



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, 2017, 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 and Debit Programs	Q3'15	Q4'15	Q1'16	Q2'16	Q3'16	Q4'16	Q1'17	Q2'17	Q3'17	3Q'16 YTD	3Q'17 YTD
APMEA	\$350	\$362	\$349	\$371	\$380	\$379	\$371	\$392	\$413	\$1,101	\$1,176
Canada	33	34	29	36	36	38	34	39	41	102	114
Europe	334	343	319	352	336	336	310	356	396	1,007	1,062
Latin America	77	83	74	79	83	90	86	93	97	236	276
Worldwide less United States	794	823	770	840	836	842	802	879	947	2,446	2,628
United States	366	378	372	391	383	387	379	404	406	1,146	1,190
Worldwide	1,160	1,201	1,143	1,230	1,219	1,229	1,181	1,283	1,353	3,592	3,817
Mastercard Credit and Charge Programs											
Worldwide less United States	447	456	421	458	465	465	445	474	508	1,344	1,427
United States	175	181	169	184	182	189	178	196	198	535	572
Worldwide	623	637	590	642	647	654	623	670	706	1,879	1,999
Mastercard Debit Programs											
Worldwide less United States	347	367	349	382	371	377	357	405	439	1,102	1,201
United States	190	197	203	207	201	198	201	208	209	610	618
Worldwide	537	564	552	588	572	575	558	613	647	1,713	1,818

GDV Local Growth											
All Mastercard Credit,											
Charge and Debit Programs	Q3'15	Q4'15	Q1'16	Q2'16	Q3'16	Q4'16	Q1'17	Q2'17	Q3'17	3Q'16 YTD	3Q'17 YTD
APMEA	14.0%	13.6%	12.9%	12.8%	10.0%	7.2%	7.9%	7.8%	9.0%	11.8%	8.3%
Canada	17.8%	13.8%	8.7%	10.9%	9.4%	9.5%	12.3%	10.3%	8.7%	9.7%	10.3%
Europe	17.4%	15.8%	18.3%	13.9%	4.5%	3.2%	1.1%	4.9%	14.8%	11.8%	7.2%
Europe adjusted for Article 8	20%	18%	20%	19%	17%	16%	14%	15%	16%	19%	15%
Latin America	16.7%	15.1%	15.1%	15.4%	14.2%	14.5%	15.4%	15.4%	14.8%	14.9%	15.2%
Worldwide less United States	15.8%	14.7%	15.1%	13.4%	8.1%	6.3%	6.0%	7.5%	12.0%	12.0%	8.6%
WW less USA adjusted for Article 8	17%	15%	16%	15%	13%	11%	11%	11%	12%	15%	12%
United States	7.7%	8.5%	9.9%	7.4%	4.8%	2.4%	1.9%	3.4%	6.1%	7.3%	3.8%
Worldwide	13.2%	12.7%	13.3%	11.4%	7.0%	5.1%	4.7%	6.2%	10.1%	10.5%	7.1%
Worldwide adjusted for Article 8	14%	13%	14%	13%	10%	8%	8%	9%	10%	12%	9%
Mastercard Credit and Charge Programs											
Worldwide less United States	10.7%	9.5%	8.6%	7.9%	6.2%	5.7%	7.3%	6.8%	8.7%	7.5%	7.6%
United States	8.7%	9.3%	11.4%	6.8%	4.0%	4.2%	5.4%	6.6%	8.6%	7.2%	6.9%
Worldwide	10.2%	9.4%	9.4%	7.6%	5.6%	5.3%	6.7%	6.7%	8.7%	7.4%	7.4%
Mastercard Debit Programs											
Worldwide less United States	23.1%	21.9%	24.1%	20.9%	10.4%	7.1%	4.5%	8.2%	15.9%	18.1%	9.7%
United States	6.9%	7.8%	8.6%	7.8%	5.5%	0.8%	-1.0%	0.7%	3.9%	7.3%	1.2%
Worldwide	16.8%	16.6%	17.9%	16.0%	8.7%	4.9%	2.5%	5.5%	11.8%	14.0%	6.7%

