

The following list of symbols specifies which firms are registered to supply liquidity for each symbol in 2018-12-13:

## ➤ 1COVd - Covestro AG

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BNP Paribas Arbitrage SNC (Program Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

## ➤ 2HRAd - H&R GmbH & Co KGaA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ 3INl - 3i Infrastructure PLC

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Citadel Securities (Europe) Limited (Program Three)

## ➤ 888l - 888 Holdings PLC

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ A1OSd - All for One Steeb AG

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Citadel Securities (Europe) Limited (Program Three)

## ➤ A2Am - A2A SpA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Hudson River Trading Europe Limited (Program Three)  
My Capital Netherlands BV (Program Two)  
Optiver V.O.F. (Program Two and Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ A3Me - Atresmedia Corp de Medios de Comunicacion SA

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Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

## ➤ A5Gi - AIB Group PLC

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BNP Paribas Arbitrage SNC (Program One and Three)

## ➤ AADd - Amadeus Fire AG

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Citadel Securities (Europe) Limited (Program Three)

## ➤ AAGd - Aumann AG

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Citadel Securities (Europe) Limited (Program Three)

#### ➤ AAKs - AAK AB

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Hudson River Trading Europe Limited (Program Three)  
XTX Markets Limited (Program Three)

#### ➤ AALBa - Aalberts Industries NV

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ AALl - Anglo American PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Tower Research Capital Europe Limited (Program Two)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ AAl - AA PLC

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

#### ➤ ABBNz - ABB Ltd

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ ABBs - ABB Ltd

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BNP Paribas Arbitrage SNC (Program One and Three)  
Optiver V.O.F. (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ ABCAp - ABC arbitrage

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Citadel Securities (Europe) Limited (Program Three)

#### ➤ ABFl - Associated British Foods PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ ABIOp - Albioma SA

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Citadel Securities (Europe) Limited (Program Three)

#### ➤ ABIB - Anheuser-Busch InBev SA/NV

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ ABNa - ABN AMRO Group NV

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ ABRd - Barrick Gold Corp

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Citadel Securities (Europe) Limited (Program Three)

#### ➤ ABp - AB Science SA

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Citadel Securities (Europe) Limited (Program Three)

#### ➤ ACAI - Acacia Mining PLC

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

#### ➤ ACAP - Credit Agricole SA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
My Capital Netherlands BV (Program Two)  
Optiver V.O.F. (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ ACCELa - Accell Group NV

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Citadel Securities (Europe) Limited (Program Three)

#### ➤ ACEm - ACEA SpA

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Citadel Securities (Europe) Limited (Program Three)  
Hudson River Trading Europe Limited (Program Three)  
XTX Markets Limited (Program Three)

### ➤ ACKBb - Ackermans & van Haaren NV

BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

### ➤ ACOMOa - Amsterdam Commodities NV

Citadel Securities (Europe) Limited (Program Three)

### ➤ ACOm - Acotel Group SpA

Citadel Securities (Europe) Limited (Program Three)

### ➤ ACSe - ACS Actividades de Construccion y Servicios SA

BNP Paribas Arbitrage SNC (Program One and Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

### ➤ ACXd - bet-at-home.com AG

Citadel Securities (Europe) Limited (Program Three)

### ➤ ACXe - Acerinox SA

BNP Paribas Arbitrage SNC (Program One and Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

### ➤ ACp - Accor SA

BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
My Capital Netherlands BV (Program Two)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

### ➤ ADDd - Adler Modemaerkte AG

Citadel Securities (Europe) Limited (Program Three)

### ➤ ADENZ - Adecco Group AG

BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

➤ [ADJd - ADO Properties SA](#)

Citadel Securities (Europe) Limited (Program Three)

➤ [ADLd - ADLER Real Estate AG](#)

Citadel Securities (Europe) Limited (Program Three)

➤ [ADMI - Admiral Group PLC](#)

BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

➤ [ADN1d - Adesso AG](#)

Citadel Securities (Europe) Limited (Program Three)

➤ [ADOCp - Adocia](#)

Citadel Securities (Europe) Limited (Program Three)

➤ [ADPp - Aeroports de Paris](#)

BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

➤ [ADSd - adidas AG](#)

BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Hudson River Trading Europe Limited (Program Three)  
Jump Trading International Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Tower Research Capital Europe Limited (Program Two)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

➤ [ADUXp - ADUX SA](#)

Citadel Securities (Europe) Limited (Program Three)

➤ [ADVd - ADVA Optical Networking SE](#)

Citadel Securities (Europe) Limited (Program Three)

## ➤ ADXNz - Addex Therapeutics Ltd

Citadel Securities (Europe) Limited (Program Three)

## ➤ ADYENa - Adyen NV

Citadel Securities (Europe) Limited (Program Three)

## ➤ ADa - Koninklijke Ahold Delhaize NV

BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ AEDb - Aedifica SA

Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ AEFm - Aeffe SpA

Citadel Securities (Europe) Limited (Program Three)

## ➤ AEINd - Allgeier SE

Citadel Securities (Europe) Limited (Program Three)

## ➤ AENaE - Aena SME SA

BNP Paribas Arbitrage SNC (Program One and Three)  
Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

## ➤ AEm - Aedes SIIQ SpA

Citadel Securities (Europe) Limited (Program Three)

## ➤ AFXd - Carl Zeiss Meditec AG

Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

## ➤ AFp - Air France-KLM

BNP Paribas Arbitrage SNC (Program Three)  
Citadel Securities (Europe) Limited (Program Three)  
My Capital Netherlands BV (Program Two)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ AGFBb - AGFA-Gevaert NV

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Citadel Securities (Europe) Limited (Program Three)

## ➤ AGKl - Aggreko PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ AGLm - Autogrill SpA

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Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ AGNa - Aegon NV

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ AGRI - Assura PLC

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Citadel Securities (Europe) Limited (Program Three)  
Hudson River Trading Europe Limited (Program Three)

## ➤ AGSb - Ageas

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ AHLAd - Alibaba Group Holding Ltd

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Citadel Securities (Europe) Limited (Program Three)

## ➤ AHTl - Ashtead Group PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ AIRd - Airbus SE

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Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)

#### ➤ AIRp - Airbus SE

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Tower Research Capital Europe Limited (Program Two)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ AIXAd - AIXTRON SE

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ Alp - Air Liquide SA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Tower Research Capital Europe Limited (Program Two)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ AKAp - Akka Technologies

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Citadel Securities (Europe) Limited (Program Three)

#### ➤ AKERBo - Aker BP ASA

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Hudson River Trading Europe Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ AKERo - Aker ASA

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XTX Markets Limited (Program Three)

#### ➤ AKEp - Arkema SA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)



## ➤ AKSOo - Aker Solutions ASA

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Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

## ➤ AKWp - AKWEL

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Citadel Securities (Europe) Limited (Program Three)

## ➤ AKZAa - Akzo Nobel NV

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Tower Research Capital Europe Limited (Program Two)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ ALDp - ALD SA

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Citadel Securities (Europe) Limited (Program Three)  
Hudson River Trading Europe Limited (Program Three)

## ➤ ALFAl - Alfa Financial Software Holdings PLC

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Citadel Securities (Europe) Limited (Program Three)

## ➤ ALFAs - Alfa Laval AB

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BNP Paribas Arbitrage SNC (Program One and Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ ALIVs - Autoliv Inc

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BNP Paribas Arbitrage SNC (Program One and Three)  
Hudson River Trading Europe Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ ALLNz - Allreal Holding AG

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ ALMe - Almirall SA

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XTX Markets Limited (Program Three)

## ➤ ALOp - Alstom SA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ ALPHz - Alpiq Holding AG

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Citadel Securities (Europe) Limited (Program Three)

## ➤ ALSNz - ALSO Holding AG

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Citadel Securities (Europe) Limited (Program Three)

## ➤ ALTAp - Altea SCA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ ALTRu - Altri SGPS SA

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

## ➤ ALTp - Altran Technologies SA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ ALVd - Allianz SE

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Jump Trading International Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Tower Research Capital Europe Limited (Program Two)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ AM3Dd - SLM Solutions Group AG

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Citadel Securities (Europe) Limited (Program Three)

## ➤ AMBUBc - Ambu A/S

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Societe Generale London Branch (Program Three)

## ➤ AMEASh - Amer Sports Oyj

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BNP Paribas Arbitrage SNC (Program One and Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ AMGa - AMG Advanced Metallurgical Group NV

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Citadel Securities (Europe) Limited (Program Three)  
Hudson River Trading Europe Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

## ➤ AMPm - Amplifon SpA

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Citadel Securities (Europe) Limited (Program Three)  
Hudson River Trading Europe Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

## ➤ AMSe - Amadeus IT Group SA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

## ➤ AMSz - ams AG

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BNP Paribas Arbitrage SNC (Program Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

## ➤ AMUNp - Amundi SA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

## ➤ AMP - Dassault Aviation SA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

## ➤ ANAe - Acciona SA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ ANDRv - ANDRITZ AG

Virtu Financial Ireland Ltd (Program Two)

## ➤ ANIMm - Anima Holding SpA

Citadel Securities (Europe) Limited (Program Three)  
Hudson River Trading Europe Limited (Program Three)  
Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

## ➤ ANTOL - Antofagasta PLC

BNP Paribas Arbitrage SNC (Program Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ AOXd - alstria office REIT-AG

Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

## ➤ AOL - AO World PLC

Citadel Securities (Europe) Limited (Program Three)

## ➤ APAMa - APERAM SA

BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ APPSe - Applus Services SA

XTX Markets Limited (Program Three)

## ➤ APRp - APRIL SA

Citadel Securities (Europe) Limited (Program Three)

## ➤ AR4d - AURELIUS Equity Opportunities SE & Co KGaA

Citadel Securities (Europe) Limited (Program Three)

## ➤ ARBNz - Arbonia AG

Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ ARCADa - Arcadis NV

Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ ARGXb - Argenx SE

Citadel Securities (Europe) Limited (Program Three)

## ➤ ARGp - ARGAN SA

Citadel Securities (Europe) Limited (Program Three)

## ➤ ARLd - Aareal Bank AG

BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ ARRDd - ArcelorMittal

Citadel Securities (Europe) Limited (Program Three)

## ➤ ARWL - Arrow Global Group PLC

Citadel Securities (Europe) Limited (Program Three)

## ➤ ARYNz - Aryzta AG

BNP Paribas Arbitrage SNC (Program One)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)

## ➤ ASCLl - Ascential PLC

Citadel Securities (Europe) Limited (Program Three)

## ➤ ASCNz - Ascom Holding AG

Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ ASCb - Ascencio

Citadel Securities (Europe) Limited (Program Three)

## ➤ ASCm - Ascopiave SpA

Citadel Securities (Europe) Limited (Program Three)

#### ➤ ASHML - Ashmore Group PLC

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ ASLI - Aberforth Smaller Companies Trust PLC

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Citadel Securities (Europe) Limited (Program Three)

#### ➤ ASMLa - ASML Holding NV

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Tower Research Capital Europe Limited (Program Two)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ ASMa - ASM International NV

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ ASRNLa - ASR Nederland NV

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

#### ➤ ASRm - AS Roma SpA

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

#### ➤ ASSABs - Assa Abloy AB

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BNP Paribas Arbitrage SNC (Program One and Three)  
Hudson River Trading Europe Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Tower Research Capital Europe Limited (Program Two)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ ASTm - Astaldi SpA

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Citadel Securities (Europe) Limited (Program Three)

#### ➤ ASYp - Assystem SA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ AT1d - Aaroundtown SA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)

## ➤ ATADL - Tatneft PJSC

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Citadel Securities (Europe) Limited (Program Three)

## ➤ ATAp - Atari SA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ ATCBa - ALTICE EUROPE NV

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Citadel Securities (Europe) Limited (Program Three)  
Optiver V.O.F. (Program Three)  
XTX Markets Limited (Program Three)

## ➤ ATCOAs - Atlas Copco AB

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BNP Paribas Arbitrage SNC (Program One and Three)  
Hudson River Trading Europe Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ ATCOBs - Atlas Copco AB

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BNP Paribas Arbitrage SNC (Program One and Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ ATCa - ALTICE EUROPE NV

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ ATEAo - Atea ASA

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Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ ATEBb - Atenor

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Citadel Securities (Europe) Limited (Program Three)

## ➤ ATEMEp - ATEME SA

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Citadel Securities (Europe) Limited (Program Three)

#### ➤ ATEp - Alten SA

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Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ ATIp - Actia Group

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Citadel Securities (Europe) Limited (Program Three)

#### ➤ ATLm - Atlantia SpA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
My Capital Netherlands BV (Program Two)  
Optiver V.O.F. (Program Two and Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

#### ➤ ATOp - Atos SE

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ ATSTI - Alliance Trust PLC

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

#### ➤ ATTI - Allianz Technology Trust PLC

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Citadel Securities (Europe) Limited (Program Three)

#### ➤ ATm - ASTM SpA

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Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

#### ➤ AUBp - Aubay

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Citadel Securities (Europe) Limited (Program Three)

#### ➤ AUSSo - Austevoll Seafood ASA

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XTX Markets Limited (Program Three)



## ➤ AUTME - Autostrade Meridionali SpA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ AUTNz - Autoneum Holding AG

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ AUTOL - Auto Trader Group PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ AVIOm - Avio SpA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ AVONl - Avon Rubber PLC

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Citadel Securities (Europe) Limited (Program Three)

## ➤ AVTp - Avenir Telecom

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Citadel Securities (Europe) Limited (Program Three)

## ➤ AWl - AVEVA Group PLC

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ AVl - Aviva PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ AXBl - Axis Bank Ltd

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Citadel Securities (Europe) Limited (Program Three)

## ➤ AXFOs - Axfood AB

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Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ AXWp - Axway Software SA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ AZMm - Azimut Holding SpA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Hudson River Trading Europe Limited (Program Three)  
My Capital Netherlands BV (Program Two)  
Optiver V.O.F. (Program Two and Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ AZNI - AstraZeneca PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Tower Research Capital Europe Limited (Program Two)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ AZNs - AstraZeneca PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Optiver V.O.F. (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

## ➤ B4Bd - METRO AG

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

## ➤ B5Ad - Bauer AG

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Citadel Securities (Europe) Limited (Program Three)

## ➤ B8Fd - Biofrontera AG

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Citadel Securities (Europe) Limited (Program Three)

## ➤ BABI - Babcock International Group PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ BAERz - Julius Baer Group Ltd

