



Supplemental Operational Performance Data

Set forth below are tables that provide supplemental information regarding the operational performance results for the three months ended September 30, 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	Q3'17	Q4'17	Q1'18	Q2'18	Q3'18	Q4'18	Q1'19	Q2'19	Q3'19	Q3'18 YTD	Q3'19 YTD
APMEA	\$407	\$431	\$440	\$453	\$447	\$469	\$459	\$480	\$491	\$1,340	\$1,431
Canada	41	43	39	44	44	46	39	46	47	127	132
Europe	395	413	407	435	438	459	429	479	507	1,280	1,414
Latin America	97	106	102	100	99	111	105	110	114	301	328
Worldwide less United States	941	994	988	1,032	1,028	1,085	1,032	1,115	1,158	3,048	3,305
United States	407	422	419	442	442	465	451	486	494	1,304	1,431
Worldwide	1,347	1,416	1,407	1,475	1,470	1,550	1,483	1,601	1,652	4,352	4,736
Mastercard Credit and Charge Programs											
Worldwide less United States	508	530	528	545	535	560	530	560	577	1,608	1,667
United States	198	207	194	211	213	228	212	237	245	618	694
Worldwide	705	737	722	756	748	788	742	797	822	2,226	2,361
Mastercard Debit and Prepaid Programs											
Worldwide less United States	433	464	461	487	493	524	502	555	581	1,440	1,638
United States	209	215	225	232	229	238	238	249	249	685	736
Worldwide	642	679	685	718	722	762	741	804	830	2,126	2,374

GDV Local Growth											
All Mastercard Credit,											
Charge, Debit and Prepaid Programs	Q3'17	Q4'17	Q1'18	Q2'18	Q3'18	Q4'18	Q1'19	Q2'19	Q3'19	Q3'18 YTD	Q3'19 YTD
APMEA	8.1%	12.2%	13.1%	14.1%	13.0%	13.2%	10.4%	11.3%	12.0%	13.4%	11.2%
Canada	8.6%	9.6%	9.5%	9.2%	10.3%	11.6%	5.8%	7.7%	8.8%	9.6%	7.5%
Europe	14.8%	16.0%	18.8%	19.6%	18.7%	19.8%	17.3%	18.6%	19.4%	19.0%	18.5%
<i>Europe adjusted for Article 8</i>	<i>16%</i>	<i>17%</i>									
Latin America	14.6%	16.4%	17.0%	17.2%	16.2%	16.8%	13.3%	15.8%	18.4%	16.8%	15.9%
Worldwide less United States	11.5%	14.1%	15.6%	16.4%	15.5%	16.2%	13.3%	14.6%	15.6%	15.9%	14.5%
<i>WW less USA adjusted for Article 8</i>	<i>12%</i>	<i>15%</i>									
United States	6.2%	9.1%	10.5%	9.4%	8.7%	10.2%	7.5%	9.9%	11.7%	9.5%	9.8%
Worldwide	9.8%	12.6%	14.1%	14.2%	13.4%	14.3%	11.5%	13.1%	14.4%	13.9%	13.1%
<i>Worldwide adjusted for Article 8</i>	<i>10%</i>	<i>13%</i>									
Mastercard Credit and Charge Programs											
Worldwide less United States	8.7%	10.3%	11.7%	12.8%	11.6%	12.8%	9.0%	9.7%	11.0%	12.0%	9.9%
United States	8.6%	10.0%	9.0%	7.6%	7.7%	9.8%	9.3%	12.5%	14.9%	8.1%	12.3%
Worldwide	8.7%	10.2%	10.9%	11.3%	10.5%	11.9%	9.1%	10.5%	12.2%	10.9%	10.6%
Mastercard Debit and Prepaid Programs											
Worldwide less United States	15.0%	18.8%	20.6%	20.8%	20.1%	20.1%	18.2%	20.0%	20.6%	20.5%	19.7%
United States	4.0%	8.3%	11.9%	11.2%	9.6%	10.6%	6.0%	7.6%	8.8%	10.9%	7.5%
Worldwide	11.2%	15.3%	17.6%	17.5%	16.6%	17.0%	14.0%	15.9%	16.8%	17.2%	15.6%