Purchase Volume (\$ Billions)											
All Mastercard Credit,											
Charge and Debit Programs											
	Q3'15	Q4'15	Q1'16	Q2'16	Q3'16	Q4'16	Q1'17	Q2'17	Q3'17	3Q'16 YTD	3Q'17 YTD
APMEA	\$237	\$245	\$232	\$248	\$256	\$260	\$252	\$263	\$281	\$735	\$796
Canada	31	33	28	34	35	36	32	37	39	97	109
Europe	228	234	218	234	213	214	199	226	253	665	678
Latin America	45	47	43	47	51	56	55	58	61	140	173
Worldwide less United States	541	559	520	562	555	565	538	583	634	1,637	1,755
United States	311	324	316	335	327	333	324	347	347	978	1,018
Worldwide	852	883	836	897	881	898	862	930	981	2,615	2,774
Mastercard Credit and Charge Programs											
Worldwide less United States	407	417	385	419	426	426	407	434	466	1,230	1,307
United States	168	174	162	176	174	180	170	187	188	512	545
Worldwide	575	590	547	595	600	606	577	621	654	1,742	1,851
Mastercard Debit Programs											
Worldwide less United States	134	142	135	143	129	139	132	149	168	407	448
United States	144	151	154	159	152	153	154	160	160	465	474
Worldwide	277	293	289	302	282	291	285	309	328	872	922

Purchase Volume Local Growth											
All Mastercard Credit,											
Charge and Debit Programs											
	Q3'15	Q4'15	Q1'16	Q2'16	Q3'16	Q4'16	Q1'17	Q2'17	Q3'17	3Q'16 YTD	3Q'17 YTD
APMEA	14.5%	13.3%	11.7%	11.0%	8.4%	7.7%	9.0%	7.6%	9.7%	10.3%	8.8%
Canada	19.2%	14.5%	9.6%	10.7%	9.9%	10.1%	13.2%	11.7%	9.3%	10.1%	11.2%
Europe	14.8%	13.5%	14.5%	8.7%	-2.6%	-2.7%	-3.2%	1.8%	16.3%	6.5%	5.1%
Europe adjusted for Article 8	18%	16%	16%	15%	16%	16%	17%	17%	19%	16%	17%
Latin America	18.0%	16.1%	15.2%	15.3%	15.2%	16.9%	18.1%	18.8%	18.2%	15.2%	18.4%
Worldwide less United States	15.2%	13.7%	13.0%	10.4%	4.5%	4.4%	5.2%	6.5%	13.0%	9.1%	8.3%
WW less USA adjusted for Article 8	16%	15%	14%	13%	12%	12%	13%	12%	14%	13%	13%
United States	7.9%	8.8%	10.3%	7.9%	4.8%	2.7%	2.3%	3.8%	6.4%	7.6%	4.2%
Worldwide	12.4%	11.8%	12.0%	9.4%	4.6%	3.8%	4.1%	5.5%	10.6%	8.6%	6.8%
Worldwide adjusted for Article 8	13%	12%	12%	11%	9%	8%	9%	9%	11%	11%	10%
Mastercard Credit and Charge Programs											
Worldwide less United States	11.7%	10.4%	9.3%	8.4%	6.8%	6.0%	7.5%	7.0%	9.1%	8.1%	7.9%
United States	8.2%	8.8%	11.1%	6.9%	3.8%	3.8%	4.9%	6.1%	7.9%	7.1%	6.3%
Worldwide	10.7%	10.0%	9.8%	8.0%	5.9%	5.3%	6.7%	6.7%	8.7%	7.8%	7.4%
Mastercard Debit Programs											
Worldwide less United States	27.1%	24.5%	25.2%	16.5%	-2.5%	0.0%	-1.5%	5.2%	25.6%	12.2%	9.7%
United States	7.6%	8.8%	9.6%	9.1%	6.0%	1.3%	-0.4%	1.2%	4.7%	8.2%	1.8%
Worldwide	16.2%	15.9%	16.3%	12.5%	2.0%	0.7%	-0.9%	3.1%	14.5%	10.0%	5.5%

