

## **Appendix I. International Reserves**

Total international reserves, including gold, grew by 2.2 percent in 2016 and stood at SDR 9.1 trillion at the end of 2016 (Table I.1).<sup>1</sup> Reserves excluding gold grew by 1.1 percent to SDR 8.2 trillion in 2016. The market value of gold held by monetary authorities<sup>2</sup> increased by 13.3 percent, to SDR 912 billion.

Foreign exchange reserves, the largest component of total international reserves, increased to SDR 7.97 trillion in 2016, with a growth rate of 1.1 percent, up from -1.5 percent in 2015. IMF-related assets (that is, reserve positions in the IMF and holdings of SDRs), which account for the balance of non-gold reserves, increased by 5.8 percent to SDR 283 billion.

### **Foreign exchange reserves**

Foreign exchange reserves accounted for 96.9 percent of non-gold international reserves, and 87.2 percent of total reserves, at the end of 2016. Emerging and developing economies held SDR 4.89 trillion of foreign exchange reserves (about three-fifths of the total), representing a decrease of 2.3 percent from the previous year. Advanced economies held SDR 3.08 trillion, representing a 7.2 percent increase.

### **IMF-related assets**

During 2016, members' reserve positions in the IMF—which consist of members' reserve tranche and creditor positions—increased by 24.6 percent, to SDR 79.1 billion. The reserve position of both advanced and emerging and developing economies increased by 14 percent and 52.8 percent, respectively in 2016. SDR holdings of IMF members were nearly steady. IMF-related assets accounted for 3.1 percent of total international reserves at the end of 2016.

### **Gold reserves**

The market value of gold reserves increased by 13.3 percent, due to higher gold prices in 2016. This increased the share of gold in international reserves to 10 percent. The physical stock of official gold grew by 1.7 percent in 2016; this reflected a 1.1 percent increase in the stock held by emerging and developing economies and no change in the much larger stock held by advanced economies (the share of the gold stock held by advanced economies remains around two-thirds). At the end of 2016, gold constituted 15.6 percent of the reserves of advanced economies, and 4.2 percent of the reserves of emerging and developing economies.

### **Developments during the first quarter of 2017**

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<sup>1</sup> On December 30, 2016, 1 SDR = 1.34433US\$.

<sup>2</sup> Official monetary authorities include central banks as well as currency boards, exchange stabilization funds, and treasuries, to the extent that the latter group of entities perform monetary authorities' functions.

During the first quarter of 2017, foreign exchange reserves grew by 0.5 percent, while total international reserves rose by 1.3 percent (annualized rates of about 1.8 percent and 5.2 percent, respectively). Foreign exchange reserve accumulation amounted to SDR 35.9 billion in the quarter, as SDR 95.8 billion reserve accumulation by the advanced economies more than compensated for emerging economies whose reserves declined by 59.8 billion to 4.83 trillion SDR. The market value of global gold reserves rose by 8.8 percent in the first quarter, driven by an increasing price of gold. IMF-related assets fell by 0.5 percent in the first quarter.

### **Currency composition of foreign exchange reserves**

Available information on the currency composition of foreign exchange reserves is shown in Table I.2—globally, and separately for the group of advanced economies and for the group of emerging and developing economies. Changes in the SDR value of foreign exchange reserves are decomposed into quantity and valuation (price) changes in Table I.3.

As reported in Table I.2, information about the currency composition of foreign exchange reserves is available for about 68.3 percent of total reserves.

The currency composition of reserves changed little in 2016. In particular:

- The share of U.S. dollar holdings in global foreign exchange reserves remained a bit more than three-fifths, at 63.4 percent in 2016. At 3.5 trillion the value of SDR holdings increased by 12 percent in 2016, reflecting a quantity increase of 275.3 billion, accompanied with a valuation increase of 108.7 billion.
- The share of the euro in global foreign exchange reserves improved to just over one-fifth, at 20.2 percent in 2016. At 1.1 trillion the value of SDR holdings increased by 16 percent in 2016, reflecting a quantity increase of 103.2 billion, accompanied with a valuation increase of 53.1 billion.
- The share of global foreign exchange reserves denominated in Japanese yen was 4.5 percent in 2016, up by 0.5 percentage point from 2015. At 253.4 billion the value of SDR holdings increased by 28 percent in 2016, reflecting a quantity increase of 12.9 billion, accompanied with a valuation increase of 42.2 billion.
- The shares of the pound sterling and the Swiss franc in global foreign exchange reserves were also little changed in 2016, at about 4.7 percent and 0.3 percent, respectively. In 2016, pound sterling reserve holdings recorded a quantity increase of SDR 37.9 billion and a valuation decrease of SDR 15.2 billion, while the Swiss franc reserve holdings recorded a quantity increase of SDR 1 billion and a valuation increase of 0.7 billion.
- The share of all other currencies in global foreign exchange reserves had declined marginally from 3.1 percent in 2015 to 3.0 percent in 2016.

## Appendix I. International Reserves

### Appendix I.1. Official holdings of reserve assets<sup>1</sup>

(Billions of SDRs)

	2009	2010	2011	2012	2013	2014	2015	2016	April-17
<b>All countries</b>									
Total reserves excluding gold									
Fund-related assets									
Reserve positions in the Fund	38.7	48.8	98.3	103.2	97.5	81.7	63.5	79.1	77.7
SDRs	204.0	204.0	204.1	204.2	204.2	204.2	204.2	204.2	204.2
<b>Subtotal, Fund-related assets</b>	<b>242.7</b>	<b>252.8</b>	<b>302.3</b>	<b>307.4</b>	<b>301.7</b>	<b>285.9</b>	<b>267.6</b>	<b>283.2</b>	<b>281.9</b>
Foreign exchange	5,208.4	6,016.1	6,647.2	7,125.8	7,586.9	7,996.9	7,878.6	7,967.9	8,003.8
<b>Total reserves excluding gold</b>	<b>5,447.8</b>	<b>6,264.6</b>	<b>6,939.5</b>	<b>7,420.8</b>	<b>7,875.6</b>	<b>8,268.7</b>	<b>8,130.6</b>	<b>8,221.2</b>	<b>8,256.6</b>
Gold <sup>2</sup>									