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ BAGl - AG Barr PLC

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ BAKKAo - Bakkafrost P/F

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Societe Generale London Branch (Program Three)

## ➤ BALDBs - Fastighets AB Balder

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BNP Paribas Arbitrage SNC (Program One and Three)  
Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

## ➤ BALNz - Baloise Holding AG

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

## ➤ BALTA b - Balta Group NV

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Citadel Securities (Europe) Limited (Program Three)

## ➤ BAMIm - Banco BPM SpA

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BNP Paribas Arbitrage SNC (Program Three)  
Citadel Securities (Europe) Limited (Program Three)  
Hudson River Trading Europe Limited (Program Three)  
Optiver V.O.F. (Program Two and Three)  
Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

## ➤ BAMNBa - Koninklijke BAM Groep NV

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Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ BANBz - Bachem Holding AG

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Citadel Securities (Europe) Limited (Program Three)

#### ➤ BANm - BasicNet SpA

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Citadel Securities (Europe) Limited (Program Three)

#### ➤ BARCl - Barclays PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Tower Research Capital Europe Limited (Program Two)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ BARNz - Barry Callebaut AG

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

#### ➤ BARb - Barco NV

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Citadel Securities (Europe) Limited (Program Three)

#### ➤ BASd - BASF SE

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Tower Research Capital Europe Limited (Program Two)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ BATSl - British American Tobacco PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Tower Research Capital Europe Limited (Program Two)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ BAYNd - Bayer AG

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Tower Research Capital Europe Limited (Program Two)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ BAI - BAE Systems PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Hudson River Trading Europe Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ BBAI - BBA Aviation PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ BBEDa - Beter Bed Holding NV

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

## ➤ BBNz - Bellevue Group AG

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Citadel Securities (Europe) Limited (Program Three)

## ➤ BBOXI - Tritax Big Box REIT PLC

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ BBVAe - Banco Bilbao Vizcaya Argentaria SA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ BBYL - Balfour Beatty PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ BBZAd - BB Biotech AG

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Citadel Securities (Europe) Limited (Program Three)

## ➤ BBp - Societe BIC SA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ BC8d - Bechtle AG

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ BCARTb - Biocartis NV

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Citadel Securities (Europe) Limited (Program Three)

## ➤ BCAI - BCA Marketplace PLC

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Citadel Securities (Europe) Limited (Program Three)

## ➤ BCGEz - Banque Cantonale de Geneve

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Citadel Securities (Europe) Limited (Program Three)

## ➤ BCHNz - Burckhardt Compression Holding AG

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ BCPu - Banco Comercial Portugues SA

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ BCVNz - Banque Cantonale Vaudoise

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ BCm - Brunello Cucinelli SpA

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Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ BCz - Bank Cler AG

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Citadel Securities (Europe) Limited (Program Three)

➤ BDBm - Banco di Desio e della Brianza SpA

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Citadel Securities (Europe) Limited (Program Three)

➤ BDEVI - Barratt Developments PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

➤ BDTd - Bertrandt AG

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Citadel Securities (Europe) Limited (Program Three)

➤ BEANz - Belimo Holding AG

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Citadel Securities (Europe) Limited (Program Three)

➤ BECm - B&C Speakers SpA

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Citadel Securities (Europe) Limited (Program Three)

➤ BEFBB - Befimmo SA

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

➤ BEId - Beiersdorf AG

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

➤ BEKBb - Bekaert SA

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BNP Paribas Arbitrage SNC (Program One)  
Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

➤ BEKNz - Berner Kantonalbank AG

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Citadel Securities (Europe) Limited (Program Three)

➤ BELlp - Le Belier

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Citadel Securities (Europe) Limited (Program Three)

➤ [BELLz - Bell Food Group AG](#)

Citadel Securities (Europe) Limited (Program Three)

➤ [BENp - Beneteau SA](#)

Citadel Securities (Europe) Limited (Program Three)

➤ [BESla - BE Semiconductor Industries NV](#)

BNP Paribas Arbitrage SNC (Program One)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

➤ [BETSBs - Betsson AB](#)

Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

➤ [BETm - BE](#)

Citadel Securities (Europe) Limited (Program Three)

➤ [BEZd - Berentzen-Gruppe AG](#)

Citadel Securities (Europe) Limited (Program Three)

➤ [BEZl - Beazley PLC](#)

BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

➤ [BFEm - Banca Finnat Euramerica SpA](#)

Citadel Securities (Europe) Limited (Program Three)

➤ [BFFm - Banca Farmafactoring SpA](#)

Citadel Securities (Europe) Limited (Program Three)

➤ [BFITa - Basic-Fit NV](#)

Citadel Securities (Europe) Limited (Program Three)

➤ [BFSAd - Befesa SA](#)

Citadel Securities (Europe) Limited (Program Three)



## ➤ BGEOL - Bank of Georgia Group PLC

Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ BGFDL - Baillie Gifford Japan Trust PLC/The

Citadel Securities (Europe) Limited (Program Three)

## ➤ BGHLA - Boussard & Gavaudan Holding Ltd

Citadel Securities (Europe) Limited (Program Three)

## ➤ BGNM - Banca Generali SpA

BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Optiver V.O.F. (Program Two and Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ BGSJ - Baillie Gifford Shin Nippon PLC

Citadel Securities (Europe) Limited (Program Three)

## ➤ BHGGI - BH Global Ltd/The Fund

Citadel Securities (Europe) Limited (Program Three)

## ➤ BHMGL - BH Macro Ltd

Citadel Securities (Europe) Limited (Program Three)

## ➤ BIFFL - Biffa PLC

Citadel Securities (Europe) Limited (Program Three)

## ➤ BIGP - Bigben Interactive

Citadel Securities (Europe) Limited (Program Three)

## ➤ BIJD - Bijou Brigitte AG

Citadel Securities (Europe) Limited (Program Three)

## ➤ BILLS - BillerudKorsnas AB

BNP Paribas Arbitrage SNC (Program One)  
Optiver V.O.F. (Program Three)  
Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

#### ➤ BIMp - BioMerieux

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ BINCKa - BinckBank NV

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

#### ➤ BIO3d - Biotest AG

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Citadel Securities (Europe) Limited (Program Three)

#### ➤ BIOGl - Biotech Growth Trust PLC/The

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Citadel Securities (Europe) Limited (Program Three)

#### ➤ BIONz - BB Biotech AG

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

#### ➤ BIRGi - Bank of Ireland Group PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Hudson River Trading Europe Limited (Program Three)

#### ➤ BIRGl - Bank of Ireland Group PLC

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Citadel Securities (Europe) Limited (Program Three)

#### ➤ BKGl - Berkeley Group Holdings PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ BKIAe - Bankia SA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ BKTe - Bankinter SA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ BKWz - BKW AG

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

#### ➤ BLBDI - BLOM Bank SAL

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Citadel Securities (Europe) Limited (Program Three)

#### ➤ BLCp - Bastide le Confort Medical

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Citadel Securities (Europe) Limited (Program Three)

#### ➤ BLKBz - Basellandschaftliche Kantonalbank

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Citadel Securities (Europe) Limited (Program Three)

#### ➤ BLNDI - British Land Co PLC/The

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ BMAXs - Bygghmax Group AB

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XTX Markets Limited (Program Three)

#### ➤ BMEDm - Banca Mediolanum SpA

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Citadel Securities (Europe) Limited (Program Three)  
Optiver V.O.F. (Program Two and Three)  
Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

#### ➤ BMEe - Bolsas y Mercados Espanoles SHMSF SA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Virtu Financial Ireland Ltd (Program Two)

#### ➤ BMEI - B&M European Value Retail SA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ BMPSm - Banca Monte dei Paschi di Siena SpA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ BMW3d - Bayerische Motoren Werke AG

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Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

## ➤ BMWd - Bayerische Motoren Werke AG

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Citadel Securities GCS (Ireland) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ BNBb - Banque Nationale de Belgique

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Citadel Securities (Europe) Limited (Program Three)

## ➤ BNKRI - Bankers Investment Trust PLC/The

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Citadel Securities (Europe) Limited (Program Three)

## ➤ BNPp - BNP Paribas SA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
My Capital Netherlands BV (Program Two)  
Societe Generale London Branch (Program Three)  
Tower Research Capital Europe Limited (Program Two)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ BNRd - Brenntag AG

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ BNSm - Beni Stabili SpA SIIQ

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

### ➤ BNZLI - Bunzl PLC

BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

### ➤ BNp - Danone SA

BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
My Capital Netherlands BV (Program Two)  
Optiver V.O.F. (Program Three)  
Societe Generale London Branch (Program Three)  
Tower Research Capital Europe Limited (Program Two)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

### ➤ BOBNNz - Bobst Group SA

Citadel Securities (Europe) Limited (Program Three)

### ➤ BOCHI - Bank of Cyprus Holdings PLC

Citadel Securities (Europe) Limited (Program Three)

### ➤ BOIp - Boiron SA

Citadel Securities (Europe) Limited (Program Three)

### ➤ BOKAa - Boskalis Westminster

BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

### ➤ BOLp - Bollore SA

BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

### ➤ BOLs - Boliden AB

BNP Paribas Arbitrage SNC (Program One and Three)  
Hudson River Trading Europe Limited (Program Three)  
Optiver V.O.F. (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ BONp - Bonduelle SCA

Citadel Securities (Europe) Limited (Program Three)

## ➤ BOSNz - Bossard Holding AG

Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ BOSSd - HUGO BOSS AG

BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ BOWLl - Hollywood Bowl Group PLC

Citadel Securities (Europe) Limited (Program Three)

## ➤ BOYl - Bodycote PLC

Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ BPEm - BPER Banca

BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Optiver V.O.F. (Program Two and Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ BPlu - Banco BPI SA

Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

## ➤ BPOSTb - bpost SA

BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ BPSOm - Banca Popolare di Sondrio SCPA

Citadel Securities (Europe) Limited (Program Three)  
Hudson River Trading Europe Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

## ➤ BPI - BP PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Hudson River Trading Europe Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Tower Research Capital Europe Limited (Program Two)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ BRAVs - Bravida Holding AB

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Hudson River Trading Europe Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ BRBYL - Burberry Group PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ BREBb - Brederode SA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ BREm - Brembo SpA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Optiver V.O.F. (Program Two and Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ BRGo - Borregaard ASA

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XTX Markets Limited (Program Three)

## ➤ BRKNz - Burkhalter Holding AG

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Citadel Securities (Europe) Limited (Program Three)

## ➤ BRNLa - Brunel International NV

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

## ➤ BRSCI - BlackRock Smaller Cos Trust PLC

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Citadel Securities (Europe) Limited (Program Three)

## ➤ BRWML - BlackRock World Mining Trust PLC

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

## ➤ BRWL - Brewin Dolphin Holdings PLC

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ BSKPz - Basler Kantonalbank

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Citadel Securities (Europe) Limited (Program Three)

## ➤ BSLNz - Basilea Pharmaceutica AG

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ BSLd - Basler AG

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Citadel Securities (Europe) Limited (Program Three)

## ➤ BSSm - Biesse SpA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ BSTm - Banca Sistema SpA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ BTEML - British Empire Trust PLC

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Citadel Securities (Europe) Limited (Program Three)

## ➤ BTGL - BTG PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ BTl - BT Group PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Tower Research Capital Europe Limited (Program Two)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)



## ➤ BUCNz - Bucher Industries AG

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Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

## ➤ BURp - Burelle SA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ BVBd - Borussia Dortmund GmbH & Co KGaA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ BVICL - Britvic PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ BVlp - Bureau Veritas SA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ BVSl - Bovis Homes Group PLC

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ BWNGl - N Brown Group PLC

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ BWYl - Bellway PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ BYGl - Big Yellow Group PLC

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

➤ **BYW6d - BayWa AG**

Citadel Securities (Europe) Limited (Program Three)

➤ **BZURm - Buzzi Unicem SpA**

Citadel Securities (Europe) Limited (Program Three)

➤ **BZUm - Buzzi Unicem SpA**

BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Hudson River Trading Europe Limited (Program Three)  
Optiver V.O.F. (Program Two and Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

➤ **CABKe - CaixaBank SA**

BNP Paribas Arbitrage SNC (Program One and Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

➤ **CAFe - Construcciones y Auxiliar de Ferrocarriles SA**

XTX Markets Limited (Program Three)

➤ **CAFp - Caisse Regionale de Credit Agricole Mutuel de Paris et d'Ile-de-France**

Citadel Securities (Europe) Limited (Program Three)

➤ **CAIm - Cairo Communication SpA**

Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

➤ **CAIv - CA Immobilien Anlagen AG**

Virtu Financial Ireland Ltd (Program Two)

➤ **CALL - Capital & Regional PLC**

Citadel Securities (Europe) Limited (Program Three)

➤ **CAPCl - Capital & Counties Properties PLC**

BNP Paribas Arbitrage SNC (Program One)  
Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ CAPd - Encavis AG

Citadel Securities (Europe) Limited (Program Three)

## ➤ CAPp - Capgemini SE

BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ CARDI - Card Factory PLC

Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ CARLBc - Carlsberg A/S

Hudson River Trading Europe Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ CARMp - Carmila SA

Citadel Securities (Europe) Limited (Program Three)

## ➤ CARRm - Carraro SpA/Campodarsego

Citadel Securities (Europe) Limited (Program Three)

## ➤ CASSm - Societa Cattolica di Assicurazioni SC

Citadel Securities (Europe) Limited (Program Three)

## ➤ CASTs - Castellum AB

BNP Paribas Arbitrage SNC (Program One and Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ CATGp - Catana Group

Citadel Securities (Europe) Limited (Program Three)

## ➤ CAp - Carrefour SA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
My Capital Netherlands BV (Program Two)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ CBGl - Close Brothers Group PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ CBKDI - Commercial International Bank Egypt SAE

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Citadel Securities (Europe) Limited (Program Three)

## ➤ CBKd - Commerzbank AG

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BNP Paribas Arbitrage SNC (Program Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ CCAPd - Corestate Capital Holding SA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ CCCI - Computacenter PLC

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ CCFSI - Charter Court Financial Services Group PLC

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Citadel Securities (Europe) Limited (Program Three)

## ➤ CCHI - Coca-Cola HBC AG

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ CCLI - Carnival PLC

BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Hudson River Trading Europe Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ CCRI - C&C Group PLC

Citadel Securities (Europe) Limited (Program Three)

#### ➤ CDAp - Cie des Alpes

Citadel Securities (Europe) Limited (Program Three)

