

HSBC HOLDINGS PLC  
Form 6-K  
March 14, 2018

FORM 6-K

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

Report of Foreign Private Issuer

Pursuant to Rule 13a - 16 or 15d - 16 of

the Securities Exchange Act of 1934

For the month of March

HSBC Holdings plc

42nd Floor, 8 Canada Square, London E14 5HQ, England

(Indicate by check mark whether the registrant files or will file annual reports under cover of Form 20-F or Form 40-F).

Form 20-F  Form 40-F

(Indicate by check mark whether the registrant by furnishing the information contained in this Form is also thereby furnishing the information to the Commission pursuant to Rule 12g3-2(b) under the Securities Exchange Act of 1934).

Yes  No

(If "Yes" is marked, indicate below the file number assigned to the registrant in connection with Rule 12g3-2(b): 82- ).

HSBC HOLDINGS PLC

13 March 2018

Notification of Transactions by Persons Discharging Managerial Responsibilities ("PDMRs")

## 1. Group Performance Share Plan awards (Performance Year 2012)

Deferred awards under the Group Performance Share Plan ("GPSP Awards") of US\$0.50 ordinary shares (the "Shares") in HSBC Holdings plc (the "Company") were granted in 2013 as a part of variable pay for the performance year ended 31 December 2012.

The GPSP Awards vested on 12 March 2018. The Shares must be retained while the individual is employed by HSBC. The GPSP Awards were determined by assessing performance against financial and non-financial metrics, as detailed in the Directors' remuneration report in the 2012 annual report and accounts.

## Directors

Name	Additional Shares issued in lieu of the 2017 4th interim dividend <sup>1</sup>	Total number of Shares vested	Number of Shares sold at £7.0592 per Share <sup>2</sup>
John Flint	1,785	86,941	40,863
Iain Mackay	5,279	257,091	120,833
Marc Moses	5,882	286,473	134,643

## Other PDMRs

Name	Additional Shares issued in lieu of the 2017 4th interim dividend <sup>1</sup>	Total number of Shares vested	Number of Shares sold at £7.0592 per Share <sup>2</sup>
Samir Assaf	5,882	286,473	134,643
Peter Boyles	732	35,643	16,040
Patrick Burke	701	34,166	18,184
Noel Quinn	865	42,163	9,168
Antonio Simoes	694	33,789	15,881
Peter Wong	6,023	293,329	44,000

<sup>1</sup> At US\$10.0177 per Share being the average closing price of the Company's Shares on the London Stock Exchange for the five business days between 22 and 28 February 2018 converted into USD.

<sup>2</sup> Includes shares sold to cover withholding tax.

## 2. Annual Incentive awards (Performance Year 2012)

Edgar Filing: HSBC HOLDINGS PLC - Form 6-K

Deferred awards (the "Awards") of US\$0.50 ordinary shares (the "Shares") in HSBC Holdings plc (the "Company") were granted in 2013 as a part of variable pay for the performance year ended 31 December 2012.

On 12 March 2018, the Awards granted in 2013 vested and the following transactions took place in London.

Directors

Name	Additional Shares issued in lieu of the 2017 4th interim dividend <sup>1</sup>	Total number of Shares vested	Number of Shares sold at £7.0592 per Share <sup>2</sup>
John Flint	1,546	75,339	35,410
Iain Mackay	1,524	74,266	34,906
Marc Moses	1,481	72,153	72,153

Other PDMRs

Name	Additional Shares issued in lieu of the 2017 4th interim dividend <sup>1</sup>	Total number of Shares vested	Number of Shares sold at £7.0592 per Share <sup>2</sup>
Samir Assaf	5,401	263,073	263,073
Peter Boyles	1,055	51,365	0
Patrick Burke	959	46,731	46,731
Noel Quinn	836	40,733	8,857
Antonio Simoes	791	38,485	38,485
Peter Wong	1,969	95,882	0

<sup>1</sup> At US\$10.0177 per Share being the average closing price of the Company's Shares on the London Stock Exchange for the five business days between 22 and 28 February 2018 converted into USD.

<sup>2</sup> Includes shares sold to cover withholding tax.

3. Annual Incentive awards (Performance Year 2016)

Deferred awards (the "Awards") of US\$0.50 ordinary shares (the "Shares") in HSBC Holdings plc (the "Company") were granted in 2017 as a part of variable pay for the performance year ended 31 December 2016.