Quantity (millions of ounces)	980.8	991.5	1,003.3	1,018.6	1,024.1	1,029.8	1,052.6	1,070.4	1,074.5
Value at London market price	680.4	904.9	1,000.5	1,102.8	801.0	857.2	805.2	912.4	992.5
<b>Total reserves including gold</b>	<b>6,128.2</b>	<b>7,169.5</b>	<b>7,940.0</b>	<b>8,523.6</b>	<b>8,676.6</b>	<b>9,126.0</b>	<b>8,935.9</b>	<b>9,133.6</b>	<b>9,249.1</b>
<b>Advanced economies<sup>3</sup></b>									
Total reserves excluding gold									
Fund-related assets									
Reserve positions in the Fund	27.4	34.5	73.9	77.6	73.2	60.6	46.1	52.6	51.5
SDRs	128.6	128.6	128.6	128.6	128.6	128.6	128.6	128.6	128.6
<b>Subtotal, Fund-related assets</b>	<b>156.1</b>	<b>163.2</b>	<b>202.5</b>	<b>206.3</b>	<b>201.8</b>	<b>189.3</b>	<b>174.8</b>	<b>181.2</b>	<b>180.1</b>
Foreign exchange	1,792.2	2,031.9	2,244.7	2,422.0	2,493.8	2,673.1	2,871.3	3,077.8	3,173.5
<b>Total reserves excluding gold</b>	<b>1,949.8</b>	<b>2,196.5</b>	<b>2,445.8</b>	<b>2,626.0</b>	<b>2,693.4</b>	<b>2,859.9</b>	<b>3,044.1</b>	<b>3,249.8</b>	<b>3,345.1</b>
Gold <sup>2</sup>									
Quantity (millions of ounces)	704.7	704.5	705.6	706.4	706.9	706.8	706.7	706.6	706.5
Value at London market price	488.9	643.0	703.7	764.8	552.9	588.4	540.6	602.3	652.7
<b>Total reserves including gold</b>	<b>2,438.7</b>	<b>2,839.4</b>	<b>3,149.4</b>	<b>3,390.8</b>	<b>3,246.3</b>	<b>3,448.2</b>	<b>3,584.6</b>	<b>3,852.1</b>	<b>3,997.8</b>
<b>Emerging market and developing economies<sup>3</sup></b>									
Total reserves excluding gold									
Fund-related assets									
Reserve positions in the Fund	11.2	14.3	24.3	25.6	24.3	21.1	17.3	26.5	26.2
SDRs	75.4	75.4	75.4	75.5	75.5	75.5	75.5	75.5	75.5
<b>Subtotal, Fund-related assets</b>	<b>86.6</b>	<b>89.6</b>	<b>99.7</b>	<b>101.1</b>	<b>99.8</b>	<b>96.6</b>	<b>92.8</b>	<b>102.0</b>	<b>101.7</b>
Foreign exchange	3,416.2	3,984.3	4,402.5	4,703.8	5,093.0	5,323.8	5,007.3	4,890.1	4,830.3
<b>Total reserves excluding gold</b>	<b>3,498.0</b>	<b>4,068.1</b>	<b>4,493.8</b>	<b>4,794.8</b>	<b>5,182.2</b>	<b>5,408.9</b>	<b>5,086.6</b>	<b>4,971.4</b>	<b>4,911.5</b>
Gold <sup>2</sup>									
Quantity (millions of ounces)	174.5	180.5	191.6	204.9	215.6	224.0	252.1	254.8	258.8
Value at London market price	121.0	164.7	191.1	221.9	168.6	186.4	192.8	217.2	239.0
<b>Total reserves including gold</b>	<b>3,619.1</b>	<b>4,232.8</b>	<b>4,684.8</b>	<b>5,016.7</b>	<b>5,350.8</b>	<b>5,595.3</b>	<b>5,279.4</b>	<b>5,188.6</b>	<b>5,150.5</b>