Purchase Transactions (Millions)											
All Mastercard Credit,											
Charge and Debit Programs											
	Q3'15	Q4'15	Q1'16	Q2'16	Q3'16	Q4'16	Q1'17	Q2'17	Q3'17	3Q'16 YTD	3Q'17 YTD
APMEA	3,121	3,335	3,264	3,565	3,768	4,151	4,078	4,417	4,655	10,597	13,150
Canada	469	488	446	511	527	543	502	571	582	1,484	1,655
Europe	4,632	4,935	4,856	5,155	4,867	5,134	4,995	5,585	6,043	14,878	16,623
Latin America	1,444	1,518	1,484	1,562	1,638	1,742	1,731	1,820	1,928	4,684	5,479
Worldwide less United States	9,666	10,277	10,050	10,793	10,800	11,570	11,306	12,393	13,208	31,643	36,907
United States	5,672	5,896	5,775	6,168	6,057	6,005	5,781	6,251	6,312	17,999	18,344
Worldwide	15,338	16,172	15,825	16,961	16,856	17,575	17,087	18,644	19,520	49,642	55,250
Mastercard Credit and Charge Programs											
Worldwide less United States	5,785	6,025	5,776	6,214	6,421	6,716	6,471	6,995	7,323	18,411	20,789
United States	1,908	1,993	1,842	2,016	2,018	2,065	1,885	2,095	2,137	5,876	6,117
Worldwide	7,693	8,018	7,618	8,230	8,439	8,781	8,357	9,090	9,459	24,287	26,906
Mastercard Debit Programs											
Worldwide less United States	3,881	4,251	4,274	4,579	4,379	4,854	4,834	5,398	5,885	13,232	16,118
United States	3,764	3,903	3,933	4,152	4,039	3,940	3,895	4,157	4,175	12,123	12,227
Worldwide	7,645	8,154	8,207	8,731	8,418	8,794	8,730	9,555	10,060	25,355	28,345

Purchase Transactions Growth											
All Mastercard Credit,											
Charge and Debit Programs											
	Q3'15	Q4'15	Q1'16	Q2'16	Q3'16	Q4'16	Q1'17	Q2'17	Q3'17	3Q'16 YTD	3Q'17 YTD
APMEA	20.5%	20.7%	21.9%	22.7%	20.7%	24.5%	25.0%	23.9%	23.5%	21.7%	24.1%
Canada	19.0%	16.0%	13.4%	12.7%	12.3%	11.3%	12.4%	11.8%	10.5%	12.8%	11.5%
Europe	23.0%	22.1%	23.3%	17.6%	5.1%	4.0%	2.9%	8.3%	24.2%	14.8%	11.7%
Europe adjusted for Article 8	28%	26%	26%	25%	24%	22%	22%	23%	27%	25%	24%
Latin America	12.3%	10.7%	10.8%	12.7%	13.5%	14.8%	16.7%	16.5%	17.7%	12.3%	17.0%
Worldwide less United States	20.3%	19.5%	20.4%	18.2%	11.7%	12.6%	12.5%	14.8%	22.3%	16.6%	16.6%
WW less USA adjusted for Article 8	22%	21%	21%	21%	20%	21%	22%	22%	23%	21%	22%
United States	9.8%	11.1%	12.9%	10.5%	6.8%	1.9%	0.1%	1.4%	4.2%	10.0%	1.9%
Worldwide	16.2%	16.3%	17.5%	15.3%	9.9%	8.7%	8.0%	9.9%	15.8%	14.1%	11.3%
Worldwide adjusted for Article 8	17%	17%	18%	17%	15%	14%	13%	14%	16%	17%	15%
Mastercard Credit and Charge Programs											
Worldwide less United States	11.9%	11.5%	11.8%	12.1%	11.0%	11.5%	12.0%	12.6%	14.0%	11.6%	12.9%
United States	10.6%	11.9%	14.6%	9.9%	5.7%	3.6%	2.3%	3.9%	5.9%	9.8%	4.1%
Worldwide	11.6%	11.6%	12.5%	11.5%	9.7%	9.5%	9.7%	10.4%	12.1%	11.2%	10.8%
Mastercard Debit Programs											
Worldwide less United States	35.4%	33.2%	34.2%	27.7%	12.8%	14.2%	13.1%	17.9%	34.4%	24.2%	21.8%
United States	9.3%	10.7%	12.1%	10.8%	7.3%	0.9%	-0.9%	0.1%	3.4%	10.0%	0.9%
Worldwide	21.2%	21.4%	22.6%	19.1%	10.1%	7.8%	6.4%	9.4%	19.5%	17.0%	11.8%