#### ➤ CDIp - Christian Dior SE

BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ CE2d - CropEnergies AG

Citadel Securities (Europe) Limited (Program Three)

#### ➤ CECd - CECONOMY AG

Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

#### ➤ CEMm - Cementir Holding SpA

Citadel Securities (Europe) Limited (Program Three)

#### ➤ CENp - Groupe Crit

Citadel Securities (Europe) Limited (Program Three)

#### ➤ CERVm - Cerved Group SpA

Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

#### ➤ CEVd - CENTROTEC Sustainable AG

Citadel Securities (Europe) Limited (Program Three)

## ➤ CEYL - Centamin PLC

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BNP Paribas Arbitrage SNC (Program One)  
Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ CEm - Credito Emiliano SpA

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

## ➤ CFEBb - Cie d'Entreprises CFE

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ CFRz - Cie Financiere Richemont SA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Tower Research Capital Europe Limited (Program Two)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ CGCBVh - Cargotec Oyj

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Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ CGGp - CGG SA

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

## ➤ CGMp - Cegedim SA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ CHGL - Chemring Group PLC

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Citadel Securities (Europe) Limited (Program Three)

## ➤ CHRc - Chr Hansen Holding A/S

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Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ CIBp - CIBOX INTER@CTIVE

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Citadel Securities (Europe) Limited (Program Three)

➤ [CICNz - Cikor Technologies Ltd](#)

Citadel Securities (Europe) Limited (Program Three)

➤ [CIEe - CIE Automotive SA](#)

XTX Markets Limited (Program Three)

➤ [CINEL - Cineworld Group PLC](#)

Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

➤ [CIRm - CIR-Compagnie Industriali Riunite SpA](#)

Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

➤ [CKNI - Clarkson PLC](#)

Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

➤ [CLABs - Cloetta AB](#)

XTX Markets Limited (Program Three)

➤ [CLAp - Claranova SADIR](#)

Citadel Securities (Europe) Limited (Program Three)

➤ [CLDNI - Caledonia Investments PLC](#)

Citadel Securities (Europe) Limited (Program Three)

➤ [CLNXe - Cellnex Telecom SA](#)

BNP Paribas Arbitrage SNC (Program One and Three)  
Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

➤ [CLNz - Clariant AG](#)

BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

➤ [CLTNz - Coltene Holding AG](#)

Citadel Securities (Europe) Limited (Program Three)

## ➤ CLXNz - Crealogix Holding AG

Citadel Securities (Europe) Limited (Program Three)

## ➤ CMBNz - Cembra Money Bank AG

BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

## ➤ CMBm - Cembre SpA

Citadel Securities (Europe) Limited (Program Three)

## ➤ CMCXI - CMC Markets PLC

Citadel Securities (Europe) Limited (Program Three)

## ➤ CNAI - Centrica PLC

BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ CNEI - Cairn Energy PLC

Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ CNFp - Caisse Regionale de Credit Agricole Mutuel Nord de France

Citadel Securities (Europe) Limited (Program Three)

## ➤ CNHIm - CNH Industrial NV

BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Hudson River Trading Europe Limited (Program Three)  
Optiver V.O.F. (Program Two and Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ CNPp - CNP Assurances

BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)



➤ CNWKd - Co.don AG

Citadel Securities (Europe) Limited (Program Three)

➤ COAl - Coats Group PLC

Citadel Securities (Europe) Limited (Program Three)

➤ COBl - Cobham PLC

BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

➤ COFAp - Coface SA

Citadel Securities (Europe) Limited (Program Three)

➤ COFBb - Cofinimmo SA

BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

➤ COFm - Cofide SpA

Citadel Securities (Europe) Limited (Program Three)

➤ COKd - CANCOM SE

Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

➤ COLOBc - Coloplast A/S

Hudson River Trading Europe Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

➤ COLRb - Colruyt SA

BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ COLe - Inmobiliaria Colonial Socimi SA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

## ➤ COMBb - Cie du Bois Sauvage SA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ COMd - comdirect bank AG

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Citadel Securities (Europe) Limited (Program Three)

## ➤ CONd - Continental AG

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BNP Paribas Arbitrage SNC (Program Three)  
Citadel Securities (Europe) Limited (Program Three)  
Jump Trading International Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ CONz - Conzzeta AG

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Citadel Securities (Europe) Limited (Program Three)

## ➤ COPNz - COSMO Pharmaceuticals NV

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ COPd - CompuGroup Medical SE

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ CORu - Corticeira Amorim SGPS SA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ COSTI - Costain Group PLC

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Citadel Securities (Europe) Limited (Program Three)

## ➤ COTNz - Comet Holding AG

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Citadel Securities (Europe) Limited (Program Three)

## ➤ COVHp - Covivio Hotels SACA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ COVp - Covivio

Citadel Securities (Europe) Limited (Program Three)

## ➤ COXp - Nicox

Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

## ➤ COp - Casino Guichard Perrachon SA

BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
My Capital Netherlands BV (Program Two)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ CPGI - Compass Group PLC

BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Tower Research Capital Europe Limited (Program Two)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ CPINvb - Care Property Invest

Citadel Securities (Europe) Limited (Program Three)

## ➤ CPII - Capita PLC

BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ CPRm - Davide Campari-Milano SpA

BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
My Capital Netherlands BV (Program Two)  
Optiver V.O.F. (Program Two and Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ CRA1Vh - Cramo OYJ

XTX Markets Limited (Program Three)

## ➤ CRBNa - Corbion NV

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ CRDAI - Croda International PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ CRESm - COIMA RES SpA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ CRGi - CRH PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Hudson River Trading Europe Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

## ➤ CRGm - Banca Carige SpA

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Virtu Financial Ireland Ltd (Program Two)

## ➤ CRHl - CRH PLC

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ CRIND - UniCredit SpA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ CRIp - Chargeurs SA

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Citadel Securities (Europe) Limited (Program Three)  
Hudson River Trading Europe Limited (Program Three)

## ➤ CRNI - Cairn Homes PLC

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Citadel Securities (Europe) Limited (Program Three)

## ➤ CRSTl - Crest Nicholson Holdings plc

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ CSGNz - Credit Suisse Group AG

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Tower Research Capital Europe Limited (Program Two)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ CSHd - CENIT AG

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Citadel Securities (Europe) Limited (Program Three)

## ➤ CSHl - Civitas Social Housing PLC

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Citadel Securities (Europe) Limited (Program Three)

## ➤ CSNI - Chesnara PLC

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Citadel Securities (Europe) Limited (Program Three)

## ➤ CSPI - Countryside Properties PLC

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Citadel Securities (Europe) Limited (Program Three)

## ➤ CSXd - Credit Suisse Group AG

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Optiver V.O.F. (Program Three)

## ➤ CSp - AXA SA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
My Capital Netherlands BV (Program Two)  
Societe Generale London Branch (Program Three)  
Tower Research Capital Europe Limited (Program Two)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ CTECl - ConvaTec Group PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ CTTu - CTT-Correios de Portugal SA

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

## ➤ CTY1Sh - Citycon OYJ

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Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ CTYL - City of London Investment Trust PLC/The

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Citadel Securities (Europe) Limited (Program Three)

## ➤ CVALm - Credito Valtellinese SpA

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Citadel Securities (Europe) Limited (Program Three)  
Hudson River Trading Europe Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

## ➤ CWCd - Cewe Stiftung & Co KGAA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ CWDl - Countrywide PLC

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ CWKl - Cranswick PLC

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ CYADb - Celyad SA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ CYBGl - CYBG PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ DAEz - Daetwyler Holding AG

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ DAld - Daimler AG

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Tower Research Capital Europe Limited (Program Two)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ DALm - Datalogic SpA

Citadel Securities (Europe) Limited (Program Three)  
Hudson River Trading Europe Limited (Program Three)

#### ➤ DANRm - Danieli & C Officine Meccaniche SpA

Citadel Securities (Europe) Limited (Program Three)

#### ➤ DANSKc - Danske Bank A/S

Hudson River Trading Europe Limited (Program Three)  
Optiver V.O.F. (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ DANm - Danieli & C Officine Meccaniche SpA

Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

#### ➤ DB1d - Deutsche Boerse AG

BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ DBANd - Deutsche Beteiligungs AG

Citadel Securities (Europe) Limited (Program Three)

#### ➤ DBGp - Derichebourg SA

Citadel Securities (Europe) Limited (Program Three)

#### ➤ DBKd - Deutsche Bank AG

BNP Paribas Arbitrage SNC (Program Three)  
Citadel Securities (Europe) Limited (Program Three)  
Jump Trading International Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ DBVp - DBV Technologies SA

Citadel Securities (Europe) Limited (Program Three)  
Hudson River Trading Europe Limited (Program Three)  
Societe Generale London Branch (Program Three)

#### ➤ DCCI - DCC PLC

BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

#### ➤ DCGL - Dairy Crest Group PLC

Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

#### ➤ DCI - Dixons Carphone PLC

BNP Paribas Arbitrage SNC (Program One)  
Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ DEAm - DeA Capital SpA

Citadel Securities (Europe) Limited (Program Three)

#### ➤ DEBl - Debenhams PLC

Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ DECBb - Deceuninck NV

Citadel Securities (Europe) Limited (Program Three)

#### ➤ DECp - JCDecaux SA

BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ DEQd - Deutsche EuroShop AG

Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ DESNz - Dottikon Es Holding AG

Citadel Securities (Europe) Limited (Program Three)



## ➤ DEXBb - Dexia SA

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

## ➤ DEZd - Deutz AG

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

## ➤ DFDSd - Dfds A/S

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Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

## ➤ DFSI - DFS Furniture PLC

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Citadel Securities (Europe) Limited (Program Three)

## ➤ DGEI - Diageo PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Tower Research Capital Europe Limited (Program Two)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ DGp - Vinci SA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
My Capital Netherlands BV (Program Two)  
Optiver V.O.F. (Program Three)  
Societe Generale London Branch (Program Three)  
Tower Research Capital Europe Limited (Program Two)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ DHERd - Delivery Hero SE

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)

## ➤ DIAe - Distribuidora Internacional de Alimentacion SA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Virtu Financial Ireland Ltd (Program Two)

## ➤ DIAL - Dialight PLC

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Virtu Financial Ireland Ltd (Program Two)

## ➤ DIAm - DiaSorin SpA

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Citadel Securities (Europe) Limited (Program Three)  
Optiver V.O.F. (Program Two)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ DIBm - Digital Bros SpA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ DICd - DIC Asset AG

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Citadel Securities (Europe) Limited (Program Three)

## ➤ DIEb - D'ieten SA/NV

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ DIGSl - GCP Student Living PLC

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Citadel Securities (Europe) Limited (Program Three)

## ➤ DIMp - Sartorius Stedim Biotech

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Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)

## ➤ DIOSs - Dios Fastigheter AB

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XTX Markets Limited (Program Three)

## ➤ DISm - d'Amico International Shipping SA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ DKSHz - DKSH Holding AG

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

## ➤ DLARl - De La Rue PLC

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

## ➤ DLGd - Dialog Semiconductor PLC

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Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ DLGI - Direct Line Insurance Group PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ DLGm - De' Longhi SpA

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ DLNI - Derwent London PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ DMGTI - Daily Mail & General Trust PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ DMREd - DEMIRE Deutsche Mittelstand Real Estate AG

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Citadel Securities (Europe) Limited (Program Three)

## ➤ DNBo - DNB ASA

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Optiver V.O.F. (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ DNLMl - Dunelm Group PLC

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ DNORDc - D/S Norden A/S

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Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ DNOo - DNO ASA

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Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ DOBm - doBank SpA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ DOKAz - dormakaba Holding AG

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BNP Paribas Arbitrage SNC (Program One)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

## ➤ DOMl - Domino's Pizza Group PLC

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ DOMs - Dometic Group AB

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Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

## ➤ DPHl - Dechra Pharmaceuticals PLC

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ DPLMl - Diploma PLC

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ DPWd - Deutsche Post AG

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Hudson River Trading Europe Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Tower Research Capital Europe Limited (Program Two)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ DRId - 1&1 Drillisch AG

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ DRW3d - Draegerwerk AG & Co KGaA

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

#### ➤ DRW8d - Draegerwerk AG & Co KGaA

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Citadel Securities (Europe) Limited (Program Three)

#### ➤ DRXl - Drax Group PLC

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ DSMa - Koninklijke DSM NV

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Tower Research Capital Europe Limited (Program Two)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ DSVc - DSV A/S

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Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ DSYp - Dassault Systemes SE

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ DTEd - Deutsche Telekom AG

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Hudson River Trading Europe Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ DTYL - Dignity PLC

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

#### ➤ DUEd - Duerr AG

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BNP Paribas Arbitrage SNC (Program One)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

#### ➤ DUFNz - Dufry AG

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

#### ➤ DVOI - Devro PLC

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

#### ➤ DVTp - Devoteam SA

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Citadel Securities (Europe) Limited (Program Three)

#### ➤ DWNld - Deutsche Wohnen SE

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ EAS2Pa - Ease2pay NV

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Citadel Securities (Europe) Limited (Program Three)

#### ➤ EBROe - Ebro Foods SA

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Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ EBSv - Erste Group Bank AG

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Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ ECMPAa - Eurocommercial Properties NV

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Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ ECML - Electrocomponents PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ ECNLm - Aquafil SpA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ ECONBb - Econocom Group SA/NV

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Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ ECPp - EuropaCorp

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Citadel Securities (Europe) Limited (Program Three)

## ➤ ECTa - Eurocastle Investment Ltd

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Citadel Securities (Europe) Limited (Program Three)

## ➤ ECXd - Epigenomics AG

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Citadel Securities (Europe) Limited (Program Three)

## ➤ ECp - Total Gabon

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Citadel Securities (Europe) Limited (Program Three)

## ➤ EDENp - Edenred

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ EDFp - Electricite de France SA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Hudson River Trading Europe Limited (Program Three)  
My Capital Netherlands BV (Program Two)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ EDINL - Edinburgh Investment Trust PLC/The

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

## ➤ EDNRm - Edison SpA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ EDPRu - EDP Renovaveis SA

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ EDPu - EDP - Energias de Portugal SA

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Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ EFGNz - EFG International AG

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ EFML - Edinburgh Dragon Trust PLC

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Citadel Securities (Europe) Limited (Program Three)

## ➤ EGLu - Mota-Engil SGPS SA

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

## ➤ EIFFp - Societe de la Tour Eiffel

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Citadel Securities (Europe) Limited (Program Three)

## ➤ EIGl - El Group PLC

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Citadel Securities (Europe) Limited (Program Three)