Source: IMF, *International Financial Statistics*.

Note: Components may not sum to totals because of rounding.

<sup>1</sup> End of year figures for all years except 2017. "IMF-related assets" comprise reserve positions in the IMF and SDR holdings of all IMF members. The entries under "Foreign exchange" and "Gold" comprise official holdings of those IMF members for which data are available and certain countries or areas.

<sup>2</sup> One troy ounce equals 31.103 grams. The market price is the afternoon price fixed in London on the last business day of each period.

<sup>3</sup> Historical data do not match those in earlier reports due to substantial revisions to foreign exchange reserves over 2005–08 by some advanced as well as emerging markets and developing economies, and smaller revisions to group totals for earlier periods.

## Appendix I. International Reserves

### Appendix I.2 Share of national currencies in total identified

#### official holdings of foreign exchange, end of year<sup>1</sup>

(Percent)

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<b>All countries</b>													
US dollar	65.5	66.5	65.0	63.9	63.8	62.1	62.1	62.6	61.5	61.2	63.3	64.2	63.4
Japanese yen	4.3	4.0	3.5	3.2	3.5	2.9	3.7	3.6	4.1	3.8	3.9	4.0	4.5
Pound sterling	3.5	3.7	4.5	4.8	4.2	4.2	3.9	3.8	4.0	4.0	3.8	4.9	4.7
Swiss franc	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.3	0.3	0.3	0.3
Euro <sup>2</sup>	24.7	23.9	25.0	26.1	26.2	27.7	25.7	24.4	24.0	24.2	21.9	19.7	20.2
Other currencies <sup>3</sup>	1.9	1.7	1.8	1.8	2.2	3.0	4.4	5.5	3.3	2.9	3.1	3.1	3.0
<b>Advanced economies<sup>4</sup></b>													
US dollar	67.1	69.1	67.9	65.7	66.9	64.9	64.8	66.3	62.2	61.6	63.6	64.4	
Japanese yen	5.0	4.7	4.2	4.0	4.3	3.9	4.5	4.4	5.0	4.6	4.5	4.8	
Pound sterling	2.6	2.7	3.2	3.5	2.7	2.8	2.5	2.5	3.0	3.0	2.9	3.1	
Swiss franc	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.3	0.4	0.4	0.4	
Euro	23.0	21.4	22.4	24.5	23.6	25.7	24.2	22.6	24.5	24.9	22.7	21.7	
Other currencies	2.1	1.8	1.9	2.1	2.4	2.6	3.9	4.1	2.9	2.4	2.7	2.6	
<b>Emerging market and developing economies<sup>4</sup></b>													
US dollar	61.9	61.9	60.7	61.8	60.3	58.8	59.1	58.3	60.6	60.8	63.0	64.2	
Japanese yen	2.8	2.6	2.3	2.3	2.6	1.7	2.8	2.7	3.0	2.9	3.1	3.4	
Pound sterling	5.4	5.6	6.4	6.3	5.9	5.9	5.5	5.3	5.2	5.2	4.9	5.0	
Swiss franc	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.2	0.1	0.1	0.1	
Euro	28.3	28.3	28.8	28.0	29.1	29.9	27.4	26.5	23.5	23.4	20.8	19.0	
Other currencies	1.4	1.6	1.7	1.6	1.9	3.6	5.1	7.1	3.7	3.3	3.8	4.0	
<b>Memorandum items:</b>													
<b>Unallocated Reserves<sup>5</sup></b>													
All countries	29.2	34.2	36.8	38.5	42.7	43.8	44.3	44.6	44.4	46.7	47.5	37.6	31.7
Advanced economies	11.8	12.3	12.0	11.3	11.7	12.5	12.4	11.3	11.0	10.9	11.0	10.7	
Emerging market and developing economies	50.7	54.5	55.5	54.2	58.7	60.0	60.3	61.3	61.5	64.1	65.7	65.9	

Note: Components may not sum to total because of rounding.

<sup>1</sup> The currency shares are calculated for the reserves of member countries that report the currency composition of their foreign exchange reserves. The data include minimal estimation undertaken mainly for late reporters. Reserves for which currency composition is not reported are shown under "Unallocated Reserves."

<sup>2</sup> Not comparable with the combined share of euro legacy currencies in previous years because it excludes the euros received by euro area members when their previous holdings of other euro area

<sup>3</sup> Foreign exchange reserves of IMF member countries and the sum of reserves that are reported to be held in currencies other than those listed above.

<sup>4</sup> Historical data do not match those in earlier reports due to substantial revisions to foreign exchange reserves over 2005–08 by some advanced as well as emerging market and developing economies, and smaller revisions to group totals for earlier periods that were first incorporated in the 2010 Annual Report.

<sup>5</sup> Foreign exchange reserves whose currency composition information is not submitted to the IMF, in percent of total official holdings of foreign exchange reserves.