Purchase Volume (\$ Billions)											
All Mastercard Credit,											
Charge, Debit and Prepaid Programs	Q3'17	Q4'17	Q1'18	Q2'18	Q3'18	Q4'18	Q1'19	Q2'19	Q3'19	Q3'18 YTD	Q3'19 YTD
APMEA	\$275	\$291	\$296	\$307	\$305	\$319	\$308	\$319	\$327	\$909	\$954
Canada	39	42	37	42	42	45	37	44	45	121	126
Europe	252	266	269	286	289	304	287	320	338	844	945
Latin America	61	67	65	64	62	71	68	71	74	192	213
Worldwide less United States	628	666	668	699	698	738	699	754	784	2,065	2,237
United States	347	366	359	384	385	408	392	427	433	1,128	1,252
Worldwide	975	1,032	1,028	1,083	1,083	1,146	1,091	1,181	1,218	3,193	3,490
Mastercard Credit and Charge Programs											
Worldwide less United States	466	489	488	505	495	520	492	520	536	1,489	1,548
United States	188	198	185	202	205	219	203	228	235	592	666
Worldwide	654	687	673	707	700	739	695	748	770	2,080	2,214
Mastercard Debit and Prepaid Programs											
Worldwide less United States	161	177	180	194	203	218	208	233	249	577	689
United States	160	168	175	182	180	189	188	199	199	536	586
Worldwide	321	345	355	376	382	407	396	432	447	1,113	1,276

Purchase Volume Local Growth											
All Mastercard Credit,											
Charge, Debit and Prepaid Programs	Q3'17	Q4'17	Q1'18	Q2'18	Q3'18	Q4'18	Q1'19	Q2'19	Q3'19	Q3'18 YTD	Q3'19 YTD
APMEA	8.5%	10.2%	11.5%	14.7%	13.5%	13.8%	9.8%	9.9%	10.2%	13.3%	10.0%
Canada	9.2%	9.9%	9.7%	9.6%	10.4%	11.5%	5.7%	7.7%	9.3%	9.9%	7.7%
Europe	16.0%	17.6%	22.0%	23.2%	22.2%	22.9%	18.4%	20.5%	21.3%	22.5%	20.1%
<i>Europe adjusted for Article 8</i>	<i>18%</i>	<i>20%</i>									
Latin America	18.2%	20.7%	22.1%	22.0%	21.4%	21.6%	17.8%	20.2%	23.2%	21.8%	20.4%
Worldwide less United States	12.4%	14.0%	16.4%	18.4%	17.5%	18.0%	13.7%	15.0%	15.9%	17.4%	14.9%
<i>WW less USA adjusted for Article 8</i>	<i>13%</i>	<i>15%</i>									
United States	6.4%	10.0%	11.1%	10.5%	10.7%	11.4%	9.0%	11.1%	12.7%	10.8%	11.0%
Worldwide	10.2%	12.6%	14.5%	15.5%	15.0%	15.5%	12.0%	13.6%	14.7%	15.0%	13.5%
<i>Worldwide adjusted for Article 8</i>	<i>11%</i>	<i>13%</i>									
Mastercard Credit and Charge Programs											
Worldwide less United States	9.1%	11.1%	12.7%	13.9%	12.6%	13.5%	9.3%	10.1%	11.2%	13.1%	10.2%
United States	7.9%	10.0%	8.8%	8.2%	9.0%	10.4%	10.0%	12.7%	14.7%	8.7%	12.5%
Worldwide	8.8%	10.8%	11.6%	12.2%	11.6%	12.5%	9.5%	10.8%	12.3%	11.8%	10.9%
Mastercard Debit and Prepaid Programs											
Worldwide less United States	23.0%	22.9%	27.9%	32.0%	31.2%	30.2%	25.7%	27.8%	27.3%	30.4%	27.0%
United States	4.7%	9.9%	13.5%	13.2%	12.7%	12.7%	8.0%	9.5%	10.5%	13.1%	9.3%
Worldwide	13.2%	16.2%	20.4%	22.2%	21.8%	21.4%	16.6%	18.7%	19.2%	21.5%	18.2%