Cash Volume (\$ Billions)											
All Mastercard Credit,											
Charge and Debit Programs											
	Q3'15	Q4'15	Q1'16	Q2'16	Q3'16	Q4'16	Q1'17	Q2'17	Q3'17	3Q'16 YTD	3Q'17 YTD
APMEA	\$113	\$117	\$117	\$124	\$124	\$119	\$119	\$130	\$132	\$365	\$380
Canada	2	2	2	2	2	2	2	2	2	5	5
Europe	106	110	101	119	123	123	111	130	143	343	384
Latin America	32	36	31	32	32	34	32	35	36	95	103
Worldwide less United States	253	265	251	277	281	278	263	296	313	809	872
United States	54	53	56	56	57	54	56	57	59	168	171
Worldwide	307	318	307	333	338	332	319	353	372	977	1,044
Mastercard Credit and Charge Programs											
Worldwide less United States	40	39	36	39	39	39	38	40	42	114	120
United States	8	7	7	8	8	8	8	9	10	23	28
Worldwide	48	47	43	46	47	48	46	49	52	137	147
Mastercard Debit Programs											
Worldwide less United States	213	225	215	239	242	238	225	256	271	695	753
United States	46	46	49	48	48	46	47	48	49	145	144
Worldwide	260	271	263	287	291	284	273	304	320	841	896

Cash Volume Local Growth											
All Mastercard Credit,											
Charge and Debit Programs											
	Q3'15	Q4'15	Q1'16	Q2'16	Q3'16	Q4'16	Q1'17	Q2'17	Q3'17	3Q'16 YTD	3Q'17 YTD
APMEA	12.9%	14.3%	15.3%	16.6%	13.3%	6.0%	5.5%	8.3%	7.6%	15.1%	7.2%
Canada	-2.5%	1.1%	-4.6%	13.8%	-0.4%	-3.5%	-2.6%	-13.0%	-1.5%	3.0%	-5.9%
Europe	23.6%	21.1%	27.4%	25.6%	19.7%	15.3%	9.8%	10.5%	12.3%	23.9%	11.0%
Latin America	14.9%	13.8%	15.0%	15.7%	12.6%	10.8%	11.1%	10.4%	9.6%	14.4%	10.3%
Worldwide less United States	17.3%	16.9%	19.7%	20.2%	15.8%	10.5%	7.9%	9.4%	9.9%	18.5%	9.1%
United States	6.9%	6.6%	7.2%	4.2%	4.4%	1.1%	-0.4%	1.5%	4.4%	5.3%	1.8%
Worldwide	15.3%	15.0%	17.2%	17.2%	13.7%	8.8%	6.3%	8.0%	9.0%	16.0%	7.8%
Mastercard Credit and Charge Programs											
Worldwide less United States	1.7%	0.3%	1.3%	2.2%	0.3%	3.2%	4.8%	5.2%	5.0%	1.2%	5.0%
United States	22.3%	20.7%	19.0%	5.8%	7.1%	13.3%	16.0%	17.6%	23.4%	10.1%	19.1%
Worldwide	4.5%	3.0%	3.9%	2.7%	1.4%	4.8%	6.7%	7.2%	8.2%	2.6%	7.4%
Mastercard Debit Programs											
Worldwide less United States	20.7%	20.4%	23.4%	23.7%	18.8%	11.8%	8.4%	10.1%	10.7%	21.9%	9.8%
United States	4.7%	4.7%	5.7%	4.0%	3.9%	-0.8%	-2.9%	-1.0%	1.2%	4.5%	-0.9%
Worldwide	17.5%	17.4%	19.7%	19.9%	16.0%	9.6%	6.3%	8.2%	9.1%	18.5%	7.9%

Cash Transactions (Millions)											
All Mastercard Credit,											
Charge and Debit Programs											
	Q3'15	Q4'15	Q1'16	Q2'16	Q3'16	Q4'16	Q1'17	Q2'17	Q3'17	3Q'16 YTD	3Q'17 YTD
APMEA	1,132	1,196	1,203	1,253	1,295	1,291	1,273	1,362	1,369	3,751	4,003
Canada	6	6	5	6	6	5	6	6	6	17	17
Europe	803	842	812	910	923	925	849	948	972	2,645	2,769
Latin America	231	249	240	251	252	264	254	260	262	744	775
Worldwide less United States	2,172	2,293	2,260	2,419	2,476	2,486	2,381	2,575	2,608	7,156	7,564
United States	340	332	338	350	350	324	320	338	345	1,038	1,003
Worldwide	2,512	2,625	2,598	2,769	2,826	2,810	2,701	2,913	2,953	8,194	8,567
Mastercard Credit and Charge Programs											
Worldwide less United States	189	189	176	189	188	191	176	188	189	552	553
United States	9	9	9	9	10	9	8	9	9	28	27
Worldwide	198	198	185	198	197	200	184	196	199	580	580
Mastercard Debit Programs											
Worldwide less United States	1,983	2,104	2,084	2,231	2,289	2,295	2,205	2,387	2,419	6,603	7,011
United States	331	323	330	340	340	315	312	329	335	1,010	976
Worldwide	2,314	2,427	2,413	2,571	2,629	2,610	2,517	2,716	2,754	7,614	7,987