On 12 March 2018, the first tranche of the Awards granted in 2017 vested and the following transactions took place in London.

Edgar Filing: HSBC HOLDINGS PLC - Form 6-K

Other PDMRs

Name	Additional Shares issued in lieu of the 2017 4th interim dividend <sup>1</sup>	Total number of Shares vested	Number of Shares sold at £7.0592 per Share <sup>2</sup>
Patrick Burke	2,307	22,476	11,962
Paulo Maia	1,173	11,429	4,001
Charlie Nunn	718	6,999	3,290
Peter Wong	2,266	22,068	3,311

1 At US\$10.0177 per Share being the average closing price of the Company's Shares on the London Stock Exchange for the five business days between 22 and 28 February 2018 converted into USD.

2 Includes shares sold to cover withholding tax.

The following disclosures are made in accordance with Article 19 of the EU Market Abuse Regulation 596/2014.

1 - Details of the person discharging managerial responsibilities / person closely associated

Name of natural person      John Flint

2 - Reason for the notification

Position/status                      Group Chief Executive

Initial notification/amendment      Initial Notification

3 - Details of the issuer, emission allowance market participant, auction platform, auctioneer or auction monitor

Full name of the entity              HSBC Holdings plc

Legal Entity Identifier code      MLU0ZO3ML4LN2LL2TL39

4 - Details of the transaction(s)

Transaction(s) summary table

Date of Transaction	Financial Instrument	Identification Code	Place of Transaction	Currency
2018-03-12	Ordinary shares of	GB0005405286	London Stock	USD - United States Dollar

Edgar Filing: HSBC HOLDINGS PLC - Form 6-K

Nature of Transaction:	Price	Volume	Total
US\$0.50 each		Exchange, Main Market (XLON)	
Acquisition	US\$10.02	3,331	US\$33,368.96
Aggregated	US\$10.018	3,331	US\$33,368.96

  

Date of Transaction	Financial Instrument	Identification Code	Place of Transaction	Currency
2018-03-12	Ordinary shares of US\$0.50 each	GB0005405286	London Stock Exchange, Main Market (XLON)	GBP - British Pound

  

Nature of Transaction:	Price	Volume	Total
Acquisition	£7.06	162,280	£1,145,372.24
Aggregated	£7.058	162,280	£1,145,372.24

  

Date of Transaction	Financial Instrument	Identification Code	Place of Transaction	Currency
2018-03-12	Ordinary shares of US\$0.50 each	GB0005405286	London Stock Exchange, Main Market (XLON)	GBP - British Pound

  

Nature of Transaction:	Price	Volume	Total
Disposal	£7.06	76,273	£538,426.36
Aggregated	£7.059	76,273	£538,426.36

1 - Details of the person discharging managerial responsibilities / person closely associated

Name of natural person      Iain Mackay

2 - Reason for the notification

Edgar Filing: HSBC HOLDINGS PLC - Form 6-K

Position/status                      Group Finance Director

Initial notification/amendment    Initial Notification

3 - Details of the issuer, emission allowance market participant, auction platform, auctioneer or auction monitor

Full name of the entity            HSBC Holdings plc

Legal Entity Identifier code      MLU0ZO3ML4LN2LL2TL39

4 - Details of the transaction(s)

Transaction(s) summary table

Date of Transaction	Financial Instrument	Identification Code	Place of Transaction	Currency
2018-03-12	Ordinary shares of US\$0.50 each	GB0005405286	London Stock Exchange, Main Market (XLON)	USD - United States Dollar

Nature of Transaction:	Price	Volume	Total
Acquisition	US\$10.02	6,803	US\$68,150.41
Aggregated	US\$10.018	6,803	US\$68,150.41

Date of Transaction	Financial Instrument	Identification Code	Place of Transaction	Currency
2018-03-12	Ordinary shares of US\$0.50 each	GB0005405286	London Stock Exchange, Main Market (XLON)	GBP - British Pound

Nature of Transaction:	Price	Volume	Total
Acquisition	£7.06	331,357	£2,338,717.71
Aggregated	£7.058	331,357	£2,338,717.71