## ➤ EIN3d - Einhell Germany AG

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Citadel Securities (Europe) Limited (Program Three)

## ➤ EKlp - Ekinops SAS

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Citadel Securities (Europe) Limited (Program Three)

## ➤ EKTABs - Elekta AB

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BNP Paribas Arbitrage SNC (Program One and Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ EKTe - Euskaltel SA

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XTX Markets Limited (Program Three)

## ➤ ELCm - Elica SpA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ ELEe - Endesa SA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

## ➤ ELGd - Elmos Semiconductor AG

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Citadel Securities (Europe) Limited (Program Three)

## ➤ ELIORp - Elio Group SA

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BNP Paribas Arbitrage SNC (Program One)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

## ➤ ELISAh - Elisa OYJ

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BNP Paribas Arbitrage SNC (Program One and Three)  
Hudson River Trading Europe Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ ELISp - Elis SA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Hudson River Trading Europe Limited (Program Three)

## ➤ ELIb - Elia System Operator SA/NV

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ ELMl - Elementis PLC

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ ELNm - El.En. SpA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ ELUXBs - Electrolux AB

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BNP Paribas Arbitrage SNC (Program One and Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ ELp - EssilorLuxottica SA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ EMGI - Man Group PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ EMMNz - Emmi AG

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ EMSNz - EMS-Chemie Holding AG

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

## ➤ EMm - Emak SpA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ ENAVm - Enav SpA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ ENCe - Ence Energia y Celulosa SA

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XTX Markets Limited (Program Three)

## ➤ ENELm - Enel SpA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
My Capital Netherlands BV (Program Two)  
Optiver V.O.F. (Program Two and Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ ENGIp - Engie SA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
My Capital Netherlands BV (Program Two)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ ENGe - Enagas SA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Hudson River Trading Europe Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

## ➤ ENId - Eni SpA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ ENIm - Eni SpA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
My Capital Netherlands BV (Program Two)  
Optiver V.O.F. (Program Two and Three)  
Societe Generale London Branch (Program Three)  
Tower Research Capital Europe Limited (Program Two)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ ENQI - EnQuest PLC

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Citadel Securities (Europe) Limited (Program Three)

## ➤ ENTRAO - Entra ASA

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XTX Markets Limited (Program Three)

## ➤ ENXp - Euronext NV

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ ENp - Bouygues SA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
My Capital Netherlands BV (Program Two)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ EOANd - E.ON SE

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Jump Trading International Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ EOSIp - EOS Imaging SA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ EOp - Faurecia SA

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BNP Paribas Arbitrage SNC (Program Three)  
Citadel Securities (Europe) Limited (Program Three)  
Optiver V.O.F. (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ EPRm - ePrice SpA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ EQNRo - Equinor ASA

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Optiver V.O.F. (Program Three)

## ➤ EQNI - Equiniti Group PLC

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Citadel Securities (Europe) Limited (Program Three)

## ➤ ERAp - Eramet

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ ERFp - Eurofins Scientific SE

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ ERGm - ERG SpA

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Citadel Securities (Europe) Limited (Program Three)  
Hudson River Trading Europe Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ ERICAs - Telefonaktiebolaget LM Ericsson

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Virtu Financial Ireland Ltd (Program Two)

## ➤ ERICBs - Telefonaktiebolaget LM Ericsson

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BNP Paribas Arbitrage SNC (Program One and Three)  
Societe Generale London Branch (Program Three)  
Tower Research Capital Europe Limited (Program Two)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ ERMKd - DEAG Deutsche Entertainment AG

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Citadel Securities (Europe) Limited (Program Three)

## ➤ ERML - Euromoney Institutional Investor PLC

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Citadel Securities (Europe) Limited (Program Three)

## ➤ ERYPP - Erytech Pharma SA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ ESIp - ESI Group

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Citadel Securities (Europe) Limited (Program Three)

## ➤ ESNTI - Essentra PLC

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ ESPa - Esperite NV

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Citadel Securities (Europe) Limited (Program Three)

## ➤ ESPL - Empiric Student Property PLC

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Citadel Securities (Europe) Limited (Program Three)

## ➤ ESSIBs - Essity AB

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BNP Paribas Arbitrage SNC (Program One and Three)  
Hudson River Trading Europe Limited (Program Three)  
Societe Generale London Branch (Program Three)

## ➤ ESURL - esure Group PLC

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ ESp - Esso SA Francaise

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Citadel Securities (Europe) Limited (Program Three)

## ➤ ETHm - Eurotech SpA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ ETLNI - Etalon Group PLC

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Citadel Securities (Europe) Limited (Program Three)

## ➤ ETLp - Eutelsat Communications SA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
My Capital Netherlands BV (Program Two)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ ETOl - Entertainment One Ltd

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ EUCARp - Europcar Mobility Group

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Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

## ➤ EURNb - Euronav NV

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

➤ EUZd - Eckert & Ziegler AG

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Citadel Securities (Europe) Limited (Program Three)

➤ EV4d - Constantin Medien AG

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Citadel Securities (Europe) Limited (Program Three)

➤ EVDd - CTS Eventim AG & Co KGaA

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Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

➤ EVEz - Evolva Holding SA

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Citadel Securities (Europe) Limited (Program Three)

➤ EVKd - Evonik Industries AG

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

➤ EVNv - EVN AG

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Virtu Financial Ireland Ltd (Program Two)

➤ EVRI - Evraz PLC

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BNP Paribas Arbitrage SNC (Program Three)  
Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

➤ EVSb - EVS Broadcast Equipment SA

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Citadel Securities (Europe) Limited (Program Three)

➤ EVTd - Evotec AG

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

➤ EWII - Edinburgh Worldwide Investment Trust PLC

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Citadel Securities (Europe) Limited (Program Three)

## ➤ EXMb - Exmar NV

Citadel Securities (Europe) Limited (Program Three)

## ➤ EXNd - Expedeon AG

Citadel Securities (Europe) Limited (Program Three)

## ➤ EXOm - EXOR NV

BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Hudson River Trading Europe Limited (Program Three)  
Optiver V.O.F. (Program Two and Three)  
Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

## ➤ EXPNI - Experian PLC

BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Tower Research Capital Europe Limited (Program Two)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ EXS1d - iShares Core DAX UCITS ETF DE

Jump Trading International Limited (Program Three)

## ➤ EZJL - easyJet PLC

BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ F3Cd - SFC Energy AG

Citadel Securities (Europe) Limited (Program Three)

## ➤ FAAd - Fabasoft AG

Citadel Securities (Europe) Limited (Program Three)

## ➤ FABGs - Fabege AB

BNP Paribas Arbitrage SNC (Program One and Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)



## ➤ FAGRb - Fagron

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Citadel Securities (Europe) Limited (Program Three)

## ➤ FBKm - FinecoBank Banca Fineco SpA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Optiver V.O.F. (Program Two and Three)  
Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

## ➤ FCAm - Fiat Chrysler Automobiles NV

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Optiver V.O.F. (Program Two and Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ FCCe - Fomento de Construcciones y Contratas SA

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Virtu Financial Ireland Ltd (Program Two)

## ➤ FCPTI - F&C Commercial Property Trust Ltd

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

## ➤ FCSSl - Fidelity China Special Situations PLC

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

## ➤ FCTm - Fincantieri SpA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ FDAm - Fidia SpA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ FDMI - FDM Group Holdings PLC

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Citadel Securities (Europe) Limited (Program Three)

## ➤ FERGl - Ferguson PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ FERe - Ferrovial SA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Hudson River Trading Europe Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

## ➤ FEVL - Fidelity European Values PLC

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Citadel Securities (Europe) Limited (Program Three)

## ➤ FFARMa - ForFarmers NV

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Citadel Securities (Europe) Limited (Program Three)

## ➤ FFPp - FFP

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Citadel Securities (Europe) Limited (Program Three)

## ➤ FGAp - FIGEAC-AERO

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Citadel Securities (Europe) Limited (Program Three)

## ➤ FGPI - Firstgroup PLC

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ FGRp - Eiffage SA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ FGTL - Finsbury Growth & Income Trust PLC/Fund

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Citadel Securities (Europe) Limited (Program Three)

## ➤ FHZNz - Flughafen Zurich AG

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

## ➤ FIEd - Fielmann AG

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Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

➤ [FIIP - LISI](#)

Citadel Securities (Europe) Limited (Program Three)

➤ [FILAm - Fila SpA](#)

Citadel Securities (Europe) Limited (Program Three)

➤ [FINGBs - Fingerprint Cards AB](#)

Virtu Financial Ireland Ltd (Program Two)

➤ [FINz - Georg Fischer AG](#)

BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

➤ [FIVEI - X5 Retail Group NV](#)

Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

➤ [FKRm - Falck Renewables SpA](#)

Citadel Securities (Europe) Limited (Program Three)

➤ [FLOWa - Flow Traders](#)

Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)

➤ [FLSc - FLSmidth & Co A/S](#)

Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

➤ [FLUv - Flughafen Wien AG](#)

Virtu Financial Ireland Ltd (Program Two)

➤ [FLYp - Societe Fonciere Lyonnaise SA](#)

Citadel Securities (Europe) Limited (Program Three)

## ➤ FMEd - Fresenius Medical Care AG & Co KGaA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ FMm - Fiera Milano SpA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ FNACp - Fnac Darty SA

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ FNMm - FNM SpA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ FNTNd - Freenet AG

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ FORNz - Forbo Holding AG

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Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

## ➤ FORTMh - Fortum OYJ

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BNP Paribas Arbitrage SNC (Program One and Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ FORTl - Forterra PLC

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Citadel Securities (Europe) Limited (Program Three)

## ➤ FOXTl - Foxtons Group PLC

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Citadel Securities (Europe) Limited (Program Three)

#### ➤ FPE3d - FUCHS PETROLUB SE

BNP Paribas Arbitrage SNC (Program One and Three)  
 Citadel Securities (Europe) Limited (Program Three)  
 Societe Generale London Branch (Program Three)  
 Virtu Financial Ireland Ltd (Program Two)  
 XTX Markets Limited (Program Three)

#### ➤ FPEd - FUCHS PETROLUB SE

Citadel Securities (Europe) Limited (Program Three)

#### ➤ FP Hd - Francotyp-Postalia Holding AG

Citadel Securities (Europe) Limited (Program Three)

#### ➤ FPp - TOTAL SA

BNP Paribas Arbitrage SNC (Program One and Three)  
 Citadel Securities (Europe) Limited (Program Three)  
 My Capital Netherlands BV (Program Two)  
 Societe Generale London Branch (Program Three)  
 Tower Research Capital Europe Limited (Program Two)  
 Virtu Financial Ireland Ltd (Program Two)  
 XTX Markets Limited (Program Three)

#### ➤ FRAd - Fraport AG Frankfurt Airport Services Worldwide

BNP Paribas Arbitrage SNC (Program One and Three)  
 Citadel Securities (Europe) Limited (Program Three)  
 Societe Generale London Branch (Program Three)  
 Virtu Financial Ireland Ltd (Program Two)  
 XTX Markets Limited (Program Three)

#### ➤ FRESl - Fresnillo PLC

BNP Paribas Arbitrage SNC (Program Three)  
 Citadel Securities (Europe) Limited (Program Three)  
 Societe Generale London Branch (Program Three)  
 Virtu Financial Ireland Ltd (Program Two)  
 XTX Markets Limited (Program Three)

#### ➤ FREd - Fresenius SE & Co KGaA

BNP Paribas Arbitrage SNC (Program One and Three)  
 Citadel Securities (Europe) Limited (Program Three)  
 Hudson River Trading Europe Limited (Program Three)  
 Societe Generale London Branch (Program Three)  
 Virtu Financial Ireland Ltd (Program Two)  
 XTX Markets Limited (Program Three)

#### ➤ FROo - Frontline Ltd/Bermuda

Virtu Financial Ireland Ltd (Program Two)  
 XTX Markets Limited (Program Three)

#### ➤ FRUd - Ferratum Oyj

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Citadel Securities (Europe) Limited (Program Three)

#### ➤ FRp - Valeo SA

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BNP Paribas Arbitrage SNC (Program Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ FSJl - James Fisher & Sons PLC

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Citadel Securities (Europe) Limited (Program Three)

#### ➤ FTIp - TechnipFMC PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

#### ➤ FTONz - Feintool International Holding AG

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Citadel Securities (Europe) Limited (Program Three)

#### ➤ FTRNp - Futuren SA

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

#### ➤ FURa - Fugro NV

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ FUTRI - Future PLC

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Citadel Securities (Europe) Limited (Program Three)

#### ➤ FXPOL - Ferrexpo PLC

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Citadel Securities (Europe) Limited (Program Three)

#### ➤ FYBd - Formycon AG

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Citadel Securities (Europe) Limited (Program Three)

## ➤ G1Ad - GEA Group AG

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ G24d - Scout24 AG

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

## ➤ GALEz - Galenica AG

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Citadel Securities (Europe) Limited (Program Three)

## ➤ GALPu - Galp Energia SGPS SA

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Citadel Securities (Europe) Limited (Program Three)  
Optiver V.O.F. (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ GAMz - GAM Holding AG

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Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

## ➤ GAVz - Carlo Gavazzi Holding AG

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Citadel Securities (Europe) Limited (Program Three)

## ➤ GAWL - Games Workshop Group PLC

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Citadel Securities (Europe) Limited (Program Three)

## ➤ GBBp - Bourbon Corp

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

## ➤ GBFd - Bilfinger SE

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Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ GBLBb - Groupe Bruxelles Lambert SA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ GBMNz - Goldbach Group AG

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Citadel Securities (Europe) Limited (Program Three)

## ➤ GBTp - Guerbet

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Citadel Securities (Europe) Limited (Program Three)

## ➤ GCCi - C&C Group PLC

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Virtu Financial Ireland Ltd (Program Two)

## ➤ GCPI - GCP Infrastructure Investments Ltd

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Citadel Securities (Europe) Limited (Program Three)

## ➤ GEBNz - Geberit AG

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Tower Research Capital Europe Limited (Program Two)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ GEDIm - GEDI Gruppo Editoriale SpA

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

## ➤ GENLI - Genel Energy Plc

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

## ➤ GENc - Genmab A/S

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Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ GEOM - Geox SpA

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)



## ➤ GETIBs - Getinge AB

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BNP Paribas Arbitrage SNC (Program One and Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ GETp - Getlink SE

