



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, 2018, 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	Q3'16	Q4'16	Q1'17	Q2'17	Q3'17	Q4'17	Q1'18	Q2'18	Q3'18	Q3'17 YTD	Q3'18 YTD
	APMEA	\$378	\$377	\$370	\$388	\$407	\$431	\$440	\$454	\$447	\$1,165
Canada	36	38	34	39	41	43	39	44	44	114	127
Europe	336	336	311	356	396	413	407	434	437	1,063	1,278
Latin America	83	90	86	92	97	106	102	100	99	276	301
Worldwide less United States	834	841	802	875	941	994	987	1,032	1,026	2,617	3,046
United States	383	387	379	404	407	423	419	442	442	1,190	1,304
Worldwide	1,217	1,228	1,181	1,279	1,348	1,416	1,407	1,475	1,468	3,808	4,350
Mastercard Credit and Charge Programs											
Worldwide less United States	465	466	444	475	508	530	528	545	535	1,426	1,608
United States	182	189	178	196	198	207	194	211	213	572	618
Worldwide	647	654	623	671	705	738	722	756	748	1,999	2,226
Mastercard Debit and Prepaid Programs											
Worldwide less United States	369	375	357	400	433	464	460	487	491	1,191	1,438
United States	201	198	201	208	209	215	225	232	229	618	685
Worldwide	570	574	558	609	642	679	685	719	720	1,809	2,123

GDV Local Growth											
All Mastercard Credit, Charge, Debit and Prepaid Programs	Q3'16	Q4'16	Q1'17	Q2'17	Q3'17	Q4'17	Q1'18	Q2'18	Q3'18	Q3'17 YTD	Q3'18 YTD
	APMEA	10.0%	7.4%	8.2%	7.0%	8.1%	12.2%	13.0%	14.2%	13.0%	7.8%
Canada	9.4%	9.4%	12.3%	10.2%	8.6%	9.6%	9.5%	9.2%	10.3%	10.2%	9.7%
Europe	4.5%	3.1%	1.3%	5.0%	14.9%	16.0%	18.5%	19.6%	18.2%	7.3%	18.8%
<i>Europe adjusted for Article 8</i>	<i>17%</i>	<i>16%</i>	<i>14%</i>	<i>15%</i>	<i>16%</i>	<i>17%</i>				<i>15%</i>	
Latin America	14.2%	14.5%	15.5%	15.1%	14.6%	16.4%	17.0%	17.1%	16.3%	15.0%	16.8%
Worldwide less United States	8.1%	6.4%	6.3%	7.1%	11.5%	14.1%	15.5%	16.4%	15.4%	8.4%	15.8%
<i>WW less USA adjusted for Article 8</i>	<i>13%</i>	<i>11%</i>	<i>11%</i>	<i>11%</i>	<i>12%</i>	<i>15%</i>				<i>12%</i>	
United States	4.8%	2.4%	1.9%	3.5%	6.2%	9.2%	10.5%	9.4%	8.7%	3.9%	9.5%
Worldwide	7.0%	5.1%	4.8%	6.0%	9.9%	12.6%	14.0%	14.2%	13.3%	6.9%	13.8%
<i>Worldwide adjusted for Article 8</i>	<i>10%</i>	<i>8%</i>	<i>8%</i>	<i>9%</i>	<i>10%</i>	<i>13%</i>				<i>9%</i>	
Mastercard Credit and Charge Programs											
Worldwide less United States	6.2%	5.7%	7.1%	6.8%	8.7%	10.3%	11.6%	12.8%	11.7%	7.6%	12.0%
United States	3.9%	4.2%	5.4%	6.6%	8.6%	10.0%	9.0%	7.6%	7.7%	6.9%	8.1%
Worldwide	5.5%	5.3%	6.6%	6.7%	8.7%	10.2%	10.9%	11.3%	10.5%	7.4%	10.9%
Mastercard Debit and Prepaid Programs											
Worldwide less United States	10.6%	7.3%	5.2%	7.5%	15.1%	18.8%	20.3%	20.8%	19.7%	9.4%	20.3%
United States	5.5%	0.8%	-1.0%	0.8%	4.0%	8.4%	11.9%	11.2%	9.5%	1.2%	10.8%
Worldwide	8.8%	5.0%	2.9%	5.1%	11.2%	15.3%	17.4%	17.5%	16.3%	6.5%	17.0%