Purchase Transactions (Millions)											
All Mastercard Credit,											
Charge, Debit and Prepaid Programs	Q3'17	Q4'17	Q1'18	Q2'18	Q3'18	Q4'18	Q1'19	Q2'19	Q3'19	Q3'18 YTD	Q3'19 YTD
APMEA	4,553	4,798	4,756	5,215	5,479	5,868	5,651	6,242	6,539	15,450	18,432
Canada	582	599	554	635	651	698	611	710	748	1,840	2,068
Europe	6,021	6,461	6,461	7,328	7,780	8,414	8,306	9,587	10,225	21,569	28,118
Latin America	1,929	2,087	2,062	2,186	2,300	2,530	2,474	2,723	2,946	6,548	8,143
Worldwide less United States	13,084	13,944	13,833	15,364	16,209	17,510	17,041	19,262	20,458	45,406	56,761
United States	6,315	6,510	6,359	6,865	6,931	7,243	6,894	7,559	7,754	20,155	22,207
Worldwide	19,400	20,455	20,192	22,230	23,140	24,753	23,935	26,821	28,212	65,562	78,968
Mastercard Credit and Charge Programs											
Worldwide less United States	7,307	7,639	7,444	8,090	8,427	9,012	8,608	9,568	10,161	23,962	28,336
United States	2,136	2,220	2,020	2,248	2,321	2,485	2,250	2,559	2,691	6,589	7,500
Worldwide	9,443	9,860	9,464	10,338	10,748	11,497	10,858	12,126	12,852	30,550	35,836
Mastercard Debit and Prepaid Programs											
Worldwide less United States	5,778	6,305	6,389	7,274	7,782	8,498	8,433	9,694	10,297	21,445	28,425
United States	4,179	4,290	4,340	4,617	4,610	4,758	4,644	5,000	5,063	13,567	14,708
Worldwide	9,956	10,595	10,728	11,892	12,391	13,257	13,078	14,694	15,361	35,011	43,132

Purchase Transactions Growth											
All Mastercard Credit,											
Charge, Debit and Prepaid Programs	Q3'17	Q4'17	Q1'18	Q2'18	Q3'18	Q4'18	Q1'19	Q2'19	Q3'19	Q3'18 YTD	Q3'19 YTD
APMEA	22.2%	16.7%	17.8%	21.2%	20.3%	22.3%	18.8%	19.7%	19.3%	19.8%	19.3%
Canada	10.5%	10.3%	10.5%	11.1%	11.8%	16.6%	10.2%	11.8%	14.9%	11.2%	12.4%
Europe	23.7%	25.9%	29.4%	30.7%	29.2%	30.2%	28.6%	30.8%	31.4%	29.8%	30.4%
<i>Europe adjusted for Article 8</i>	26%	28%									
Latin America	17.7%	19.8%	14.4%	20.2%	19.2%	21.2%	20.0%	24.6%	28.1%	18.0%	24.4%
Worldwide less United States	21.6%	21.0%	22.0%	24.9%	23.9%	25.6%	23.2%	25.4%	26.2%	23.7%	25.0%
<i>WW less USA adjusted for Article 8</i>	23%	22%									
United States	4.3%	8.4%	10.0%	9.8%	9.7%	11.3%	8.4%	10.1%	11.9%	9.8%	10.2%
Worldwide	15.4%	16.7%	18.0%	19.8%	19.3%	21.0%	18.5%	20.7%	21.9%	19.1%	20.4%
<i>Worldwide adjusted for Article 8</i>	16%	17%									
Mastercard Credit and Charge Programs											
Worldwide less United States	13.8%	13.7%	13.8%	15.6%	15.3%	18.0%	15.6%	18.3%	20.6%	15.0%	18.3%
United States	5.9%	7.5%	7.1%	7.3%	8.6%	11.9%	11.4%	13.8%	15.9%	7.7%	13.8%
Worldwide	11.9%	12.3%	12.3%	13.7%	13.8%	16.6%	14.7%	17.3%	19.6%	13.3%	17.3%
Mastercard Debit and Prepaid Programs											
Worldwide less United States	33.2%	31.1%	33.2%	37.2%	34.7%	34.8%	32.0%	33.3%	32.3%	35.1%	32.5%
United States	3.5%	8.9%	11.4%	11.0%	10.3%	10.9%	7.0%	8.3%	9.8%	10.9%	8.4%
Worldwide	18.9%	21.1%	23.4%	25.7%	24.5%	25.1%	21.9%	23.6%	24.0%	24.6%	23.2%