Edgar Filing: HSBC HOLDINGS PLC - Form 6-K

Date of Transaction	Financial Instrument	Identification Code	Place of Transaction	Currency
2018-03-12	Ordinary shares of US\$0.50 each	GB0005405286	London Stock Exchange, Main Market (XLON)	GBP - British Pound
Nature of Transaction:		Price	Volume	Total
Disposal		£7.06	155,739	£1,099,392.75
Aggregated		£7.059	155,739	£1,099,392.75

1 - Details of the person discharging managerial responsibilities / person closely associated

Name of natural person      Marc Moses

2 - Reason for the notification

Position/status                  Group Chief Risk Officer

Initial notification/amendment      Initial Notification

3 - Details of the issuer, emission allowance market participant, auction platform, auctioneer or auction monitor

Full name of the entity              HSBC Holdings plc

Legal Entity Identifier code      MLU0ZO3ML4LN2LL2TL39

4 - Details of the transaction(s)

Transaction(s) summary table

Date of Transaction	Financial Instrument	Identification Code	Place of Transaction	Currency
2018-03-12	Ordinary shares of US\$0.50 each	GB0005405286	London Stock Exchange, Main Market (XLON)	USD - United States Dollar
Nature of Transaction:		Price	Volume	Total

Edgar Filing: HSBC HOLDINGS PLC - Form 6-K

Acquisition		US\$10.02	7,363	US\$73,760.33
	Aggregated	US\$10.018	7,363	US\$73,760.33

Date of Transaction	Financial Instrument	Identification Code	Place of Transaction	Currency
2018-03-12	Ordinary shares of US\$0.50 each	GB0005405286	London Stock Exchange, Main Market (XLON)	GBP - British Pound

Nature of Transaction:	Price	Volume	Total
Acquisition	£7.06	358,626	£2,531,182.31
	Aggregated £7.058	358,626	£2,531,182.31

Date of Transaction	Financial Instrument	Identification Code	Place of Transaction	Currency
2018-03-12	Ordinary shares of US\$0.50 each	GB0005405286	London Stock Exchange, Main Market (XLON)	GBP - British Pound

Nature of Transaction:	Price	Volume	Total
Disposal	£7.06	206,796	£1,459,814.32
	Aggregated £7.059	206,796	£1,459,814.32

1 - Details of the person discharging managerial responsibilities / person closely associated

Name of natural person Samir Assaf

2 - Reason for the notification

Position/status Chief Executive, Global Banking and Markets

Initial notification/amendment Initial Notification



## 3 - Details of the issuer, emission allowance market participant, auction platform, auctioneer or auction monitor

Full name of the entity        HSBC Holdings plc

Legal Entity Identifier code    MLU0ZO3ML4LN2LL2TL39

## 4 - Details of the transaction(s)

## Transaction(s) summary table

Date of Transaction	Financial Instrument	Identification Code	Place of Transaction	Currency
2018-03-12	Ordinary shares of US\$0.50 each	GB0005405286	London Stock Exchange, Main Market (XLON)	USD - United States Dollar
Nature of Transaction:		Price	Volume	Total
Acquisition		US\$10.02	11,283	US\$113,029.71
Aggregated		US\$10.018	11,283	US\$113,029.71
Date of Transaction	Financial Instrument	Identification Code	Place of Transaction	Currency
2018-03-12	Ordinary shares of US\$0.50 each	GB0005405286	London Stock Exchange, Main Market (XLON)	GBP - British Pound
Nature of Transaction:		Price	Volume	Total
Acquisition		£7.06	549,546	£3,878,695.67
Aggregated		£7.058	549,546	£3,878,695.67
Date of Transaction	Financial Instrument	Identification Code	Place of Transaction	Currency
2018-03-12		GB0005405286		GBP - British Pound

Edgar Filing: HSBC HOLDINGS PLC - Form 6-K

Nature of Transaction:	Price	Volume	Total
Disposal	£7.06	397,716	£2,807,556.79
Aggregated	£7.059	397,716	£2,807,556.79

1 - Details of the person discharging managerial responsibilities / person closely associated

Name of natural person Peter Boyles

2 - Reason for the notification

Position/status Chief Executive of Global Private Banking

Initial notification/amendment Initial Notification

3 - Details of the issuer, emission allowance market participant, auction platform, auctioneer or auction monitor