Cash Transactions Growth											
All Mastercard Credit,											
Charge and Debit Programs											
	Q3'15	Q4'15	Q1'16	Q2'16	Q3'16	Q4'16	Q1'17	Q2'17	Q3'17	3Q'16 YTD	3Q'17 YTD
APMEA	12.6%	15.3%	17.7%	17.0%	14.4%	8.0%	5.8%	8.7%	5.7%	16.3%	6.7%
Canada	-1.7%	1.9%	2.8%	2.7%	-1.2%	-3.1%	2.7%	-3.0%	3.1%	1.4%	0.9%
Europe	17.8%	17.4%	19.8%	18.7%	14.9%	9.8%	4.6%	4.2%	5.3%	17.7%	4.7%
Latin America	10.9%	10.5%	12.6%	12.0%	9.4%	5.8%	5.7%	3.4%	3.8%	11.3%	4.3%
Worldwide less United States	14.2%	15.5%	17.8%	17.1%	14.0%	8.4%	5.4%	6.4%	5.3%	16.2%	5.7%
United States	1.5%	2.2%	3.8%	1.8%	2.9%	-2.4%	-5.4%	-3.3%	-1.5%	2.8%	-3.4%
Worldwide	12.3%	13.6%	15.8%	14.9%	12.5%	7.0%	4.0%	5.2%	4.5%	14.3%	4.6%
Mastercard Credit and Charge Programs											
Worldwide less United States	-6.7%	-4.5%	-1.4%	-0.3%	-0.5%	0.7%	-0.1%	-0.5%	0.9%	-0.7%	0.1%
United States	18.7%	17.1%	20.6%	10.3%	6.0%	1.0%	-4.7%	-5.1%	-1.3%	11.7%	-3.7%
Worldwide	-5.8%	-3.7%	-0.5%	0.1%	-0.2%	0.7%	-0.3%	-0.7%	0.8%	-0.2%	-0.1%
Mastercard Debit Programs											
Worldwide less United States	16.7%	17.7%	19.8%	18.8%	15.4%	9.1%	5.8%	7.0%	5.7%	17.9%	6.2%
United States	1.1%	1.8%	3.5%	1.6%	2.8%	-2.5%	-5.4%	-3.2%	-1.5%	2.6%	-3.3%
Worldwide	14.2%	15.3%	17.3%	16.2%	13.6%	7.5%	4.3%	5.6%	4.8%	15.6%	4.9%

Cards (Millions)											
All Mastercard Credit, Charge and Debit Programs											
	Q3'15	Q4'15	Q1'16	Q2'16	Q3'16	Q4'16	Q1'17	Q2'17	Q3'17	3Q'16 YTD	3Q'17 YTD
APMEA	531	546	563	579	598	619	640	661	682	598	682
Canada	46	48	48	45	46	48	48	49	51	46	51
Europe	386	396	403	414	421	432	443	453	468	421	468
Latin America	159	161	163	162	164	166	167	170	172	164	172
Worldwide less United States	1,121	1,151	1,176	1,200	1,229	1,265	1,299	1,333	1,374	1,229	1,374
United States	364	373	380	383	383	391	392	399	405	383	405
Worldwide	1,485	1,524	1,556	1,583	1,612	1,656	1,690	1,732	1,780	1,612	1,780
Mastercard Credit and Charge Programs											
Worldwide less United States	561	564	564	562	563	569	574	583	593	563	593
United States	186	190	192	195	196	200	202	204	208	196	208
Worldwide	747	754	756	757	759	770	776	787	801	759	801
Mastercard Debit Programs											
Worldwide less United States	560	587	612	638	666	695	724	750	781	666	781
United States	177	183	188	188	187	191	190	195	197	187	197
Worldwide	737	770	800	826	853	886	914	945	978	853	978

