	5.6%	6.1%	5.6%	6.8%	7.1%	8.1%	9.6%	6.1%	8.1%
Mastercard Debit and Prepaid Programs											
Worldwide less United States	17.3%	16.4%	16.8%	15.5%	14.8%	14.4%	13.4%	16.1%	16.4%	15.5%	16.1%
United States	0.6%	1.7%	3.1%	4.4%	8.3%	8.5%	9.7%	5.5%	5.4%	4.4%	5.5%
Worldwide	13.4%	13.0%	13.8%	13.1%	13.5%	13.2%	12.6%	14.0%	14.2%	13.1%	14.0%

Note that the figures in the preceding tables may not sum due to rounding; growth represents change from the comparable year-ago period.

Footnote

The tables set forth the gross dollar volume (“GDV”), purchase volume, cash volume and the number of purchase transactions, cash transactions, and cards on a regional and global basis for Mastercard™-branded cards. Growth rates over prior periods are provided for volume-based data.

Debit transactions on Maestro® and Cirrus®-branded cards and transactions involving brands other than Mastercard are not included in the preceding tables.

For purposes of the table: GDV represents purchase volume plus cash volume and includes the impact of balance transfers and convenience checks; “purchase volume” means the aggregate dollar amount of purchases made with Mastercard-branded cards for the relevant period; and “cash volume” means the aggregate dollar amount of cash disbursements obtained with Mastercard-branded cards for the relevant period. The number of cards includes virtual cards, which are Mastercard-branded payment accounts that do not generally have physical cards associated with them.

The Mastercard payment product is comprised of credit, charge, debit and prepaid programs, and data relating to each type of program is included in the tables. Debit programs include Mastercard-branded debit programs where the primary means of cardholder validation at the point of sale is for cardholders either to sign a sales receipt or enter a PIN. The tables include information with respect to transactions involving Mastercard-branded cards that are not switched by Mastercard and transactions for which Mastercard does not earn significant revenues.

Information denominated in U.S. dollars is calculated by applying an established U.S. dollar/local currency exchange rate for each local currency in which Mastercard volumes are reported. These exchange rates are calculated on a quarterly basis using the average exchange rate for each quarter. Mastercard reports period-over-period rates of change in purchase volume and cash volume on the basis of local currency information, in order to eliminate the impact of changes in the value of foreign currencies against the U.S. dollar in calculating such rates of change.

The data set forth in the GDV, purchase volume, purchase transactions, cash volume and cash transactions columns is provided by Mastercard customers and is subject to verification by Mastercard and partial cross-checking against information provided by Mastercard’s transaction switching systems. The data set forth in the cards columns is provided by Mastercard customers and is subject to certain limited verification by Mastercard. A portion of the data set forth in the cards columns reflects the impact of routine portfolio changes among customers and other practices that may lead to over counting of the underlying data in certain circumstances. All data is subject to revision and amendment by Mastercard or Mastercard’s customers.

Effective Q1’18, our operational metrics reflect the impact of the Venezuela deconsolidation. Prior to Q1’18 all metrics include Venezuela. We are providing additional information regarding our Switched Transactions and Card growth rates. The adjusted growth rates eliminate Venezuelan Switched Transactions and Card counts from prior periods. In addition, we are providing further adjusted growth rates for switched transactions and adjusted rates for cross border volume to normalize for the effects of differing switching days between periods. This information is being provided so that you can better understand the underlying growth rates of our operating metrics.

Article 8 of the EU Interchange Fee Regulation related to card payments that became effective June 9, 2016 states that a network can no longer charge fees on domestic EEA payment transactions that do not use its payment brand. Prior to that, Mastercard collected a de minimis assessment fee in a few countries, particularly France, on transactions with Mastercard co-badged cards if the brands of domestic networks (as opposed to Mastercard) were used. As a result, the non-Mastercard co-badged volume is no longer being included.

To aid in understanding the underlying trends in the business, the table above reflects adjusted growth rates for the impact of Article 8, by eliminating the related co-badged volumes where relevant.

2. Switched Transactions

The table below sets forth the total number of transactions switched by Mastercard and growth from the comparable year-ago period.

Period	Switched	Growth	
	Trans. (Mil.)	Excluding Venezuela ⁽¹⁾	Excluding Venezuela and Equalizing Switching Days ⁽¹⁾⁽²⁾
2019Q1	19,205	15%	17%
2018Q4	20,124	19%	17%
2018Q3	18,825	16%	18%
2018Q2	18,161	17%	17%
2018Q1	16,681	17%	16%
2017Q4	17,739	15%	17%
2017Q3	16,851	15%	15%
2017Q2	16,014	16%	16%
2017Q1	14,700	16%	17%
FY 2018	73,791	17%	17%
FY 2017	65,304	15%	16%

3. Cross Border Volume

The table below sets forth the Cross Border Volume Growth from the comparable year-ago period, on a local currency basis and U.S. dollar-converted basis, for all Mastercard-branded programs.

Period	Growth	Growth
	(Local) ⁽²⁾	(USD) ⁽²⁾
2019Q1	13%	6%
2018Q4	17%	12%
2018Q3	18%	15%
2018Q2	19%	24%
2018Q1	20%	30%
2017Q4	18%	24%
2017Q3	15%	17%
2017Q2	14%	10%
2017Q1	14%	11%
FY 2018	18%	20%
FY 2017	15%	15%

Note:

- (1) Growth rates eliminate Venezuela transactions from current and past periods
- (2) Growth rates normalized to eliminate the effects of differing switching days between periods

4. Cards

The tables below set forth the number of Mastercard, Maestro and Total Cards with growth rates from the comparable year-ago period.

Mastercard Cards				Maestro Cards				Total WW Mastercard & Maestro Cards			
Period	Cards (Mil.)	Actual Growth	Growth Adj for Ven	Period	Cards (Mil.)	Actual Growth	Growth Adj for Ven	Period	Cards (Mil.)	Actual Growth	Growth Adj for Ven
2019Q1	2,066	12.2%	12%	2019Q1	471	-11.2%	-11%	2019Q1	2,537	6.9%	7%
2018Q4	2,015	11.4%	12%	2018Q4	492	-17.2%	-11%	2018Q4	2,508	4.3%	7%
2018Q3	1,944	10.1%	11%	2018Q3	511	-15.2%	-9%	2018Q3	2,454	3.7%	6%
2018Q2	1,889	10.2%	11%	2018Q2	522	-14.5%	-9%	2018Q2	2,410	3.8%	6%
2018Q1	1,842	9.8%	10%	2018Q1	531	-15.8%	-11%	2018Q1	2,373	2.8%	5%
2017Q4	1,810	9.8%	10%	2017Q4	595	-7.6%	-9%	2017Q4	2,405	4.9%	5%
2017Q3	1,765	9.9%	10%	2017Q3	602	-7.6%	-9%	2017Q3	2,367	4.9%	5%
2017Q2	1,713	8.3%	8%	2017Q2	610	-7.7%	-9%	2017Q2	2,323	3.6%	3%
2017Q1	1,677	7.8%	8%	2017Q1	630	-4.8%	-5%	2017Q1	2,308	4.0%	4%