Full name of the entity HSBC Holdings plc

Legal Entity Identifier code MLU0ZO3ML4LN2LL2TL39

4 - Details of the transaction(s)

Transaction(s) summary table

Date of Transaction	Financial Instrument	Identification Code	Place of Transaction	Currency
2018-03-12	Ordinary shares of US\$0.50 each	GB0005405286	London Stock Exchange, Main Market (XLON)	USD - United States Dollar
			Price	Volume
Nature of Transaction:				Total
Acquisition			US\$10.02	1,787
	Aggregated		US\$10.018	1,787

Date of Transaction	Financial Instrument	Identification Code	Place of Transaction	Currency
---------------------	----------------------	---------------------	----------------------	----------

Edgar Filing: HSBC HOLDINGS PLC - Form 6-K

Date of Transaction	Financial Instrument	Identification Code	Place of Transaction	Currency
2018-03-12	Ordinary shares of US\$0.50 each	GB0005405286	London Stock Exchange, Main Market (XLON)	GBP - British Pound
			Price	Total
			Volume	
Nature of Transaction:			£7.06	87,008
Acquisition			£7.058	87,008
		Aggregated		£614,102.46
				£614,102.46

Date of Transaction	Financial Instrument	Identification Code	Place of Transaction	Currency
2018-03-12	Ordinary shares of US\$0.50 each	GB0005405286	London Stock Exchange, Main Market (XLON)	GBP - British Pound
			Price	Total
			Volume	
Nature of Transaction:			£7.06	16,040
Disposal			£7.059	16,040
		Aggregated		£113,229.57
				£113,229.57

1 - Details of the person discharging managerial responsibilities / person closely associated

Name of natural person Patrick Burke

2 - Reason for the notification

Position/status President and Chief Executive of HSBC US

Initial notification/amendment Initial Notification

3 - Details of the issuer, emission allowance market participant, auction platform, auctioneer or auction monitor

Full name of the entity HSBC Holdings plc

Legal Entity Identifier code MLU0ZO3ML4LN2LL2TL39

4 - Details of the transaction(s)

Transaction(s) summary table

Date of Transaction	Financial Instrument	Identification Code	Place of Transaction	Currency
2018-03-12		GB0005405286		

Edgar Filing: HSBC HOLDINGS PLC - Form 6-K

Ordinary shares of US\$0.50 each	London Stock Exchange, Main Market (XLON)	USD - United States Dollar
-------------------------------------	--	-------------------------------

	Price	Volume	Total
Nature of Transaction:			
Acquisition	US\$10.02	3,967	US\$39,740.22
	US\$10.018 Aggregated	3,967	US\$39,740.22

Date of Transaction	Financial Instrument	Identification Code	Place of Transaction	Currency
2018-03-12	Ordinary shares of US\$0.50 each	GB0005405286	London Stock Exchange, Main Market (XLON)	GBP - British Pound

	Price	Volume	Total
Nature of Transaction:			
Acquisition	£7.06	103,373	£729,606.63
	£7.058 Aggregated	103,373	£729,606.63

Date of Transaction	Financial Instrument	Identification Code	Place of Transaction	Currency
2018-03-12	Ordinary shares of US\$0.50 each	GB0005405286	London Stock Exchange, Main Market (XLON)	GBP - British Pound

	Price	Volume	Total
Nature of Transaction:			
Disposal	£7.06	76,877	£542,690.12
	£7.059 Aggregated	76,877	£542,690.12

1 - Details of the person discharging managerial responsibilities / person closely associated

Name of natural person            Paulo Maia

2 - Reason for the notification

Position/status                      Chief Executive, Latin America

Initial notification/amendment    Initial Notification

## 3 - Details of the issuer, emission allowance market participant, auction platform, auctioneer or auction monitor

Full name of the entity HSBC Holdings plc

Legal Entity Identifier code MLU0ZO3ML4LN2LL2TL39

## 4 - Details of the transaction(s)

## Transaction(s) summary table

Date of Transaction	Financial Instrument	Identification Code	Place of Transaction	Currency
2018-03-12	Ordinary shares of US\$0.50 each	GB0005405286	London Stock Exchange, Main Market (XLON)	USD - United States Dollar
		Price	Volume	Total
Nature of Transaction:		US\$10.02	1,173	US\$11,750.76
Acquisition		US\$10.018 Aggregated	1,173	US\$11,750.76