Purchase Volume (\$ Billions)											
All Mastercard Credit, Charge, Debit and Prepaid Programs											
	Q3'16	Q4'16	Q1'17	Q2'17	Q3'17	Q4'17	Q1'18	Q2'18	Q3'18	Q3'17 YTD	Q3'18 YTD
APMEA	\$253	\$258	\$250	\$258	\$275	\$291	\$297	\$308	\$305	\$783	\$909
Canada	35	36	32	37	39	42	37	42	42	109	121
Europe	213	213	199	226	252	266	268	285	288	677	842
Latin America	51	56	55	57	61	67	65	64	63	173	192
Worldwide less United States	552	563	537	578	628	666	668	699	697	1,742	2,064
United States	327	333	324	348	347	366	359	384	385	1,019	1,128
Worldwide	879	896	860	926	975	1,032	1,027	1,083	1,082	2,761	3,192
Mastercard Credit and Charge Programs											
Worldwide less United States	426	427	407	435	466	489	488	505	496	1,308	1,488
United States	174	180	170	187	188	198	185	202	205	545	592
Worldwide	600	607	577	622	654	687	673	708	700	1,853	2,080
Mastercard Debit and Prepaid Programs											
Worldwide less United States	127	136	129	143	161	177	180	194	202	434	575
United States	152	153	154	161	160	168	174	182	180	474	536
Worldwide	279	289	283	303	321	345	354	376	382	908	1,111

Purchase Volume Local Growth											
All Mastercard Credit, Charge, Debit and Prepaid Programs											
	Q3'16	Q4'16	Q1'17	Q2'17	Q3'17	Q4'17	Q1'18	Q2'18	Q3'18	Q3'17 YTD	Q3'18 YTD
APMEA	8.5%	8.0%	9.4%	6.6%	8.5%	10.2%	11.7%	14.8%	13.4%	8.2%	13.3%
Canada	9.9%	10.1%	13.1%	11.6%	9.2%	9.9%	9.7%	9.7%	10.4%	11.1%	9.9%
Europe	-2.6%	-2.8%	-3.3%	1.9%	16.0%	17.5%	21.6%	23.1%	22.0%	5.0%	22.2%
<i>Europe adjusted for Article 8</i>	16%	16%	16%	17%	18%	20%				17%	
Latin America	15.2%	16.9%	18.2%	18.6%	18.2%	20.7%	22.1%	21.9%	21.7%	18.3%	21.9%
Worldwide less United States	4.5%	4.5%	5.3%	6.1%	12.4%	14.0%	16.3%	18.4%	17.4%	8.0%	17.4%
<i>WW less USA adjusted for Article 8</i>	12%	12%	13%	12%	13%	15%				13%	
United States	4.8%	2.7%	2.3%	3.8%	6.4%	10.0%	11.0%	10.5%	10.7%	4.2%	10.7%
Worldwide	4.6%	3.8%	4.2%	5.2%	10.2%	12.5%	14.4%	15.5%	14.9%	6.6%	14.9%
<i>Worldwide adjusted for Article 8</i>	9%	8%	9%	9%	11%	13%				9%	
Mastercard Credit and Charge Programs											
Worldwide less United States	6.7%	6.0%	7.6%	7.1%	9.1%	11.1%	12.7%	13.9%	12.7%	8.0%	13.1%
United States	3.8%	3.8%	4.9%	6.1%	7.9%	10.0%	8.8%	8.2%	9.0%	6.3%	8.7%
Worldwide	5.9%	5.4%	6.8%	6.8%	8.8%	10.8%	11.6%	12.2%	11.6%	7.5%	11.8%
Mastercard Debit and Prepaid Programs											
Worldwide less United States	-2.3%	0.2%	-1.3%	2.9%	22.9%	22.8%	27.6%	32.0%	30.7%	8.1%	30.1%
United States	6.0%	1.3%	-0.3%	1.3%	4.7%	9.9%	13.5%	13.2%	12.6%	1.9%	13.1%
Worldwide	2.1%	0.8%	-0.8%	2.0%	13.2%	16.2%	20.2%	22.2%	21.5%	4.7%	21.3%