Cards Growth											
All Mastercard Credit, Charge and Debit Programs											
	Q3'15	Q4'15	Q1'16	Q2'16	Q3'16	Q4'16	Q1'17	Q2'17	Q3'17	3Q'16 YTD	3Q'17 YTD
APMEA	15.6%	15.1%	14.9%	13.5%	12.7%	13.5%	13.8%	14.1%	14.1%	12.7%	14.1%
Canada	9.1%	8.8%	8.3%	-1.4%	-0.5%	0.8%	0.8%	10.5%	11.9%	-0.5%	11.9%
Europe	7.8%	6.5%	8.1%	9.7%	9.3%	9.0%	9.9%	9.5%	11.1%	9.3%	11.1%
Latin America	8.0%	6.3%	7.8%	4.0%	3.0%	2.6%	2.8%	4.5%	5.4%	3.0%	5.4%
Worldwide less United States	11.5%	10.5%	11.2%	10.2%	9.6%	9.9%	10.4%	11.1%	11.9%	9.6%	11.9%
United States	7.0%	6.1%	7.2%	6.6%	5.3%	4.9%	3.1%	4.2%	5.8%	5.3%	5.8%
Worldwide	10.3%	9.4%	10.2%	9.3%	8.6%	8.7%	8.6%	9.4%	10.4%	8.6%	10.4%
Mastercard Credit and Charge Programs											
Worldwide less United States	1.3%	0.4%	1.8%	0.6%	0.3%	1.0%	1.8%	3.6%	5.5%	0.3%	5.5%
United States	5.3%	5.1%	5.5%	5.2%	5.4%	5.3%	5.2%	5.1%	5.9%	5.4%	5.9%
Worldwide	2.2%	1.6%	2.7%	1.7%	1.6%	2.1%	2.7%	4.0%	5.6%	1.6%	5.6%
Mastercard Debit Programs											
Worldwide less United States	24.0%	22.3%	21.6%	20.4%	18.9%	18.5%	18.3%	17.6%	17.3%	18.9%	17.3%
United States	8.7%	7.3%	8.9%	8.1%	5.3%	4.5%	1.0%	3.4%	5.7%	5.3%	5.7%
Worldwide	19.9%	18.3%	18.4%	17.3%	15.7%	15.2%	14.2%	14.4%	14.7%	15.7%	14.7%

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 and debit 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’s customers subsequent to the date of its release.

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 reflected adjusted growth rates for the impact of Article 8, by eliminating the related co-badged volumes.

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 Trans. (Mil.)	Growth
2017Q3	16,851	16.6%
2017Q2	16,014	17.0%
2017Q1 (2)	14,700	16.7%
2016Q4	15,200	17.2%
2016Q3	14,452	17.7%
2016Q2	13,688	14.0%
2016Q1 (1)	12,601	14.2%
2015Q4	12,971	12.2%
2015Q3	12,279	12.0%
FY 2016	55,941	15.8%
FY 2015	48,297	12.4%

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 (Local)	Growth (USD)
2017Q3	15.1%	17.4%
2017Q2	13.6%	10.1%
2017Q1 (2)	12.8%	9.6%
2016Q4	12.9%	7.9%
2016Q3	12.4%	9.0%
2016Q2	10.3%	7.1%
2016Q1 (1)	11.9%	6.3%
2015Q4	12.3%	0.9%
2015Q3	15.7%	0.1%
FY 2016	11.9%	7.6%
FY 2015	15.7%	1.3%

Note:

- (1) There was one more day in this period vs. the same period the previous year
- (2) There was one less day in this period vs. the same period the previous year

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.)	Growth	Period	Cards (Mil.)	Growth	Period	Cards (Mil.)	Growth
2017Q3	1,780	10.4%	2017Q3	628	-4.7%	2017Q3	2,408	6.0%
2017Q2	1,732	9.4%	2017Q2	633	-5.2%	2017Q2	2,366	5.1%
2017Q1	1,690	8.6%	2017Q1	653	-2.5%	2017Q1	2,343	5.3%
2016Q4	1,656	8.7%	2016Q4	659	-2.6%	2016Q4	2,315	5.2%
2016Q3	1,612	8.6%	2016Q3	659	-3.3%	2016Q3	2,271	4.8%
2016Q2	1,583	9.3%	2016Q2	668	-1.9%	2016Q2	2,252	5.7%
2016Q1	1,556	10.2%	2016Q1	669	-1.6%	2016Q1	2,226	6.4%
2015Q4	1,524	9.4%	2015Q4	677	-1.1%	2015Q4	2,201	6.0%
2015Q3	1,485	10.3%	2015Q3	682	-2.0%	2015Q3	2,166	6.1%