## Appendix I. International Reserves

### Appendix I.3 Currency composition of official holdings of foreign exchange, end of year<sup>1</sup>

(Billions of SDRs)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016 Q2
<b>US dollar</b>												
Change in holdings	203.4	113.0	229.9	76.9	74.0	266.6	221.9	129.7	41.3	184.5	495.6	384.0
Quantity change	104.1	183.3	308.4	29.3	104.3	237.3	210.3	132.5	46.8	26.1	372.0	275.3
Price change	99.4	-70.3	-78.5	47.6	-30.3	29.3	11.5	-2.8	-5.5	158.3	123.6	108.7
Year-end value	1,323.3	1,436.3	1,666.2	1,743.1	1,817.1	2,083.7	2,305.5	2,435.2	2,476.6	2,661.0	3,156.6	3,540.6
<b>Japanese yen</b>												
Change in holdings	5.5	-2.4	6.5	11.9	-9.9	37.8	10.2	29.1	-7.4	9.2	34.6	55.1
Quantity change	8.8	2.0	7.0	-12.1	-7.3	23.4	3.4	46.2	23.6	21.7	26.8	12.9
Price change	-3.3	-4.3	-0.5	23.9	-2.6	14.3	6.8	-17.1	-31.0	-12.5	7.8	42.2
Year-end value	78.8	76.4	82.9	94.8	84.8	122.6	132.8	161.9	154.5	163.7	198.3	253.4
<b>Pound sterling</b>												
Change in holdings	14.8	25.3	26.0	-10.6	9.1	7.6	9.3	18.8	1.1	-2.0	80.0	22.7
Quantity change	17.1	18.0	29.7	26.2	-0.7	9.6	10.5	16.2	-5.3	-3.1	82.5	37.9
Price change	-2.2	7.3	-3.6	-36.8	9.7	-2.0	-1.3	2.6	6.4	1.1	-2.6	-15.2
Year-end value	74.6	99.8	125.9	115.3	124.3	131.9	141.2	160.0	161.1	159.1	239.1	261.9
<b>Swiss franc</b>												
Change in holdings	0.1	0.9	0.2	-0.3	-0.4	0.9	-1.5	5.6	2.4	0.4	3.0	1.7
Quantity change	0.2	0.8	0.1	-0.6	-0.4	0.5	-1.2	5.4	2.1	0.9	2.5	1.0
Price change	-0.2	0.1	0.1	0.3	0.0	0.4	-0.3	0.2	0.3	-0.5	0.5	0.7
Year-end value	2.9	3.8	4.0	3.8	3.4	4.3	2.8	8.4	10.8	11.3	14.3	16.0
<b>Euro</b>												
Change in holdings	53.4	76.6	129.9	34.6	93.4	52.3	36.5	54.2	25.3	-58.2	50.7	156.3
Quantity change	80.5	46.7	90.6	57.1	80.4	99.1	64.1	37.2	-15.3	4.9	109.7	103.2
Price change	-27.1	29.9	39.3	-22.5	13.0	-46.9	-27.6	17.0	40.7	-63.2	-59.0	53.1
Year-end value	475.3	551.9	681.8	716.4	809.8	862.1	898.7	952.8	978.2	919.9	970.7	1,126.9
<b>Sum of the above<sup>2</sup></b>												
Change in holdings	277.2	213.4	392.6	112.5	166.2	365.1	276.4	237.4	62.8	133.8	663.8	619.9
Quantity change	210.7	250.8	435.8	99.9	176.4	370.0	287.2	237.6	52.0	50.6	593.5	430.4
Price change	66.5	-37.4	-43.1	12.6	-10.2	-4.8	-10.8	-0.2	10.9	83.3	70.3	189.5
Year-end value	1,954.8	2,168.2	2,560.8	2,673.4	2,839.5	3,204.6	3,481.1	3,718.4	3,781.3	3,915.1	4,579.0	5,198.8
<b>Other currencies</b>												
Change in holdings	2.7	5.3	7.9	12.2	28.8	59.5	53.8	-72.7	-14.0	16.8	22.1	15.3
Year-end value	34.7	39.9	47.9	60.1	88.9	148.4	202.2	129.5	115.5	132.3	154.4	169.7
<b>Unallocated Reserves<sup>3</sup></b>												
Change in holdings	329	250	351	402	244	383	301	201	378	259	-836	-374
Year-end value	1,033.0	1,283.0	1,634.0	2,035.9	2,279.8	2,662.8	2,963.7	3,164.4	3,542.6	3,801.1	2,965.3	2,591.7
<b>Total official holdings<sup>4</sup></b>												
Change in holdings	609.1	468.6	751.5	526.6	438.9	807.6	631.1	365.4	427.0	409.2	-149.8	261.5
Year-end value	3,022.6	3,491.2	4,242.7	4,769.3	5,208.2	6,015.8	6,646.9	7,012.3	7,439.3	7,848.5	7,698.7	7,960.2

Note: Components may not sum to total because of rounding.

<sup>1</sup> The currency composition of official foreign exchange reserves as reported by countries, including minimal estimation undertaken mainly for late reporters. Reserves for which currency composition is not reported are shown under "Unallocated Reserves." Quantity changes are derived by multiplying the changes in official holdings of each currency from the end of one quarter to the next by the average of the two SDR prices of that currency prevailing at the corresponding dates. This procedure converts the change in the quantity of national currency from own units to SDR units of account. Subtracting the SDR value of the quantity change so derived from the quarterly change in the SDR value of foreign exchange held at the end of two successive quarters and cumulating these differences yields the effect of price changes over the years shown.

<sup>2</sup> Each item represents the sum of the currencies above.

<sup>3</sup> Foreign exchange reserves whose currency composition information is not submitted to the IMF.

<sup>4</sup> Includes "Unallocated Reserves."