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ GEm - Gefran SpA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ GFCp - Gecina SA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Hudson River Trading Europe Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ GFRDL - Galliford Try PLC

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ GFSI - G4S PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ GFTUL - Grafton Group PLC

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ GFTd - GFT Technologies SE

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Citadel Securities (Europe) Limited (Program Three)

## ➤ GGTVm - Giglio Group SpA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ GILd - DMG Mori AG

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

## ➤ GIMAm - Gima TT SpA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ GIMBb - Gimv NV

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Citadel Securities (Europe) Limited (Program Three)

## ➤ GIVNz - Givaudan SA

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BNP Paribas Arbitrage SNC (Program Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Tower Research Capital Europe Limited (Program Two)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ GJFo - Gjensidige Forsikring ASA

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Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ GKPl - Gulf Keystone Petroleum Ltd

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Citadel Securities (Europe) Limited (Program Three)

## ➤ GKSD - GK Software SE

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Citadel Securities (Europe) Limited (Program Three)

## ➤ GL9i - Glanbia PLC

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BNP Paribas Arbitrage SNC (Program One and Three)

## ➤ GLBl - Glanbia PLC

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Citadel Securities (Europe) Limited (Program Three)

## ➤ GLENl - Glencore PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ GLEp - Societe Generale SA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
My Capital Netherlands BV (Program Two)  
Optiver V.O.F. (Program Three)  
Societe Generale London Branch (Program Three)  
Tower Research Capital Europe Limited (Program Two)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ GLJd - GRENKE AG

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Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)

## ➤ GLOp - GL Events

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Citadel Securities (Europe) Limited (Program Three)

## ➤ GLPGa - Galapagos NV

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ GLTRL - Globaltrans Investment PLC

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Citadel Securities (Europe) Limited (Program Three)

## ➤ GMMd - Grammer AG

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Citadel Securities (Europe) Limited (Program Three)

## ➤ GNCl - Greencore Group PLC

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ GNFTp - Genfit

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Citadel Securities (Europe) Limited (Program Three)

## ➤ GNKl - Greene King PLC

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ GNSI - Genus PLC

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ GNc - GN Store Nord A/S

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Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ GOCOL - Gocompare.Com Group PLC

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Citadel Securities (Europe) Limited (Program Three)

## ➤ GOEp - Groupe Gorge

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Citadel Securities (Europe) Limited (Program Three)

## ➤ GOGLo - Golden Ocean Group Ltd

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Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

## ➤ GOGL - Go-Ahead Group PLC/The

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ GPORl - Great Portland Estates PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ GREENb - Greenyard NV

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Citadel Securities (Europe) Limited (Program Three)

## ➤ GRFe - Grifols SA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ GRGl - Greggs PLC

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ GRIL - Grainger PLC

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ GRKPz - Graubuendner Kantonalbank

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Citadel Securities (Europe) Limited (Program Three)

## ➤ GRNGs - Granges AB

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XTX Markets Limited (Program Three)

## ➤ GSC1d - Gesco AG

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Citadel Securities (Europe) Limited (Program Three)

## ➤ GSFo - Grieg Seafood ASA

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Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

## ➤ GSKl - GlaxoSmithKline PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ GSSl - Genesis Emerging Markets Fund Ltd

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

## ➤ GTOa - Gemalto NV

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Hudson River Trading Europe Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ GTTp - Gaztransport Et Technigaz SA

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Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)

## ➤ GURz - Gurit Holding AG

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Citadel Securities (Europe) Limited (Program Three)

## ➤ GVCl - GVC Holdings PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ GNVVa - GrandVision NV

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ GWI1d - Gerry Weber International AG

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Citadel Securities (Europe) Limited (Program Three)

## ➤ GXId - Gerresheimer AG

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ GYCd - Grand City Properties SA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ GYML - Gym Group PLC/The

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Citadel Securities (Europe) Limited (Program Three)

## ➤ Gm - Assicurazioni Generali SpA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
My Capital Netherlands BV (Program Two)  
Optiver V.O.F. (Program Two and Three)  
Societe Generale London Branch (Program Three)  
Tower Research Capital Europe Limited (Program Two)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ H5Ed - HELMA Eigenheimbau AG

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Citadel Securities (Europe) Limited (Program Three)

## ➤ HABd - Hamborner REIT AG

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Citadel Securities (Europe) Limited (Program Three)

## ➤ HAEd - HAEMATO AG

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Citadel Securities (Europe) Limited (Program Three)

## ➤ HALa - HAL Trust

Citadel Securities (Europe) Limited (Program Three)

## ➤ HASI - Hays PLC

BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ HBHd - Hornbach Holding AG & Co KGaA

Citadel Securities (Europe) Limited (Program Three)

## ➤ HBLNz - Hypothekarbank Lenzburg AG

Citadel Securities (Europe) Limited (Program Three)

## ➤ HBMd - Hornbach Baumarkt AG

Citadel Securities (Europe) Limited (Program Three)

## ➤ HDDd - Heidelberger Druckmaschinen AG

Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

## ➤ HDGa - Hunter Douglas NV

Citadel Securities (Europe) Limited (Program Three)

## ➤ HEADl - Headlam Group PLC

Citadel Securities (Europe) Limited (Program Three)

## ➤ HEIAa - Heineken NV

BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ HEIJMa - Heijmans NV

Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

### ➤ HEIOa - Heineken Holding NV

BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

### ➤ HEId - HeidelbergCement AG

BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

### ➤ HELNz - Helvetia Holding AG

BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

### ➤ HEMFs - Hemfosa Fastigheter AB

XTX Markets Limited (Program Three)

### ➤ HEN3d - Henkel AG & Co KGaA

BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

### ➤ HENd - Henkel AG & Co KGaA

Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

### ➤ HERm - Hera SpA

Citadel Securities (Europe) Limited (Program Three)  
Hudson River Trading Europe Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)



## ➤ HEXABs - Hexagon AB

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BNP Paribas Arbitrage SNC (Program One and Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ HFDI - Halfords Group PLC

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ HFGd - HelloFresh SE

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Citadel Securities (Europe) Limited (Program Three)

## ➤ HFGI - Hilton Food Group PLC

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Citadel Securities (Europe) Limited (Program Three)

## ➤ HGTL - HgCapital Trust PLC/Fund

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Citadel Securities (Europe) Limited (Program Three)

## ➤ HHFAd - Hamburger Hafen und Logistik AG

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

## ➤ HHPDI - Hon Hai Precision Industry Co Ltd

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Citadel Securities (Europe) Limited (Program Three)

## ➤ HIAGz - Hiag Immobilien Holding AG

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Citadel Securities (Europe) Limited (Program Three)

## ➤ HICLI - HICL Infrastructure Co Ltd/Fund

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ HIKI - Hikma Pharmaceuticals PLC

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ HILSI - Hill & Smith Holdings PLC

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ HLAGd - Hapag-Lloyd AG

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Citadel Securities (Europe) Limited (Program Three)

## ➤ HLCLI - Helical PLC

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

## ➤ HLEd - Hella GmbH & Co KGaA

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Citadel Securities (Europe) Limited (Program Three)  
Optiver V.O.F. (Program Three)  
Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

## ➤ HLMAI - Halma PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ HLL - Hargreaves Lansdown PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ HMBs - Hennes & Mauritz AB

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BNP Paribas Arbitrage SNC (Program One and Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ HMSFl - Highbridge Multi-Strategy Fund Ltd

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Citadel Securities (Europe) Limited (Program Three)

## ➤ HMSOL - Hammerson PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ HNLd - Dr Hoenle AG

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Citadel Securities (Europe) Limited (Program Three)

## ➤ HNR1d - Hannover Rueck SE

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ HOCNz - HOCHDORF Holding AG

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Citadel Securities (Europe) Limited (Program Three)

## ➤ HOCd - HolidayCheck Group AG

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Citadel Securities (Europe) Limited (Program Three)

## ➤ HOCl - Hochschild Mining PLC

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ HOLMBs - Holmen AB

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Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ HOMIb - Home Invest Belgium

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Citadel Securities (Europe) Limited (Program Three)

## ➤ HOTd - HOCHTIEF AG

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ HOp - Thales SA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ HPOLBs - Hexpol AB

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BNP Paribas Arbitrage SNC (Program One and Three)  
XTX Markets Limited (Program Three)

## ➤ HRIL - Herald Investment Trust PLC

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Citadel Securities (Europe) Limited (Program Three)

## ➤ HSBAL - HSBC Holdings PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Hudson River Trading Europe Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Tower Research Capital Europe Limited (Program Two)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ HSBp - HSBC Holdings PLC

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Citadel Securities (Europe) Limited (Program Three)

## ➤ HSLI - Henderson Smaller Companies Investment Trust PLC/The

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Citadel Securities (Europe) Limited (Program Three)

## ➤ HSTGI - Hastings Group Holdings PLC

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ HSTNI - Hansteen Holdings PLC

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ HSVI - HomeServe PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ HSXI - Hiscox Ltd

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ HTGL - Hunting PLC

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ HUBNz - Huber + Suhner AG

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Citadel Securities (Europe) Limited (Program Three)

## ➤ HUFVAs - Hufvudstaden AB

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Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ HUH1Vh - Huhtamaki OYJ

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BNP Paribas Arbitrage SNC (Program One and Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ HUSQAs - Husqvarna AB

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Virtu Financial Ireland Ltd (Program Two)

## ➤ HUSQBs - Husqvarna AB

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BNP Paribas Arbitrage SNC (Program One and Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ HVPEI - HarbourVest Global Private Equity Ltd

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Citadel Securities (Europe) Limited (Program Three)

## ➤ HWDNI - Howden Joinery Group PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ HYDRI - RusHydro PJSC

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Citadel Securities (Europe) Limited (Program Three)

## ➤ HYQd - Hypoport AG

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Citadel Securities (Europe) Limited (Program Three)

## ➤ IAGe - International Consolidated Airlines Group SA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Optiver V.O.F. (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

## ➤ IAGl - International Consolidated Airlines Group SA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ IBABb - Ion Beam Applications

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

## ➤ IBEE - Iberdrola SA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Hudson River Trading Europe Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ IBSTl - Ibstock PLC

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ IBSu - Ibersol SGPS SA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ ICADp - ICADE

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ ICAs - ICA Gruppen AB

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BNP Paribas Arbitrage SNC (Program One and Three)  
Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

## ➤ ICPl - Intermediate Capital Group PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ ICTa - ICT Group NV

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Citadel Securities (Europe) Limited (Program Three)

## ➤ IDIAz - Idorsia Ltd

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Citadel Securities (Europe) Limited (Program Three)

## ➤ IDLp - ID Logistics Group

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Citadel Securities (Europe) Limited (Program Three)

## ➤ IDRe - Indra Sistemas SA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ IFCNz - Inficon Holding AG

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Citadel Securities (Europe) Limited (Program Three)

## ➤ IFXd - Infineon Technologies AG

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BNP Paribas Arbitrage SNC (Program Three)  
Citadel Securities (Europe) Limited (Program Three)  
Hudson River Trading Europe Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Tower Research Capital Europe Limited (Program Two)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ IFm - Banca IFIS SpA

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Citadel Securities (Europe) Limited (Program Three)  
Hudson River Trading Europe Limited (Program Three)

## ➤ IGDm - Immobiliare Grande Distribuzione SIIQ SpA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ IGGL - IG Group Holdings PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ IGYd - Innogy SE

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

## ➤ IGm - Italgas SpA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
My Capital Netherlands BV (Program Two)  
Optiver V.O.F. (Program Two and Three)  
Societe Generale London Branch (Program Three)

## ➤ IHGL - InterContinental Hotels Group PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ IIAv - IMMOFINANZ AG

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Virtu Financial Ireland Ltd (Program Two)

## ➤ IIIl - 3i Group PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ IKGm - Intek Group SpA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ ILDP - Iliad SA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)



## ➤ IMAm - IMA Industria Macchine Automatiche SpA

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

## ➤ IMBl - Imperial Brands PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Tower Research Capital Europe Limited (Program Two)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ IMCDa - IMCD NV

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

## ➤ IMIl - IMI PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ IMLp - Affine RE SA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ IMMOb - Cie Immobiliere de Belgique SA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ IMPNz - Implenla AG

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ IMSm - IMMSI SpA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ INCHl - Inchcape PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ INDUAs - Industrivarden AB

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BNP Paribas Arbitrage SNC (Program One and Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ INDUCs - Industrivarden AB

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Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ INDVl - Indivior PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

#### ➤ INF1 - Informa PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ INFp - Infotel SA

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Citadel Securities (Europe) Limited (Program Three)

#### ➤ INGAA - ING Groep NV

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ INGP - Ingenico Group SA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ INHd - Indus Holding AG

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Citadel Securities (Europe) Limited (Program Three)

#### ➤ INPPl - International Public Partnerships Ltd

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Citadel Securities (Europe) Limited (Program Three)

## ➤ INRNz - Interroll Holding AG

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Citadel Securities (Europe) Limited (Program Three)

## ➤ INSDp - Inside Secure SA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ INTERa - Intertrust NV

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ INTOb - Intervest Offices & Warehouses NV

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Citadel Securities (Europe) Limited (Program Three)

## ➤ INTRUs - Intrum AB

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BNP Paribas Arbitrage SNC (Program One)  
Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

## ➤ INTUL - Intu Properties PLC

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BNP Paribas Arbitrage SNC (Program One)  
Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ INVEAs - Investor AB

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Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ INVEBs - Investor AB

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BNP Paribas Arbitrage SNC (Program One and Three)  
Hudson River Trading Europe Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Tower Research Capital Europe Limited (Program Two)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ INVPL - Investec PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ INWm - Infrastrutture Wireless Italiane SpA

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Citadel Securities (Europe) Limited (Program Three)  
Hudson River Trading Europe Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ IOLm - Italiaonline SpA

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Virtu Financial Ireland Ltd (Program Two)

## ➤ IPFl - International Personal Finance PLC

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ IPHp - Innate Pharma SA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ IPNp - Ipsen SA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ IPOl - IP Group PLC

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ IPRu - Impresa SGPS SA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ IPSp - IPSOS

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ IPm - Interpump Group SpA

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Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ IREm - Iren SpA

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Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ IRVl - Interserve PLC

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Citadel Securities (Europe) Limited (Program Three)

#### ➤ ISATl - Inmarsat PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ ISGm - Isagro SpA

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Citadel Securities (Europe) Limited (Program Three)

#### ➤ ISNz - Intershop Holding AG

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Citadel Securities (Europe) Limited (Program Three)