Purchase Transactions (Millions)											
All Mastercard Credit,											
Charge, Debit and Prepaid Programs	Q3'16	Q4'16	Q1'17	Q2'17	Q3'17	Q4'17	Q1'18	Q2'18	Q3'18	Q3'17 YTD	Q3'18 YTD
APMEA	3,726	4,110	4,038	4,301	4,553	4,798	4,760	5,218	5,471	12,892	15,449
Canada	527	543	502	571	582	599	554	635	650	1,655	1,839
Europe	4,867	5,133	4,993	5,607	6,020	6,457	6,440	7,323	7,764	16,620	21,527
Latin America	1,638	1,742	1,732	1,819	1,929	2,087	2,062	2,185	2,303	5,479	6,550
Worldwide less United States	10,758	11,528	11,264	12,299	13,083	13,941	13,816	15,361	16,187	36,646	45,364
United States	6,057	6,005	5,782	6,254	6,315	6,510	6,357	6,863	6,928	18,351	20,148
Worldwide	16,814	17,533	17,046	18,553	19,398	20,451	20,172	22,224	23,115	54,997	65,512
Mastercard Credit and Charge Programs											
Worldwide less United States	6,421	6,717	6,470	6,996	7,307	7,640	7,433	8,089	8,431	20,773	23,954
United States	2,018	2,065	1,885	2,095	2,137	2,220	2,020	2,248	2,321	6,117	6,589
Worldwide	8,438	8,782	8,355	9,090	9,444	9,861	9,453	10,337	10,752	26,889	30,542
Mastercard Debit and Prepaid Programs											
Worldwide less United States	4,337	4,811	4,794	5,303	5,776	6,300	6,382	7,272	7,756	15,873	21,410
United States	4,039	3,940	3,896	4,159	4,179	4,290	4,337	4,615	4,607	12,234	13,559
Worldwide	8,376	8,751	8,691	9,463	9,955	10,591	10,720	11,887	12,363	28,108	34,969