Cash Volume (\$ Billions)											
All Mastercard Credit,											
Charge, Debit and Prepaid Programs	Q3'17	Q4'17	Q1'18	Q2'18	Q3'18	Q4'18	Q1'19	Q2'19	Q3'19	Q3'18 YTD	Q3'19 YTD
APMEA	\$132	\$140	\$143	\$146	\$142	\$150	\$152	\$161	\$164	\$431	\$477
Canada	2	2	2	2	2	2	2	2	2	5	5
Europe	143	147	138	149	149	155	142	159	169	436	470
Latin America	36	39	37	37	37	40	37	39	39	110	115
Worldwide less United States	313	328	320	333	330	346	333	361	374	983	1,068
United States	59	56	60	58	57	57	59	59	60	175	179
Worldwide	372	384	380	391	387	404	392	420	434	1,158	1,246
Mastercard Credit and Charge Programs											
Worldwide less United States	41	41	40	40	39	40	38	39	41	119	119
United States	10	9	9	9	8	9	9	9	10	27	28
Worldwide	52	50	49	49	48	49	47	49	52	146	147
Mastercard Debit and Prepaid Programs											
Worldwide less United States	272	287	280	293	290	306	295	321	332	864	949
United States	49	47	50	50	49	49	50	50	50	149	150
Worldwide	321	334	331	343	339	355	344	372	383	1,013	1,099

Cash Volume Local Growth											
All Mastercard Credit,											
Charge, Debit and Prepaid Programs	Q3'17	Q4'17	Q1'18	Q2'18	Q3'18	Q4'18	Q1'19	Q2'19	Q3'19	Q3'18 YTD	Q3'19 YTD
APMEA	7.3%	16.7%	16.4%	12.6%	12.0%	12.0%	11.5%	14.1%	15.8%	13.6%	13.8%
Canada	-2.0%	2.2%	4.5%	-1.0%	9.3%	13.8%	8.6%	6.9%	-4.2%	4.2%	3.5%
Europe	12.6%	13.3%	13.0%	13.2%	12.4%	14.2%	15.3%	14.8%	15.9%	12.9%	15.3%
Latin America	9.0%	9.8%	8.9%	9.6%	8.3%	9.3%	5.8%	8.6%	10.4%	8.9%	8.3%
Worldwide less United States	9.8%	14.2%	14.0%	12.5%	11.7%	12.7%	12.4%	13.7%	15.2%	12.7%	13.8%
United States	4.8%	4.0%	7.4%	2.9%	-3.2%	2.2%	-1.6%	1.9%	5.1%	2.2%	1.7%
Worldwide	9.0%	12.6%	12.9%	10.9%	9.2%	11.1%	10.0%	11.9%	13.6%	11.0%	11.9%
Mastercard Credit and Charge Programs											
Worldwide less United States	4.3%	1.3%	0.1%	0.4%	0.5%	4.9%	4.7%	5.0%	8.4%	0.3%	6.0%
United States	23.4%	9.1%	12.4%	-4.4%	-16.9%	-3.3%	-5.2%	8.1%	20.0%	-3.9%	7.1%
Worldwide	7.6%	2.7%	2.2%	-0.5%	-3.1%	3.3%	2.6%	5.6%	10.5%	-0.5%	6.3%
Mastercard Debit and Prepaid Programs											
Worldwide less United States	10.7%	16.4%	16.3%	14.3%	13.4%	13.8%	13.4%	14.9%	16.1%	14.7%	14.8%
United States	1.6%	3.1%	6.5%	4.2%	-0.4%	3.2%	-1.0%	0.9%	2.5%	3.4%	0.8%
Worldwide	9.2%	14.3%	14.7%	12.8%	11.2%	12.2%	11.1%	12.8%	14.1%	12.8%	12.7%