Date of Transaction	Financial Instrument	Identification Code	Place of Transaction	Currency
2018-03-12	Ordinary shares of US\$0.50 each	GB0005405286	London Stock Exchange, Main Market (XLON)	GBP - British Pound
		Price	Volume	Total
Nature of Transaction:		£7.06	11,429	£80,665.88
Acquisition		£7.058 Aggregated	11,429	£80,665.88

Date of Transaction	Financial Instrument	Identification Code	Place of Transaction	Currency
2018-03-12	Ordinary shares of US\$0.50 each	GB0005405286	London Stock Exchange, Main Market (XLON)	GBP - British Pound
		Price	Volume	Total
Nature of Transaction:		£7.06	4,001	£28,243.86
Disposal				

Edgar Filing: HSBC HOLDINGS PLC - Form 6-K

£7.059  
Aggregated 4,001 £28,243.86

1 - Details of the person discharging managerial responsibilities / person closely associated

Name of natural person Charlie Nunn

2 - Reason for the notification

Position/status Chief Executive, Retail Banking and Wealth Management

Initial notification/amendment Initial Notification

3 - Details of the issuer, emission allowance market participant, auction platform, auctioneer or auction monitor

Full name of the entity HSBC Holdings plc

Legal Entity Identifier code MLU0ZO3ML4LN2LL2TL39

4 - Details of the transaction(s)

Transaction(s) summary table

Date of Transaction	Financial Instrument	Identification Code	Place of Transaction	Currency
2018-03-12	Ordinary shares of US\$0.50 each	GB0005405286	London Stock Exchange, Main Market (XLON)	USD - United States Dollar
			Price	Volume
				Total
	Nature of Transaction:		US\$10.02	718
	Acquisition	Aggregated	US\$10.018	718
				US\$7,192.71

Date of Transaction	Financial Instrument	Identification Code	Place of Transaction	Currency
2018-03-12	Ordinary shares of US\$0.50 each	GB0005405286	London Stock Exchange, Main Market (XLON)	GBP - British Pound
			Price	Volume
				Total
	Nature of Transaction:		£7.06	6,999
	Acquisition			£49,398.94

Edgar Filing: HSBC HOLDINGS PLC - Form 6-K

Date of Transaction	Financial Instrument	Identification Code	Place of Transaction	Currency
2018-03-12	Ordinary shares of US\$0.50 each	GB0005405286	London Stock Exchange, Main Market (XLON)	GBP - British Pound
Nature of Transaction:			Price	Total
Disposal		Aggregated	£7.06	£23,224.77
			Volume	
		Aggregated	£7.059	£23,224.77

1 - Details of the person discharging managerial responsibilities / person closely associated

Name of natural person Noel Quinn

2 - Reason for the notification

Position/status Chief Executive, Global Commercial Banking

Initial notification/amendment Initial Notification

3 - Details of the issuer, emission allowance market participant, auction platform, auctioneer or auction monitor

Full name of the entity HSBC Holdings plc

Legal Entity Identifier code MLU0ZO3ML4LN2LL2TL39

4 - Details of the transaction(s)

Transaction(s) summary table

Date of Transaction	Financial Instrument	Identification Code	Place of Transaction	Currency
2018-03-12	Ordinary shares of US\$0.50 each	GB0005405286	London Stock Exchange, Main Market (XLON)	USD - United States Dollar
Nature of Transaction:			Price	Total
Acquisition			US\$10.02	US\$17,040.11
			Volume	
			1,701	

Edgar Filing: HSBC HOLDINGS PLC - Form 6-K

Aggregated US\$10.018 1,701 US\$17,040.11

Date of Transaction	Financial Instrument	Identification Code	Place of Transaction	Currency
2018-03-12	Ordinary shares of US\$0.50 each	GB0005405286	London Stock Exchange, Main Market (XLON)	GBP - British Pound

Nature of Transaction:	Price	Volume	Total
Acquisition	£7.06	82,896	£585,079.97
	Aggregated £7.058	82,896	£585,079.97