#### ➤ ISPm - Intesa Sanpaolo SpA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
My Capital Netherlands BV (Program Two)  
Optiver V.O.F. (Program Two and Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ ISRd - Isra Vision AG

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Citadel Securities (Europe) Limited (Program Three)

#### ➤ ISSc - ISS A/S

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Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ ITEl - ITE Group PLC

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Citadel Securities (Europe) Limited (Program Three)

#### ➤ ITMm - Italmobiliare SpA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ ITPp - Interparfums SA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ ITRKL - Intertek Group PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ ITVI - ITV PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ ITXe - Industria de Diseno Textil SA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Hudson River Trading Europe Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ IVUd - IVU Traffic Technologies AG

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Citadel Securities (Europe) Limited (Program Three)

## ➤ IWGI - IWG PLC

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BNP Paribas Arbitrage SNC (Program One)  
Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ IXXd - Traffic Systems SE

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Citadel Securities (Europe) Limited (Program Three)

## ➤ JAIL - JPMorgan Asian Investment Trust plc

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Citadel Securities (Europe) Limited (Program Three)

## ➤ JAMI - JPMorgan American Investment Trust PLC

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Citadel Securities (Europe) Limited (Program Three)

## ➤ JCHl - JPMorgan Claverhouse Investment Trust plc

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Citadel Securities (Europe) Limited (Program Three)

➤ JCQp - Jacquet Metal Service SA

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Citadel Securities (Europe) Limited (Program Three)

➤ JDWL - J D Wetherspoon PLC

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

➤ JDI - JD Sports Fashion PLC

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

➤ JENd - Jenoptik AG

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Citadel Securities (Europe) Limited (Program Three)

➤ JEOL - Jupiter European Opportunities Trust PLC

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Citadel Securities (Europe) Limited (Program Three)

➤ JEI - Just Eat PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

➤ JIII - JPMorgan Indian Investment Trust plc

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Citadel Securities (Europe) Limited (Program Three)

➤ JLGI - John Laing Group PLC

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

➤ JLTl - Jardine Lloyd Thompson Group PLC

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

➤ JMATI - Johnson Matthey PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

➤ JMGI - JPMorgan Emerging Markets Investment Trust plc

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Citadel Securities (Europe) Limited (Program Three)

➤ JMTu - Jeronimo Martins SGPS SA

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Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

➤ JMs - JM AB

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Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

➤ JPGII - JPMorgan Global Growth & Income PLC

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Citadel Securities (Europe) Limited (Program Three)

➤ JPJI - JPJ Group PLC

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Citadel Securities (Europe) Limited (Program Three)

➤ JRSI - JPMorgan Russian Securities plc

---

Citadel Securities (Europe) Limited (Program Three)

➤ JSTd - JOST Werke AG

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Citadel Securities (Europe) Limited (Program Three)

➤ JUN3d - Jungheinrich AG

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Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)

➤ JUPI - Jupiter Fund Management PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

➤ JUSTI - Just Group PLC

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

➤ JUSI - Jupiter US Smaller Companies PLC

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Citadel Securities (Europe) Limited (Program Three)



➤ JUVEm - Juventus Football Club SpA

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Citadel Securities (Europe) Limited (Program Three)

➤ JXRp - Archos

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Citadel Securities (Europe) Limited (Program Three)

➤ JYSKc - Jyske Bank A/S

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Optiver V.O.F. (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

➤ KAHLs - KappAhl AB

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XTX Markets Limited (Program Three)

➤ KARNz - Kardex AG

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Citadel Securities (Europe) Limited (Program Three)

➤ KAZI - KAZ Minerals PLC

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

➤ KBCAb - KBC Ancora

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Citadel Securities (Europe) Limited (Program Three)

➤ KBCb - KBC Group NV

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

➤ KCOMI - KCOM Group PLC

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Citadel Securities (Europe) Limited (Program Three)

➤ KCOd - Kloeckner & Co SE

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Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ KCRh - Konecranes OYJ

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BNP Paribas Arbitrage SNC (Program One and Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ KEMIRh - Kemira OYJ

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Hudson River Trading Europe Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ KENDRa - Kendrion NV

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Citadel Securities (Europe) Limited (Program Three)

## ➤ KERp - Kering SA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
My Capital Netherlands BV (Program Two)  
Optiver V.O.F. (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ KESKBh - Kesko OYJ

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BNP Paribas Arbitrage SNC (Program One and Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ KEYp - Keyrus

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Citadel Securities (Europe) Limited (Program Three)

## ➤ KGFl - Kingfisher PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ KGPl - Kingspan Group PLC

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ KGXd - KION Group AG

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

## ➤ KIEI - Kier Group PLC

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ KINDs - Kindred Group PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ KINVBs - Kinnevik AB

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BNP Paribas Arbitrage SNC (Program One and Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ KINb - Kinopolis Group NV

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Citadel Securities (Europe) Limited (Program Three)

## ➤ KITI - Keystone Investment Trust PLC

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Citadel Securities (Europe) Limited (Program Three)

## ➤ KLEDs - Kungsleden AB

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XTX Markets Limited (Program Three)

## ➤ KLRI - Keller Group PLC

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ KNEBVh - Kone OYJ

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BNP Paribas Arbitrage SNC (Program One and Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ KNINz - Kuehne + Nagel International AG

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

#### ➤ KNp - Natixis SA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
My Capital Netherlands BV (Program Two)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ KOAo - Kongsberg Automotive ASA

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XTX Markets Limited (Program Three)

#### ➤ KOFp - Kaufman & Broad SA

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Citadel Securities (Europe) Limited (Program Three)

#### ➤ KOG0 - Kongsberg Gruppen ASA

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XTX Markets Limited (Program Three)

#### ➤ KOMNz - Komax Holding AG

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

#### ➤ KORlp - Korian SA

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Citadel Securities (Europe) Limited (Program Three)

#### ➤ KPNa - Koninklijke KPN NV

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ KRNd - Krones AG

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

## ➤ KRXi - Kingspan Group PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Hudson River Trading Europe Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

## ➤ KRZi - Kerry Group PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Hudson River Trading Europe Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

## ➤ KSB3d - KSB SE & Co KGaA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ KSCd - KPS AG

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Citadel Securities (Europe) Limited (Program Three)

## ➤ KTMlz - KTM Industries AG

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Citadel Securities (Europe) Limited (Program Three)

## ➤ KU2d - KUKA AG

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

## ➤ KUDz - Kudelski SA

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ KVAERo - Kvaerner ASA

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Virtu Financial Ireland Ltd (Program Two)

## ➤ KWVa - Koninklijke Volkerwessels NV

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Citadel Securities (Europe) Limited (Program Three)

## ➤ KWSd - KWS Saat SE

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Citadel Securities (Europe) Limited (Program Three)

## ➤ KYGAl - Kerry Group PLC

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ LAMl - Lamprell PLC

Citadel Securities (Europe) Limited (Program Three)

## ➤ LANDl - Land Securities Group PLC

BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ LANDz - Landis+Gyr Group AG

Citadel Securities (Europe) Limited (Program Three)

## ➤ LATOBs - Investment AB Latour

XTX Markets Limited (Program Three)

## ➤ LATp - Latecoere SACA

Citadel Securities (Europe) Limited (Program Three)

## ➤ LBIRDp - Lumibird

Citadel Securities (Europe) Limited (Program Three)

## ➤ LDLp - Groupe LDLC

Citadel Securities (Europe) Limited (Program Three)

## ➤ LDOm - Leonardo SpA

BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Optiver V.O.F. (Program Two and Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ LDm - La Doria SpA

Citadel Securities (Europe) Limited (Program Three)

## ➤ LEASb - Leasinvest Real Estate SCA

Citadel Securities (Europe) Limited (Program Three)

## ➤ LECNz - Leclanche SA

Citadel Securities (Europe) Limited (Program Three)

#### ➤ LEGd - LEG Immobilien AG

BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

#### ➤ LEHNz - LEM Holding SA

Citadel Securities (Europe) Limited (Program Three)

#### ➤ LEId - Leifheit AG

Citadel Securities (Europe) Limited (Program Three)

#### ➤ LEOd - Leoni AG

Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ LGENI - Legal & General Group PLC

BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ LHAd - Deutsche Lufthansa AG

BNP Paribas Arbitrage SNC (Program Three)  
Citadel Securities (Europe) Limited (Program Three)  
Jump Trading International Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ LHNp - LafargeHolcim Ltd

BNP Paribas Arbitrage SNC (Program One)  
Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

#### ➤ LHNz - LafargeHolcim Ltd

BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Tower Research Capital Europe Limited (Program Two)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ LIABs - Lindab International AB

XTX Markets Limited (Program Three)

#### ➤ LIGHTa - Signify NV

BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

#### ➤ LINd - Linde PLC

Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ LINp - Linedata Services

Citadel Securities (Europe) Limited (Program Three)

#### ➤ LISNz - Chocoladefabriken Lindt & Spruengli AG

Citadel Securities (Europe) Limited (Program Three)

#### ➤ LISPz - Chocoladefabriken Lindt & Spruengli AG

Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

#### ➤ LITm - Retelit SpA

Citadel Securities (Europe) Limited (Program Three)  
Hudson River Trading Europe Limited (Program Three)

#### ➤ Llp - Klepierre SA

BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
My Capital Netherlands BV (Program Two)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ LKODI - LUKOIL PJSC

Citadel Securities (Europe) Limited (Program Three)

#### ➤ LLBNz - Liechtensteinische Landesbank AG

Citadel Securities (Europe) Limited (Program Three)



## ➤ LLOYL - Lloyds Banking Group PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ LMIL - Lonmin PLC

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ LMNz - Lastminute.com NV

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Citadel Securities (Europe) Limited (Program Three)

## ➤ LMPL - LondonMetric Property PLC

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ LNAd - Linde AG

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Citadel Securities (Europe) Limited (Program Three)

## ➤ LNAp - LNA Sante SA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ LNSXd - Sixt Leasing SE

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Citadel Securities (Europe) Limited (Program Three)

## ➤ LNTAl - Lenta Ltd

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Citadel Securities (Europe) Limited (Program Three)

## ➤ LNZv - Lenzing AG

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Virtu Financial Ireland Ltd (Program Two)

## ➤ LO24d - Lotto24

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Citadel Securities (Europe) Limited (Program Three)

## ➤ LOCALp - Solocal Group

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Citadel Securities (Europe) Limited (Program Three)  
Hudson River Trading Europe Limited (Program Three)

## ➤ LOGNz - Logitech International SA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

## ➤ LOGe - Cia de Distribucion Integral Logista Holdings SA

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XTX Markets Limited (Program Three)

## ➤ LONNz - Lonza Group AG

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

## ➤ LOOKI - Lookers PLC

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Citadel Securities (Europe) Limited (Program Three)

## ➤ LOOMBs - Loomis AB

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BNP Paribas Arbitrage SNC (Program One and Three)  
Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

## ➤ LOTBb - Lotus Bakeries

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Citadel Securities (Europe) Limited (Program Three)

## ➤ LOUPp - LDC SA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ LPEp - Laurent-Perrier

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Citadel Securities (Europe) Limited (Program Three)

## ➤ LPKd - LPKF Laser & Electronics AG

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Citadel Securities (Europe) Limited (Program Three)

## ➤ LREl - Lancashire Holdings Ltd

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ LRm - Landi Renzo SpA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ LRp - Legrand SA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ LSEI - London Stock Exchange Group PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ LSGo - Leroy Seafood Group ASA

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Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

## ➤ LSRGI - LSR Group PJSC

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Citadel Securities (Europe) Limited (Program Three)

## ➤ LSSp - Lectra

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Citadel Securities (Europe) Limited (Program Three)

## ➤ LTAp - Altamir

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Citadel Securities (Europe) Limited (Program Three)

## ➤ LTODI - Larsen & Toubro Ltd

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Citadel Securities (Europe) Limited (Program Three)

## ➤ LUKNz - Luzerner Kantonalbank AG

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Citadel Securities (Europe) Limited (Program Three)

## ➤ LUMIs - Lundin Mining Corp

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Virtu Financial Ireland Ltd (Program Two)

## ➤ LUNDBs - L E Lundbergforetagen AB

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BNP Paribas Arbitrage SNC (Program One and Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ LUNc - H Lundbeck A/S

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Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ LUPEs - Lundin Petroleum AB

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BNP Paribas Arbitrage SNC (Program Three)  
Optiver V.O.F. (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ LUXm - Luxottica Group SpA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Optiver V.O.F. (Program Two and Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ LWDBI - Law Debenture Corp PLC/fund

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Citadel Securities (Europe) Limited (Program Three)

## ➤ LXSd - LANXESS AG

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ M5Zd - Manz AG

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Citadel Securities (Europe) Limited (Program Three)

## ➤ MABl - Mitchells & Butlers PLC

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ MAERAc - AP Moller - Maersk A/S

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Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ MAERBc - AP Moller - Maersk A/S

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Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ MAILL - Mail.Ru Group Ltd

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Citadel Securities (Europe) Limited (Program Three)

## ➤ MAN3d - MAN SE

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Citadel Securities (Europe) Limited (Program Three)

## ➤ MAND - MAN SE

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ MAPe - Mapfre SA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Hudson River Trading Europe Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ MARRm - MARR SpA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ MARSl - Marston's PLC

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ MAUp - Etablissements Maurel et Prom

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

## ➤ MBBd - MBB SE

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Citadel Securities (Europe) Limited (Program Three)

## ➤ MBTNz - Meyer Burger Technology AG

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Citadel Securities (Europe) Limited (Program Three)

## ➤ MBWSp - Marie Brizard Wine & Spirits SA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ MBm - Mediobanca Banca di Credito Finanziario SpA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Hudson River Trading Europe Limited (Program Three)  
My Capital Netherlands BV (Program Two)  
Optiver V.O.F. (Program Two and Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ MCROI - Micro Focus International PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

## ➤ MCSI - McCarthy & Stone PLC

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Citadel Securities (Europe) Limited (Program Three)

## ➤ MCp - LVMH Moet Hennessy Louis Vuitton SE

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Optiver V.O.F. (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ MDCl - Mediclinic International PLC

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BNP Paribas Arbitrage SNC (Program One)  
Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ MDG1d - Medigene AG

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Citadel Securities (Europe) Limited (Program Three)

## ➤ MDMp - Maisons du Monde SA

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Citadel Securities (Europe) Limited (Program Three)  
Hudson River Trading Europe Limited (Program Three)

➤ MDXHb - MDxHealth

Citadel Securities (Europe) Limited (Program Three)