Purchase Transactions Growth											
All Mastercard Credit,											
Charge, Debit and Prepaid Programs	Q3'16	Q4'16	Q1'17	Q2'17	Q3'17	Q4'17	Q1'18	Q2'18	Q3'18	Q3'17 YTD	Q3'18 YTD
APMEA	21.2%	25.0%	25.4%	22.0%	22.2%	16.7%	17.9%	21.3%	20.2%	23.1%	19.8%
Canada	12.3%	11.3%	12.4%	11.8%	10.5%	10.3%	10.5%	11.1%	11.6%	11.5%	11.1%
Europe	5.1%	4.0%	2.8%	8.8%	23.7%	25.8%	29.0%	30.6%	29.0%	11.7%	29.5%
<i>Europe adjusted for Article 8</i>	24%	22%	22%	24%	26%	28%				24%	
Latin America	13.5%	14.7%	16.7%	16.4%	17.7%	19.8%	19.1%	20.1%	19.4%	17.0%	19.5%
Worldwide less United States	11.8%	12.7%	12.6%	14.4%	21.6%	20.9%	22.6%	24.9%	23.7%	16.3%	23.8%
<i>WW less USA adjusted for Article 8</i>	21%	21%	22%	21%	23%	22%				22%	
United States	6.8%	1.9%	0.1%	1.4%	4.3%	8.4%	10.0%	9.7%	9.7%	2.0%	9.8%
Worldwide	10.0%	8.7%	8.0%	9.6%	15.4%	16.6%	18.3%	19.8%	19.2%	11.1%	19.1%
<i>Worldwide adjusted for Article 8</i>	15%	14%	14%	14%	16%	17%				14%	
Mastercard Credit and Charge Programs											
Worldwide less United States	10.9%	11.4%	11.9%	12.5%	13.8%	13.7%	14.9%	15.6%	15.4%	12.8%	15.3%
United States	5.7%	3.6%	2.3%	3.9%	5.9%	7.5%	7.1%	7.3%	8.6%	4.1%	7.7%
Worldwide	9.6%	9.5%	9.6%	10.4%	11.9%	12.3%	13.1%	13.7%	13.9%	10.7%	13.6%
Mastercard Debit and Prepaid Programs											
Worldwide less United States	13.2%	14.5%	13.5%	16.9%	33.2%	31.0%	33.1%	37.1%	34.3%	21.2%	34.9%
United States	7.3%	0.9%	-0.9%	0.2%	3.5%	8.9%	11.3%	11.0%	10.3%	0.9%	10.8%
Worldwide	10.3%	8.0%	6.5%	8.9%	18.8%	21.0%	23.3%	25.6%	24.2%	11.4%	24.4%

Cash Volume (\$ Billions)											
All Mastercard Credit,											
Charge, Debit and Prepaid Programs	Q3'16	Q4'16	Q1'17	Q2'17	Q3'17	Q4'17	Q1'18	Q2'18	Q3'18	Q3'17 YTD	Q3'18 YTD
APMEA	\$125	\$119	\$120	\$130	\$132	\$140	\$143	\$146	\$142	\$381	\$431
Canada	2	2	2	2	2	2	2	2	2	5	5
Europe	123	123	112	131	143	148	138	149	148	386	436
Latin America	32	34	32	35	36	39	36	37	37	103	110
Worldwide less United States	282	278	265	297	313	328	320	333	329	875	982
United States	57	54	56	57	59	56	60	58	57	172	176
Worldwide	338	332	321	354	373	384	380	392	386	1,047	1,158
Mastercard Credit and Charge Programs											
Worldwide less United States	39	39	37	39	41	41	40	40	39	118	119
United States	8	8	8	9	10	9	9	9	8	28	27
Worldwide	47	47	46	48	52	50	49	49	48	146	146
Mastercard Debit and Prepaid Programs											
Worldwide less United States	243	239	228	257	272	287	280	293	290	757	863
United States	48	46	47	48	49	47	50	50	49	144	149
Worldwide	291	285	275	305	321	334	330	343	339	901	1,012