Cash Transactions (Millions)											
All Mastercard Credit,											
Charge, Debit and Prepaid Programs											
	Q3'17	Q4'17	Q1'18	Q2'18	Q3'18	Q4'18	Q1'19	Q2'19	Q3'19	Q3'18 YTD	Q3'19 YTD
APMEA	1,374	1,468	1,470	1,533	1,557	1,646	1,627	1,692	1,735	4,560	5,054
Canada	6	5	6	6	6	6	6	6	6	18	17
Europe	977	1,001	937	1,054	1,067	1,101	1,044	1,172	1,194	3,058	3,410
Latin America	261	279	264	272	273	298	275	295	302	809	872
Worldwide less United States	2,618	2,753	2,677	2,864	2,903	3,051	2,952	3,165	3,237	8,445	9,353
United States	346	326	328	340	337	328	322	337	340	1,005	999
Worldwide	2,964	3,079	3,005	3,204	3,241	3,379	3,274	3,501	3,576	9,450	10,352
Mastercard Credit and Charge Programs											
Worldwide less United States	185	183	170	180	182	187	173	185	190	532	548
United States	9	9	8	9	9	9	8	9	10	26	27
Worldwide	195	192	178	189	191	196	181	194	200	558	575
Mastercard Debit and Prepaid Programs											
Worldwide less United States	2,433	2,570	2,507	2,684	2,722	2,864	2,779	2,979	3,047	7,913	8,805
United States	336	317	320	331	328	320	314	328	330	979	972
Worldwide	2,769	2,887	2,827	3,016	3,050	3,184	3,093	3,307	3,377	8,893	9,777

Cash Transactions Growth											
All Mastercard Credit,											
Charge, Debit and Prepaid Programs											
	Q3'17	Q4'17	Q1'18	Q2'18	Q3'18	Q4'18	Q1'19	Q2'19	Q3'19	Q3'18 YTD	Q3'19 YTD
APMEA	5.9%	13.5%	15.2%	12.4%	13.3%	12.2%	10.7%	10.4%	11.4%	13.6%	10.8%
Canada	-0.4%	0.0%	2.9%	14.7%	8.8%	15.2%	-3.5%	-11.2%	-6.8%	8.8%	-7.3%
Europe	6.6%	8.2%	8.8%	10.0%	9.3%	9.9%	11.3%	11.3%	11.9%	9.4%	11.5%
Latin America	3.6%	5.8%	4.0%	4.7%	4.4%	6.7%	4.3%	8.5%	10.5%	4.4%	7.8%
Worldwide less United States	5.9%	10.7%	11.7%	10.8%	10.9%	10.8%	10.3%	10.5%	11.5%	11.1%	10.8%
United States	-1.3%	0.5%	2.4%	0.6%	-2.4%	0.8%	-1.8%	-1.0%	0.7%	0.1%	-0.7%
Worldwide	5.0%	9.5%	10.6%	9.6%	9.4%	9.8%	9.0%	9.3%	10.4%	9.8%	9.5%
Mastercard Credit and Charge Programs											
Worldwide less United States	-0.6%	-3.3%	-2.9%	-3.2%	-1.8%	2.1%	2.0%	2.7%	4.4%	-2.6%	3.1%
United States	-1.4%	-2.9%	0.2%	-4.1%	-6.8%	0.4%	-1.4%	4.7%	8.1%	-3.7%	3.9%
Worldwide	-0.7%	-3.3%	-2.7%	-3.2%	-2.0%	2.1%	1.9%	2.8%	4.6%	-2.7%	3.1%
Mastercard Debit and Prepaid Programs											
Worldwide less United States	6.4%	11.9%	12.8%	11.8%	11.9%	11.4%	10.8%	11.0%	11.9%	12.2%	11.3%
United States	-1.3%	0.6%	2.5%	0.7%	-2.3%	0.9%	-1.8%	-1.1%	0.5%	0.2%	-0.8%
Worldwide	5.4%	10.5%	11.6%	10.5%	10.2%	10.3%	9.4%	9.7%	10.7%	10.7%	9.9%

Cards (Millions)											
All Mastercard Credit,											
Charge, Debit and Prepaid Programs											
	Q3'17	Q4'17	Q1'18	Q2'18	Q3'18	Q4'18	Q1'19	Q2'19	Q3'19	Q3'18 YTD	Q3'19 YTD
APMEA	679	696	713	732	758	797	813	823	831	758	831
Canada	50	52	56	58	59	61	61	62	62	59	62
Europe	465	475	485	499	512	529	544	563	584	512	584
Latin America	172	176	168	172	176	183	188	195	202	176	202
Worldwide less United States	1,366	1,400	1,423	1,461	1,504	1,569	1,606	1,642	1,680	1,504	1,680
United States	399	410	415	419	429	437	447	456	465	429	465
Worldwide	1,765	1,810	1,838	1,879	1,933	2,006	2,054	2,098	2,145	1,933	2,145
Mastercard Credit and Charge Programs											
Worldwide less United States	590	600	603	615	627	642	654	669	686	627	686
United States	207	211	211	211	218	227	230	235	240	218	240
Worldwide	797	811	813	826	845	869	885	904	926	845	926
Mastercard Debit and Prepaid Programs											
Worldwide less United States	776	799	820	846	877	927	952	973	994	877	994
United States	192	199	205	208	211	210	217	221	225	211	225
Worldwide	968	998	1,025	1,054	1,088	1,137	1,169	1,194	1,219	1,088	1,219