➤ MEKOs - Mekonomen AB

XTX Markets Limited (Program Three)

➤ MELEb - Melexis NV

Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

➤ MELe - Melia Hotels International SA

BNP Paribas Arbitrage SNC (Program One and Three)  
Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

➤ MERLI - Merlin Entertainments PLC

BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

➤ MERYp - Mercialys SA

Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

➤ METEXp - METabolic EXplorer SA

Citadel Securities (Europe) Limited (Program Three)

➤ METNz - Metall Zug AG

Citadel Securities (Europe) Limited (Program Three)

➤ METSBh - Metsa Board OYJ

Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

➤ METSOh - Metso OYJ

BNP Paribas Arbitrage SNC (Program One and Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ MFCp - Maisons France Confort SA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ MFp - Wendel SA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ MGAMl - Morgan Advanced Materials PLC

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ MGGTl - Meggitt PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ MGNKd - Mologen AG

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Citadel Securities (Europe) Limited (Program Three)

## ➤ MGNSl - Morgan Sindall Group PLC

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Citadel Securities (Europe) Limited (Program Three)

## ➤ MGNTl - Magnit PJSC

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Citadel Securities (Europe) Limited (Program Three)

## ➤ MHGo - Marine Harvest ASA

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Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ MHIDl - Mahindra & Mahindra Ltd

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Citadel Securities (Europe) Limited (Program Three)

## ➤ MICs - Millicom International Cellular SA

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Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)



➤ MIKNz - Mikron Holding AG

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Citadel Securities (Europe) Limited (Program Three)

➤ MINGo - SpareBank 1 SMN

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XTX Markets Limited (Program Three)

➤ MITRAb - Mithra Pharmaceuticals SA

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Citadel Securities (Europe) Limited (Program Three)

➤ MKEAp - Mauna Kea Technologies

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Citadel Securities (Europe) Limited (Program Three)

➤ MKSl - Marks & Spencer Group PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

➤ MLCl - Millennium & Cophorne Hotels PLC

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

➤ MLMm - Molecular Medicine SPA

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Citadel Securities (Europe) Limited (Program Three)

➤ MLPd - MLP SE

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Citadel Securities (Europe) Limited (Program Three)

➤ MLp - Cie Generale des Etablissements Michelin SCA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ MMBp - Lagardere SCA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
My Capital Netherlands BV (Program Two)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ MMKl - Magnitogorsk Iron & Steel Works PJSC

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Citadel Securities (Europe) Limited (Program Three)

## ➤ MMKv - Mayr Melnhof Karton AG

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Virtu Financial Ireland Ltd (Program Two)

## ➤ MMTp - Metropole Television SA

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

## ➤ MNDIl - Mondi PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ MNKSl - Monks Investment Trust PLC/The

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

## ➤ MNODl - MMC Norilsk Nickel PJSC

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Citadel Securities (Europe) Limited (Program Three)

## ➤ MNPl - Martin Currie Global Portfolio Trust PLC

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Citadel Securities (Europe) Limited (Program Three)

## ➤ MNZSl - John Menzies PLC

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Citadel Securities (Europe) Limited (Program Three)

## ➤ MNm - Arnaldo Mondadori Editore SpA

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

## ➤ MOBZ - Mobimo Holding AG

Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ MOLM - Gruppo MutuiOnline SpA

Citadel Securities (Europe) Limited (Program Three)

## ➤ MONCM - Moncler SpA

BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Optiver V.O.F. (Program Two and Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ MONTB - Montea C.V.A

Citadel Securities (Europe) Limited (Program Three)

## ➤ MONYL - Moneysupermarket.com Group PLC

BNP Paribas Arbitrage SNC (Program One)  
Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ MORd - MorphoSys AG

Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ MOZNz - Mobilezone Holding AG

Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ MRCHL - Merchants Trust PLC/The

Citadel Securities (Europe) Limited (Program Three)

## ➤ MRCL - Mercantile Investment Trust PLC

Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

## ➤ MRKd - Merck KGaA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ MRLe - Merlin Properties Socimi SA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

## ➤ MRNp - Mersen SA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ MROL - Melrose Industries PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

## ➤ MRWl - Wm Morrison Supermarkets PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ MSAGd - MS Industrie AG

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Citadel Securities (Europe) Limited (Program Three)

## ➤ MSLHl - Marshalls PLC

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Citadel Securities (Europe) Limited (Program Three)

## ➤ MSm - Mediaset SpA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Optiver V.O.F. (Program Two and Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ MTCl - Mothercare PLC

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XTX Markets Limited (Program Three)

## ➤ MTGBs - Modern Times Group MTG AB

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Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ MTGz - Meier Tobler Group AG

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Citadel Securities (Europe) Limited (Program Three)

## ➤ MTOL - Mitie Group PLC

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ MTROl - Metro Bank PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ MTSe - ArcelorMittal

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BNP Paribas Arbitrage SNC (Program One and Three)  
Optiver V.O.F. (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

## ➤ MTUp - Manitou BF SA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ MTVm - Mondo TV SpA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ MTXd - MTU Aero Engines AG

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Hudson River Trading Europe Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ MTa - ArcelorMittal

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ MTm - Maire Tecnimont SpA

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Citadel Securities (Europe) Limited (Program Three)  
Hudson River Trading Europe Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

## ➤ MUBd - Muehlbauer Holding AG

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Citadel Securities (Europe) Limited (Program Three)

## ➤ MUMd - Mensch und Maschine Software SE

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Citadel Securities (Europe) Limited (Program Three)

## ➤ MUNp - Micropole

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Citadel Securities (Europe) Limited (Program Three)

## ➤ MUV2d - Muenchener Rueckversicherungs-Gesellschaft AG in Muenchen

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Tower Research Capital Europe Limited (Program Two)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ MUXd - mutares AG

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Citadel Securities (Europe) Limited (Program Three)

## ➤ MXFl - MedicX Fund Ltd

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Citadel Securities (Europe) Limited (Program Three)

## ➤ MXHNd - MAX Automation SE

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Citadel Securities (Europe) Limited (Program Three)

## ➤ MYII - Murray International Trust PLC

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

## ➤ N7Gd - Nanogate SE

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Citadel Securities (Europe) Limited (Program Three)

## ➤ NANOl - Nanoco Group PLC

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Citadel Securities (Europe) Limited (Program Three)

## ➤ NANOp - Nanobiotix

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Citadel Securities (Europe) Limited (Program Three)

## ➤ NASo - Norwegian Air Shuttle ASA

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Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ NBAu - Novabase SGPS SA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ NBLSI - NB Global Floating Rate Income Fund Ltd

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Citadel Securities (Europe) Limited (Program Three)

## ➤ NC5Ad - NorCom Information Technology GmbH & Co KGaA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ NCCBs - NCC AB

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Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ NCCI - NCC Group PLC

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ NDAc - Nordea Bank Abp

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Virtu Financial Ireland Ltd (Program Two)

## ➤ NDAAd - Aurubis AG

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Optiver V.O.F. (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ NDAs - Nordea Bank Abp

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BNP Paribas Arbitrage SNC (Program One and Three)  
Hudson River Trading Europe Limited (Program Three)  
Optiver V.O.F. (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ NDX1d - Nordex SE

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

## ➤ NEDAPa - Nederland Apparatenfabriek

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Citadel Securities (Europe) Limited (Program Three)

## ➤ NEMd - Nemetschek SE

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Citadel Securities (Europe) Limited (Program Three)

## ➤ NEOp - Neopost SA

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Citadel Securities (Europe) Limited (Program Three)  
My Capital Netherlands BV (Program Two)  
Virtu Financial Ireland Ltd (Program Two)

## ➤ NESNz - Nestle SA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Hudson River Trading Europe Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Tower Research Capital Europe Limited (Program Two)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ NESRd - Nestle SA

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Citadel Securities (Europe) Limited (Program Three)  
Optiver V.O.F. (Program Three)

## ➤ NESTEh - Neste Oyj

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BNP Paribas Arbitrage SNC (Program One and Three)  
Optiver V.O.F. (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ NETBs - NetEnt AB

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XTX Markets Limited (Program Three)



## ➤ NEWAYa - Neways Electronics International NV

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Citadel Securities (Europe) Limited (Program Three)

## ➤ NEXI - National Express Group PLC

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ NEXp - Nexans SA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ NGI - National Grid PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Tower Research Capital Europe Limited (Program Two)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ NHHe - NH Hotel Group SA

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XTX Markets Limited (Program Three)

## ➤ NHYo - Norsk Hydro ASA

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Optiver V.O.F. (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

## ➤ NIBEBs - Nibe Industrier AB

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BNP Paribas Arbitrage SNC (Program One and Three)  
Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

## ➤ NKTc - NKT A/S

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Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ NKp - Imerys SA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ NLMKl - Novolipetsk Steel PJSC

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Citadel Securities (Europe) Limited (Program Three)

## ➤ NMCl - NMC Health PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

## ➤ NNa - NN Group NV

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

## ➤ NOBInS - Nobina AB

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XTX Markets Limited (Program Three)

## ➤ NOBIs - Nobia AB

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XTX Markets Limited (Program Three)

## ➤ NOEJd - Norma Group SE

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Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

## ➤ NOGl - Nostrum Oil & Gas PLC

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Citadel Securities (Europe) Limited (Program Three)

## ➤ NOKIAh - Nokia OYJ

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BNP Paribas Arbitrage SNC (Program One and Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ NOKIAp - Nokia OYJ

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ NOKIAs - Nokia OYJ

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Optiver V.O.F. (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

## ➤ NOSu - NOS SGPS SA

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ NOTd - Novartis AG

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Citadel Securities (Europe) Limited (Program Three)  
Optiver V.O.F. (Program Three)

## ➤ NOVZ - Novartis AG

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Hudson River Trading Europe Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Tower Research Capital Europe Limited (Program Two)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ NOVOBc - Novo Nordisk A/S

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Optiver V.O.F. (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ NPROo - Norwegian Property ASA

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Virtu Financial Ireland Ltd (Program Two)

## ➤ NRE1Vh - Nokian Renkaat OYJ

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BNP Paribas Arbitrage SNC (Program One and Three)  
Optiver V.O.F. (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ NRRl - NewRiver REIT PLC

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Citadel Securities (Europe) Limited (Program Three)

➤ NSIa - NSI NV

Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

➤ NTGL - Northgate PLC

Citadel Securities (Europe) Limited (Program Three)

➤ NVGu - Navigator Co SA/The

Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

➤ NVTkl - Novatek PJSC

Citadel Securities (Europe) Limited (Program Three)

➤ NXIp - Nexity SA

Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

➤ NXTI - Next PLC

BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

➤ NXUd - Nexus AG

Citadel Securities (Europe) Limited (Program Three)

➤ NYRb - Nyrstar NV

Virtu Financial Ireland Ltd (Program Two)

➤ NZYMBc - Novozymes A/S

Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

➤ O1BCd - XING SE

Citadel Securities (Europe) Limited (Program Three)

## ➤ O2Cd - Petro Welt Technologies AG

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Citadel Securities (Europe) Limited (Program Three)

## ➤ O2Dd - Telefonica Deutschland Holding AG

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ OBELb - Orange Belgium SA

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

## ➤ OCD0l - Ocado Group PLC

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BNP Paribas Arbitrage SNC (Program Three)  
Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ OCla - OCI NV

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ ODETp - Financiere de L'Odet SA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ ODHnz - Orascom Development Holding AG

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Citadel Securities (Europe) Limited (Program Three)

## ➤ OERLz - OC Oerlikon Corp AG

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

## ➤ OGZDI - Gazprom PJSC

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Citadel Securities (Europe) Limited (Program Three)

➤ OHBd - OHB SE

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Citadel Securities (Europe) Limited (Program Three)

➤ OHLe - Obrascon Huarte Lain SA

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Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

➤ OJMm - Openjobmetis Spa agenzia per il lavoro

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Citadel Securities (Europe) Limited (Program Three)

➤ OKDAVh - Oriola Oyj

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Virtu Financial Ireland Ltd (Program Two)

➤ OMUI - Old Mutual Ltd

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Citadel Securities (Europe) Limited (Program Three)

➤ OMVv - OMV AG

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Optiver V.O.F. (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

➤ ONTEXb - Ontex Group NV

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

➤ ONXEOp - Onxeo SA

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Citadel Securities (Europe) Limited (Program Three)

➤ OPHRI - Ophir Energy PLC

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

➤ OPNp - Groupe Open

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Citadel Securities (Europe) Limited (Program Three)

## ➤ ORAp - Orange SA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
My Capital Netherlands BV (Program Two)  
Optiver V.O.F. (Program Three)  
Societe Generale London Branch (Program Three)  
Tower Research Capital Europe Limited (Program Two)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ ORDla - Ordina NV

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

## ➤ ORIs - Oriflame Holding AG

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Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ ORKo - Orkla ASA

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Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ ORNAVh - Orion Oyj

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Virtu Financial Ireland Ltd (Program Two)

## ➤ ORNBVh - Orion Oyj

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BNP Paribas Arbitrage SNC (Program One and Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ ORONz - Orior AG

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ ORPp - Orpea

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ ORSTEc - Orsted A/S

Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

## ➤ ORp - L'Oreal SA

BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Optiver V.O.F. (Program Three)  
Societe Generale London Branch (Program Three)  
Tower Research Capital Europe Limited (Program Two)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ OSBl - OneSavings Bank PLC

Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ OSP2d - USU Software AG

Citadel Securities (Europe) Limited (Program Three)

## ➤ OSRd - OSRAM Licht AG

BNP Paribas Arbitrage SNC (Program Three)  
Citadel Securities (Europe) Limited (Program Three)  
Hudson River Trading Europe Limited (Program Three)  
Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

## ➤ OTBl - On the Beach Group PLC

Citadel Securities (Europe) Limited (Program Three)

## ➤ OTE1Vh - Outotec OYJ

Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ OTELLo - Otello Corp ASA

Virtu Financial Ireland Ltd (Program Two)

## ➤ OUT1Vh - Outokumpu OYJ

BNP Paribas Arbitrage SNC (Program One)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)



➤ [OVSm - OVS SpA](#)

Citadel Securities (Europe) Limited (Program Three)

➤ [OXBl - Oxford Biomedica PLC](#)

Citadel Securities (Europe) Limited (Program Three)

➤ [OXIGl - Oxford Instruments PLC](#)

Citadel Securities (Europe) Limited (Program Three)

➤ [OXURb - Oxurion NV](#)