Cash Volume Local Growth											
All Mastercard Credit,											
Charge, Debit and Prepaid Programs	Q3'16	Q4'16	Q1'17	Q2'17	Q3'17	Q4'17	Q1'18	Q2'18	Q3'18	Q3'17 YTD	Q3'18 YTD
APMEA	13.3%	5.9%	5.8%	7.9%	7.3%	16.7%	16.0%	12.8%	12.1%	7.0%	13.6%
Canada	-0.4%	-3.6%	-2.6%	-13.0%	-2.0%	2.2%	4.3%	-1.0%	9.0%	-6.1%	4.1%
Europe	19.7%	15.3%	10.5%	11.0%	13.0%	13.5%	13.0%	13.3%	11.5%	11.5%	12.6%
Latin America	12.6%	10.8%	11.1%	9.7%	8.9%	9.7%	8.8%	9.5%	8.2%	9.9%	8.8%
Worldwide less United States	15.8%	10.4%	8.3%	9.3%	9.9%	14.3%	13.8%	12.6%	11.4%	9.2%	12.5%
United States	4.4%	1.1%	-0.4%	1.5%	4.8%	4.2%	7.6%	2.9%	-3.3%	2.0%	2.3%
Worldwide	13.7%	8.8%	6.7%	8.0%	9.1%	12.7%	12.7%	11.0%	8.9%	7.9%	10.9%
Mastercard Credit and Charge Programs											
Worldwide less United States	0.1%	2.3%	2.5%	3.1%	4.3%	1.3%	0.2%	0.6%	0.4%	3.3%	0.4%
United States	7.1%	13.3%	16.0%	17.5%	23.4%	9.1%	12.4%	-4.7%	-16.8%	19.1%	-3.9%
Worldwide	1.3%	4.1%	4.8%	5.5%	7.6%	2.6%	2.3%	-0.4%	-3.2%	6.0%	-0.4%
Mastercard Debit and Prepaid Programs											
Worldwide less United States	18.8%	11.9%	9.3%	10.3%	10.8%	16.4%	16.0%	14.4%	13.1%	10.2%	14.5%
United States	3.9%	-0.8%	-2.9%	-1.0%	1.6%	3.2%	6.7%	4.4%	-0.5%	-0.8%	3.5%
Worldwide	16.0%	9.6%	7.0%	8.3%	9.3%	14.4%	14.5%	12.8%	10.9%	8.3%	12.7%

Cash Transactions (Millions)											
All Mastercard Credit,											
Charge, Debit and Prepaid Programs	Q3'16	Q4'16	Q1'17	Q2'17	Q3'17	Q4'17	Q1'18	Q2'18	Q3'18	Q3'17 YTD	Q3'18 YTD
APMEA	1,298	1,294	1,279	1,365	1,375	1,468	1,468	1,525	1,554	4,019	4,546
Canada	6	5	6	6	6	5	6	6	6	17	19
Europe	916	925	861	958	977	1,001	937	1,045	1,056	2,796	3,038
Latin America	252	264	254	259	261	279	264	271	272	775	806
Worldwide less United States	2,473	2,488	2,400	2,588	2,619	2,754	2,675	2,847	2,888	7,606	8,409
United States	350	324	320	338	346	326	328	340	337	1,004	1,006
Worldwide	2,823	2,812	2,720	2,926	2,964	3,080	3,003	3,187	3,225	8,610	9,414
Mastercard Credit and Charge Programs											
Worldwide less United States	187	189	175	186	185	183	170	180	183	547	533
United States	10	9	8	9	9	9	8	8	9	27	25
Worldwide	196	198	183	195	195	192	178	189	191	573	558
Mastercard Debit and Prepaid Programs											
Worldwide less United States	2,286	2,299	2,225	2,402	2,433	2,571	2,505	2,666	2,705	7,060	7,876
United States	340	315	312	329	336	317	320	332	328	977	980
Worldwide	2,626	2,614	2,537	2,731	2,769	2,888	2,825	2,998	3,033	8,037	8,856