Cards Growth											
All Mastercard Credit,											
Charge, Debit and Prepaid Programs											
	Q3'17	Q4'17	Q1'18	Q2'18	Q3'18	Q4'18	Q1'19	Q2'19	Q3'19	Q3'18 YTD	Q3'19 YTD
APMEA	14.7%	13.5%	13.1%	12.4%	11.6%	14.4%	14.1%	12.4%	9.7%	11.6%	9.7%
Canada	9.5%	8.9%	14.7%	17.5%	17.0%	15.7%	9.8%	6.6%	6.0%	17.0%	6.0%
Europe	10.4%	10.3%	10.5%	11.3%	10.1%	11.3%	12.0%	12.6%	14.1%	10.1%	14.1%
Latin America	4.9%	6.9%	0.6%	2.1%	2.5%	3.9%	11.7%	13.6%	15.1%	2.5%	15.1%
Worldwide less United States	11.7%	11.4%	10.6%	10.9%	10.1%	12.1%	12.9%	12.4%	11.7%	10.1%	11.7%
United States	4.3%	4.9%	6.2%	5.7%	7.5%	6.5%	7.7%	8.9%	8.5%	7.5%	8.5%
Worldwide	9.9%	9.8%	9.6%	9.7%	9.5%	10.8%	11.7%	11.6%	11.0%	9.5%	11.0%
Mastercard Credit and Charge Programs											
Worldwide less United States	5.7%	6.3%	6.0%	6.8%	6.3%	6.9%	8.5%	8.8%	9.4%	6.3%	9.4%
United States	5.4%	5.4%	4.2%	3.0%	5.5%	7.6%	9.5%	11.5%	10.1%	5.5%	10.1%
Worldwide	5.6%	6.1%	5.5%	5.8%	6.1%	7.1%	8.8%	9.5%	9.6%	6.1%	9.6%
Mastercard Debit and Prepaid Programs											
Worldwide less United States	16.8%	15.5%	14.3%	14.1%	13.1%	16.0%	16.1%	15.0%	13.3%	13.1%	13.3%
United States	3.1%	4.4%	8.3%	8.5%	9.7%	5.3%	5.9%	6.2%	6.7%	9.7%	6.7%
Worldwide	13.8%	13.1%	13.0%	13.0%	12.4%	13.9%	14.1%	13.3%	12.0%	12.4%	12.0%

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. 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⁾
2019Q3	22,891	22%	20%
2019Q2	21,429	18%	18%
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%
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⁾
2019Q3	17%	13%
2019Q2	16%	10%
2019Q1	13%	6%
2018Q4	17%	12%
2018Q3	18%	15%
2018Q2	19%	24%
2018Q1	20%	30%
2017Q4	18%	24%
2017Q3	15%	17%
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
2019Q3	2,145	11.0%	11%	2019Q3	443	-12.9%	-13%	2019Q3	2,589	6.0%	6%
2019Q2	2,098	11.6%	12%	2019Q2	450	-13.4%	-13%	2019Q2	2,548	6.2%	6%
2019Q1	2,054	11.7%	12%	2019Q1	465	-12.0%	-12%	2019Q1	2,518	6.4%	6%
2018Q4	2,006	10.8%	11%	2018Q4	490	-17.6%	-11%	2018Q4	2,496	3.8%	6%
2018Q3	1,933	9.5%	10%	2018Q3	509	-15.4%	-9%	2018Q3	2,442	3.2%	5%
2018Q2	1,879	9.7%	10%	2018Q2	520	-14.8%	-9%	2018Q2	2,399	3.3%	5%
2018Q1	1,838	9.6%	10%	2018Q1	528	-16.2%	-11%	2018Q1	2,366	2.5%	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%