Date of Transaction	Financial Instrument	Identification Code	Place of Transaction	Currency
2018-03-12	Ordinary shares of US\$0.50 each	GB0005405286	London Stock Exchange, Main Market (XLON)	GBP - British Pound

Nature of Transaction:	Price	Volume	Total
Disposal	£7.06	18,025	£127,242.08
	Aggregated £7.059	18,025	£127,242.08

1 - Details of the person discharging managerial responsibilities / person closely associated

Name of natural person Antonio Simoes

2 - Reason for the notification

Position/status Chief Executive, HSBC Bank plc

Initial notification/amendment Initial Notification

3 - Details of the issuer, emission allowance market participant, auction platform, auctioneer or auction monitor

Full name of the entity HSBC Holdings plc

Legal Entity Identifier code MLU0ZO3ML4LN2LL2TL39

4 - Details of the transaction(s)

Transaction(s) summary table



Edgar Filing: HSBC HOLDINGS PLC - Form 6-K

Date of Transaction	Financial Instrument	Identification Code	Place of Transaction	Currency
2018-03-12	Ordinary shares of US\$0.50 each	GB0005405286	London Stock Exchange, Main Market (XLON)	USD - United States Dollar
		Price	Volume	Total
Nature of Transaction:		US\$10.02	1,485	US\$14,876.28
Acquisition		US\$10.018 Aggregated	1,485	US\$14,876.28

Date of Transaction	Financial Instrument	Identification Code	Place of Transaction	Currency
2018-03-12	Ordinary shares of US\$0.50 each	GB0005405286	London Stock Exchange, Main Market (XLON)	GBP - British Pound
		Price	Volume	Total
Nature of Transaction:		£7.06	72,274	£510,109.89
Acquisition		£7.058 Aggregated	72,274	£510,109.89

Date of Transaction	Financial Instrument	Identification Code	Place of Transaction	Currency
2018-03-12	Ordinary shares of US\$0.50 each	GB0005405286	London Stock Exchange, Main Market (XLON)	GBP - British Pound
		Price	Volume	Total
Nature of Transaction:		£7.06	54,366	£383,780.47
Disposal		£7.059 Aggregated	54,366	£383,780.47

1 - Details of the person discharging managerial responsibilities / person closely associated

Name of natural person Peter Wong

2 - Reason for the notification

Position/status Deputy Chairman and Chief Executive, The Hongkong and Shanghai Banking Corporation

Edgar Filing: HSBC HOLDINGS PLC - Form 6-K

Limited

Initial Notification

Initial notification/amendment

3 - Details of the issuer, emission allowance market participant, auction platform, auctioneer or auction monitor

Full name of the entity HSBC Holdings plc

Legal Entity Identifier code MLU0ZO3ML4LN2LL2TL39

4 - Details of the transaction(s)

Transaction(s) summary table

Date of Transaction	Financial Instrument	Identification Code	Place of Transaction	Currency
2018-03-12	Ordinary shares of US\$0.50 each	GB0005405286	London Stock Exchange, Main Market (XLON)	USD - United States Dollar
		Price	Volume	Total
Nature of Transaction:		US\$10.02	10,258	US\$102,761.57
Acquisition		US\$10.018 Aggregated	10,258	US\$102,761.57

Date of Transaction	Financial Instrument	Identification Code	Place of Transaction	Currency
2018-03-12	Ordinary shares of US\$0.50 each	GB0005405286	London Stock Exchange, Main Market (XLON)	GBP - British Pound
		Price	Volume	Total
Nature of Transaction:		£7.06	411,279	£2,902,807.18
Acquisition		£7.058 Aggregated	411,279	£2,902,807.18

Date of Transaction	Financial Instrument	Identification Code	Place of Transaction	Currency
2018-03-12	Ordinary shares of US\$0.50 each	GB0005405286	London Stock Exchange, Main Market (XLON)	GBP - British Pound
		Price	Volume	Total
Nature of Transaction:		£7.06	47,311	£333,977.81
Disposal				

£7.059 Aggregated	47,311	£333,977.81
----------------------	--------	-------------

For any queries related to this notification please contact:

Larissa Wilson  
Shareholder Services Team  
020 7991 0595

#### SIGNATURE

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

HSBC Holdings plc

By:  
Name: Ben J S Mathews  
Title: Group Company Secretary

Date: 13 March 2018