Cash Transactions Growth											
All Mastercard Credit,											
Charge, Debit and Prepaid Programs	Q3'16	Q4'16	Q1'17	Q2'17	Q3'17	Q4'17	Q1'18	Q2'18	Q3'18	Q3'17 YTD	Q3'18 YTD
APMEA	14.3%	7.8%	6.1%	8.6%	5.9%	13.5%	14.8%	11.7%	13.0%	6.9%	13.1%
Canada	-1.2%	-3.2%	2.7%	-3.0%	-0.4%	0.0%	2.9%	14.7%	14.6%	-0.3%	10.8%
Europe	14.1%	9.8%	6.1%	5.3%	6.6%	8.2%	8.8%	9.1%	8.0%	6.0%	8.6%
Latin America	9.4%	5.8%	5.7%	3.3%	3.6%	5.8%	3.9%	4.5%	3.9%	4.2%	4.1%
Worldwide less United States	13.7%	8.3%	6.0%	6.8%	5.9%	10.7%	11.4%	10.0%	10.3%	6.3%	10.6%
United States	2.9%	-2.4%	-5.4%	-3.3%	-1.3%	0.6%	2.6%	0.6%	-2.5%	-3.3%	0.2%
Worldwide	12.2%	7.0%	4.6%	5.5%	5.0%	9.5%	10.4%	8.9%	8.8%	5.0%	9.3%
Mastercard Credit and Charge Programs											
Worldwide less United States	-1.1%	0.1%	-0.9%	-1.1%	-0.6%	-3.2%	-2.9%	-3.2%	-1.5%	-0.9%	-2.5%
United States	6.0%	1.0%	-4.7%	-5.2%	-1.4%	-2.9%	0.2%	-5.0%	-8.1%	-3.7%	-4.5%
Worldwide	-0.7%	0.1%	-1.1%	-1.3%	-0.6%	-3.2%	-2.7%	-3.3%	-1.8%	-1.0%	-2.6%
Mastercard Debit and Prepaid Programs											
Worldwide less United States	15.1%	9.1%	6.6%	7.5%	6.4%	11.8%	12.6%	11.0%	11.2%	6.8%	11.6%
United States	2.8%	-2.5%	-5.4%	-3.2%	-1.3%	0.7%	2.7%	0.8%	-2.3%	-3.3%	0.3%
Worldwide	13.3%	7.5%	5.0%	6.0%	5.4%	10.5%	11.4%	9.8%	9.5%	5.5%	10.2%

Cards (Millions)											
All Mastercard Credit,											
Charge, Debit and Prepaid Programs	Q3'16	Q4'16	Q1'17	Q2'17	Q3'17	Q4'17	Q1'18	Q2'18	Q3'18	Q3'17 YTD	Q3'18 YTD
APMEA	592	613	633	655	683	703	721	741	765	683	765
Canada	46	48	49	49	50	52	56	58	59	50	59
Europe	421	431	439	449	465	475	489	501	516	465	516
Latin America	164	165	166	168	172	176	170	174	178	172	178
Worldwide less United States	1,222	1,257	1,288	1,321	1,370	1,407	1,435	1,474	1,518	1,370	1,518
United States	383	391	391	397	399	410	416	427	434	399	434
Worldwide	1,605	1,648	1,679	1,717	1,769	1,817	1,851	1,900	1,952	1,769	1,952
Mastercard Credit and Charge Programs											
Worldwide less United States	558	565	568	576	590	601	605	617	631	590	631
United States	196	200	202	205	207	211	211	218	222	207	222
Worldwide	754	765	770	781	797	812	815	835	853	797	853
Mastercard Debit and Prepaid Programs											
Worldwide less United States	664	692	720	745	779	806	831	857	887	779	887
United States	187	191	189	192	192	199	205	209	212	192	212
Worldwide	851	883	909	936	972	1,005	1,036	1,066	1,099	972	1,099

Cards Growth											
All Mastercard Credit,											
Charge, Debit and Prepaid Programs	Q3'16	Q4'16	Q1'17	Q2'17	Q3'17	Q4'17	Q1'18	Q2'18	Q3'18	Q3'17 YTD	Q3'18 YTD
APMEA	11.5%	12.3%	12.7%	13.1%	15.3%	14.6%	13.9%	13.2%	12.0%	15.3%	12.0%
Canada	-0.5%	0.8%	1.0%	9.8%	9.5%	9.2%	14.8%	17.7%	17.6%	9.5%	17.6%
Europe	9.1%	8.6%	9.1%	8.5%	10.4%	10.3%	11.3%	11.7%	11.2%	10.4%	11.2%
Latin America	3.1%	2.3%	2.1%	3.6%	4.9%	6.9%	1.9%	3.3%	3.7%	4.9%	3.7%
Worldwide less United States	9.0%	9.2%	9.5%	10.1%	12.0%	11.9%	11.5%	11.6%	10.9%	12.0%	10.9%
United States	5.3%	4.9%	3.0%	3.5%	4.3%	4.9%	6.3%	7.6%	8.7%	4.3%	8.7%
Worldwide	8.1%	8.1%	7.9%	8.5%	10.2%	10.3%	10.3%	10.7%	10.4%	10.2%	10.4%
Mastercard Credit and Charge Programs											
Worldwide less United States	-0.7%	0.0%	0.6%	2.4%	5.7%	6.4%	6.4%	7.1%	6.9%	5.7%	6.9%
United States	5.4%	5.3%	5.4%	5.3%	5.4%	5.4%	4.3%	6.4%	7.3%	5.4%	7.3%
Worldwide	0.8%	1.4%	1.8%	3.1%	5.6%	6.1%	5.9%	6.9%	7.0%	5.6%	7.0%
Mastercard Debit and Prepaid Programs											
Worldwide less United States	18.6%	17.9%	17.7%	17.0%	17.3%	16.4%	15.4%	15.1%	13.9%	17.3%	13.9%
United States	5.3%	4.5%	0.6%	1.7%	3.1%	4.4%	8.5%	9.0%	10.1%	3.1%	10.1%
Worldwide	15.4%	14.7%	13.7%	13.5%	14.2%	13.8%	14.0%	13.8%	13.1%	14.2%	13.1%

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, so that you can better understand the underlying growth rates of our business. These are the only supplemental operational metrics which are significantly impacted by the deconsolidation.

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 Trans. (Mil.)	Actual Growth	Growth Adj for Ven
2018Q3	(2)	18,825	11.7%	16%
2018Q2		18,161	13.4%	17%
2018Q1	(1)	16,681	13.5%	17%
2017Q4	(2)	17,739	16.7%	15%
2017Q3		16,851	16.6%	15%
2017Q2		16,014	17.0%	16%
2017Q1	(2)	14,700	16.7%	16%
2016Q4		15,200	17.2%	16%
2016Q3		14,452	17.7%	17%
FY 2017	(3)	65,304	16.7%	15%
FY 2016	(1)	55,941	15.8%	15%

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)
2018Q3	(2)	16.6%	13.5%
2018Q2		19.4%	23.6%
2018Q1	(1)	21.5%	31.8%
2017Q4	(2)	16.6%	22.4%
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%
FY 2017	(3)	14.6%	15.0%
FY 2016	(1)	11.9%	7.6%

Note:

- (1) There was one more switching day in this period vs. the same period the previous year
- (2) There was one less switching day in this period vs. the same period the previous year
- (3) There were two less switching days 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.)	Actual Growth	Growth Adj for Ven	Period	Cards (Mil.)	Actual Growth	Growth Adj for Ven	Period	Cards (Mil.)	Actual Growth	Growth Adj for Ven
2018Q2	1,900	10.7%	11%	2018Q2	527	-13.6%	-8%	2018Q2	2,427	4.3%	6%
2018Q1	1,851	10.3%	11%	2018Q1	536	-15.0%	-10%	2018Q1	2,387	3.4%	5%
2017Q4	1,817	10.3%	10%	2017Q4	595	-7.6%	-9%	2017Q4	2,412	5.2%	5%
2017Q3	1,769	10.2%	10%	2017Q3	602	-7.6%	-9%	2017Q3	2,371	5.0%	5%
2017Q2	1,717	8.5%	9%	2017Q2	610	-7.7%	-9%	2017Q2	2,327	3.7%	4%
2017Q1	1,679	7.9%	8%	2017Q1	630	-4.8%	-5%	2017Q1	2,309	4.1%	4%
2016Q4	1,648	8.1%	8%	2016Q4	644	-4.8%	-5%	2016Q4	2,292	4.1%	4%
2016Q3	1,605	8.1%	8%	2016Q3	652	-4.4%	-5%	2016Q3	2,257	4.2%	4%