Citadel Securities (Europe) Limited (Program Three)

➤ [P2Pl - P2P Global Investments PLC/Fund](#)

Citadel Securities (Europe) Limited (Program Three)

➤ [PA8d - Paion AG](#)

Citadel Securities (Europe) Limited (Program Three)

➤ [PAGEl - Pagegroup PLC](#)

Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

➤ [PAGl - Paragon Banking Group PLC](#)

Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

➤ [PAH3d - Porsche Automobil Holding SE](#)

BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Optiver V.O.F. (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

➤ [PALv - Palfinger AG](#)

Virtu Financial Ireland Ltd (Program Two)

➤ [PANm - Panariagroup Industrie Ceramiche SpA](#)

Citadel Securities (Europe) Limited (Program Three)

## ➤ PARGz - Pargesa Holding SA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

## ➤ PARROp - Parrot SA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ PATd - PATRIZIA Immobilien AG

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Citadel Securities (Europe) Limited (Program Three)

## ➤ PAYl - PayPoint PLC

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ PBBd - Deutsche Pfandbriefbank AG

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Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)

## ➤ PBYd - publity AG

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Citadel Securities (Europe) Limited (Program Three)

## ➤ PCTNI - Picton Property Income Ltd/The

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Citadel Securities (Europe) Limited (Program Three)

## ➤ PCTI - Polar Capital Technology Trust PLC

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Citadel Securities (Europe) Limited (Program Three)

## ➤ PDGl - Pendragon PLC

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Citadel Securities (Europe) Limited (Program Three)

## ➤ PDLl - Petra Diamonds Ltd

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Citadel Securities (Europe) Limited (Program Three)

## ➤ PEABBs - Peab AB

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XTX Markets Limited (Program Three)

## ➤ PEANz - Peach Property Group AG

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Citadel Securities (Europe) Limited (Program Three)

## ➤ PETS1 - Pets at Home Group Plc

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ PEYL - Princess Private Equity Holding Ltd

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Citadel Securities (Europe) Limited (Program Three)

## ➤ PFCL - Petrofac Ltd

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ PFDL - Premier Foods PLC

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Citadel Securities (Europe) Limited (Program Three)

## ➤ PFGL - Provident Financial PLC

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ PFVd - Pfeiffer Vacuum Technology AG

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ PGHNz - Partners Group Holding AG

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

## ➤ PGNd - Paragon GmbH & Co KGaA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ PGSo - Petroleum Geo-Services ASA

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Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

➤ PHARMa - Pharming Group NV

Citadel Securities (Europe) Limited (Program Three)

➤ PHAp - Pharmagest Inter@ctive

Citadel Securities (Europe) Limited (Program Three)

➤ PHIAa - Koninklijke Philips NV

BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Tower Research Capital Europe Limited (Program Two)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

➤ PHII - Pacific Horizon Investment Trust PLC

Citadel Securities (Europe) Limited (Program Three)

➤ PHORI - PhosAgro PJSC

Citadel Securities (Europe) Limited (Program Three)

➤ PHPl - Primary Health Properties PLC

Citadel Securities (Europe) Limited (Program Three)

➤ PHRu - Pharol SGPS SA

Citadel Securities (Europe) Limited (Program Three)

➤ PHTMl - Photo-Me International PLC

Citadel Securities (Europe) Limited (Program Three)

➤ PIAm - Piaggio & C SpA

Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

➤ PIGp - Haulotte Group SA

Citadel Securities (Europe) Limited (Program Three)

➤ PINFm - Pininfarina SpA

Citadel Securities (Europe) Limited (Program Three)

➤ PINL - Pantheon International PLC/The Fund

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Citadel Securities (Europe) Limited (Program Three)

➤ PIRCM - Pirelli & C SpA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Hudson River Trading Europe Limited (Program Three)  
Optiver V.O.F. (Program Two and Three)

➤ PLLI - Perpetual Income and Growth Investment Trust PLC

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Citadel Securities (Europe) Limited (Program Three)

➤ PLPI - Polypipe Group plc

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Citadel Securities (Europe) Limited (Program Three)

➤ PLTM - Parmalat SpA

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

➤ PLUSL - Plus500 Ltd

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Citadel Securities (Europe) Limited (Program Three)

➤ PLZLL - Polyus PJSC

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Citadel Securities (Europe) Limited (Program Three)

➤ PMOL - Premier Oil PLC

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

➤ PMZ - Phoenix Mecano AG

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Citadel Securities (Europe) Limited (Program Three)

➤ PNDORc - Pandora A/S

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Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

➤ PNE3d - PNE AG

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Citadel Securities (Europe) Limited (Program Three)

#### ➤ PNL<sub>a</sub> - PostNL NV

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ PNL<sub>l</sub> - Personal Assets Trust PLC/Fund

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Citadel Securities (Europe) Limited (Program Three)

#### ➤ PNN<sub>l</sub> - Pennon Group PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ POG<sub>l</sub> - Petropavlovsk PLC

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Citadel Securities (Europe) Limited (Program Three)

#### ➤ POLY<sub>l</sub> - Polymetal International PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Optiver V.O.F. (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

#### ➤ POL<sub>m</sub> - Poligrafici Editoriale SpA

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Citadel Securities (Europe) Limited (Program Three)

#### ➤ POM<sub>p</sub> - Cie Plastic Omnium SA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Optiver V.O.F. (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ POST<sub>v</sub> - Oesterreichische Post AG

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Virtu Financial Ireland Ltd (Program Two)

#### ➤ POXEL<sub>p</sub> - Poxel SA

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Citadel Securities (Europe) Limited (Program Three)

➤ POY1Vh - Poyry OYJ

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Virtu Financial Ireland Ltd (Program Two)

➤ PPBi - Paddy Power Betfair PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Virtu Financial Ireland Ltd (Program Two)

➤ PPBl - Paddy Power Betfair PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

➤ PRCp - Artprice.com

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Citadel Securities (Europe) Limited (Program Three)

➤ PRIm - Prima Industrie SpA

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Citadel Securities (Europe) Limited (Program Three)

➤ PROLp - Prologue

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Citadel Securities (Europe) Limited (Program Three)

➤ PROXb - Proximus SADP

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

➤ PROM - Banca Profilo SpA

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Citadel Securities (Europe) Limited (Program Three)

➤ PRSe - Promotora de Informaciones SA

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Virtu Financial Ireland Ltd (Program Two)

➤ PRTm - Esprinet SpA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ PRUL - Prudential PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Hudson River Trading Europe Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Tower Research Capital Europe Limited (Program Two)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ PRYm - Prysmian SpA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
My Capital Netherlands BV (Program Two)  
Optiver V.O.F. (Program Two and Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ PSANd - PSI Software AG

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Citadel Securities (Europe) Limited (Program Three)

## ➤ PSGe - Prosegur Cia de Seguridad SA

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XTX Markets Limited (Program Three)

## ➤ PSMd - ProSiebenSat.1 Media SE

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ PSNI - Persimmon PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Hudson River Trading Europe Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ PSONI - Pearson PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)



#### ➤ PSPNz - PSP Swiss Property AG

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

#### ➤ PSTm - Poste Italiane SpA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
My Capital Netherlands BV (Program Two)  
Optiver V.O.F. (Program Two and Three)  
Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

#### ➤ PTECl - Playtech Plc

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BNP Paribas Arbitrage SNC (Program One)  
Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

#### ➤ PUBp - Publicis Groupe SA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
My Capital Netherlands BV (Program Two)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ PUMd - Puma SE

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ PUREl - PureCircle Ltd

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Citadel Securities (Europe) Limited (Program Three)

#### ➤ PVLp - Plastivaloire

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Citadel Securities (Europe) Limited (Program Three)

#### ➤ PWGp - Prodways Group SA

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Citadel Securities (Europe) Limited (Program Three)

#### ➤ PZCl - PZ Cussons PLC

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ QFGb - QUESTFOR GR-PRICAF

Citadel Securities (Europe) Limited (Program Three)

#### ➤ QIAd - QIAGEN NV

BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ QLTI - Quilter PLC

Citadel Securities (Europe) Limited (Program Three)

#### ➤ QQI - QinetiQ Group PLC

Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ QSCd - QSC AG

Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

#### ➤ R6Cd - Royal Dutch Shell PLC

Citadel Securities (Europe) Limited (Program Three)  
Optiver V.O.F. (Program Three)

#### ➤ RAAAd - Rational AG

Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

#### ➤ RACEm - Ferrari NV

BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Hudson River Trading Europe Limited (Program Three)  
Optiver V.O.F. (Program Two and Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ RAIWh - Raisio Oyj

XTX Markets Limited (Program Three)

## ➤ RALp - Rallye SA

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

## ➤ RAMu - Ramada Investimentos E Industria SA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ RANDa - Randstad NV

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ RATOBS - Ratos AB

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Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ RATl - Rathbone Brothers PLC

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ RBIV - Raiffeisen Bank International AG

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Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ RBREWc - Royal Unibrew A/S

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Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

## ➤ RBSl - Royal Bank of Scotland Group PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ RBTp - Robertet SA

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Citadel Securities (Europe) Limited (Program Three)

#### ➤ RBL - Reckitt Benckiser Group PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
 Citadel Securities (Europe) Limited (Program Three)  
 Societe Generale London Branch (Program Three)  
 Tower Research Capital Europe Limited (Program Two)  
 Virtu Financial Ireland Ltd (Program Two)  
 XTX Markets Limited (Program Three)

#### ➤ RCOp - Remy Cointreau SA

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BNP Paribas Arbitrage SNC (Program One and Three)  
 Citadel Securities (Europe) Limited (Program Three)  
 Societe Generale London Branch (Program Three)  
 Virtu Financial Ireland Ltd (Program Two)  
 XTX Markets Limited (Program Three)

#### ➤ RCPI - RIT Capital Partners PLC/Fund

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Citadel Securities (Europe) Limited (Program Three)  
 Virtu Financial Ireland Ltd (Program Two)  
 XTX Markets Limited (Program Three)

#### ➤ RCSm - Rizzoli Corriere Della Sera Mediagroup SpA

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Citadel Securities (Europe) Limited (Program Three)  
 Virtu Financial Ireland Ltd (Program Two)

#### ➤ RDII - RDI REIT PLC

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Citadel Securities (Europe) Limited (Program Three)  
 XTX Markets Limited (Program Three)

#### ➤ RDSAa - Royal Dutch Shell PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
 Citadel Securities (Europe) Limited (Program Three)  
 Optiver V.O.F. (Program Three)  
 Societe Generale London Branch (Program Three)  
 Virtu Financial Ireland Ltd (Program Two)  
 XTX Markets Limited (Program Three)

#### ➤ RDSAl - Royal Dutch Shell PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
 Citadel Securities (Europe) Limited (Program Three)  
 Optiver V.O.F. (Program Three)  
 Societe Generale London Branch (Program Three)  
 Tower Research Capital Europe Limited (Program Two)  
 Virtu Financial Ireland Ltd (Program Two)  
 XTX Markets Limited (Program Three)

#### ➤ RDSBa - Royal Dutch Shell PLC

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Citadel Securities (Europe) Limited (Program Three)

## ➤ RDSBl - Royal Dutch Shell PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Tower Research Capital Europe Limited (Program Two)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ RDWl - Redrow PLC

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ RECb - Recticel SA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ REcm - Recordati SpA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
My Capital Netherlands BV (Program Two)  
Optiver V.O.F. (Program Two and Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ RECo - REC Silicon ASA

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Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ REEe - Red Electrica Corp SA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Hudson River Trading Europe Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

## ➤ RELI - RELX PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ RENEu - REN - Redes Energeticas Nacionais SGPS SA

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ RENa - RELX PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ REPe - Repsol SA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Hudson River Trading Europe Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Tower Research Capital Europe Limited (Program Two)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ RESb - Resilux

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Citadel Securities (Europe) Limited (Program Three)

#### ➤ RETb - Retail Estates NV

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Citadel Securities (Europe) Limited (Program Three)

#### ➤ REYm - Reply SpA

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Citadel Securities (Europe) Limited (Program Three)  
Hudson River Trading Europe Limited (Program Three)

#### ➤ REp - Colas SA

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Citadel Securities (Europe) Limited (Program Three)

#### ➤ RFp - Eurazeo SE

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ RGLI - Regional REIT Ltd

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Citadel Securities (Europe) Limited (Program Three)

#### ➤ RHIMl - Rhi Magnesita NV

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Citadel Securities (Europe) Limited (Program Three)

## ➤ RHKd - RHOEN-KLINIKUM AG

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ RHMd - Rheinmetall AG

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Optiver V.O.F. (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ RIBd - RIB Software SE

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Citadel Securities (Europe) Limited (Program Three)

## ➤ RIBp - Riber SA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ RIENZ - Rieter Holding AG

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ RIGDI - Reliance Industries Ltd

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Citadel Securities (Europe) Limited (Program Three)

## ➤ RINp - Vilmorin & Cie SA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ RIOI - Rio Tinto PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ Rlp - Pernod Ricard SA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ RKETd - Rocket Internet SE

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Citadel Securities (Europe) Limited (Program Three)

#### ➤ RKMDI - Rostelecom PJSC

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Citadel Securities (Europe) Limited (Program Three)

#### ➤ RMGI - Royal Mail PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

#### ➤ RMsP - Hermes International

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ RmVl - Rightmove PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ RMm - Reno de Medici SpA

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Citadel Securities (Europe) Limited (Program Three)

#### ➤ RNKl - Rank Group PLC

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

#### ➤ RNOp - Renault SA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
My Capital Netherlands BV (Program Two)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ ROCKBc - Rockwool International A/S

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Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)



## ➤ ROGz - Roche Holding AG

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Hudson River Trading Europe Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Tower Research Capital Europe Limited (Program Two)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ ROODa - Roodmicrotec NV

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Citadel Securities (Europe) Limited (Program Three)

## ➤ RORl - Rotork PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ ROSEz - Zur Rose Group AG

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Citadel Securities (Europe) Limited (Program Three)

## ➤ ROSNl - Rosneft Oil Co PJSC

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Citadel Securities (Europe) Limited (Program Three)

## ➤ ROTHp - Rothschild & Co

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Citadel Securities (Europe) Limited (Program Three)

## ➤ ROz - Roche Holding AG

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Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

## ➤ RPCl - RPC Group PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ RPSl - RPS Group PLC

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Citadel Securities (Europe) Limited (Program Three)

## ➤ RRSI - Randgold Resources Ltd

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ RRTLd - RTL Group SA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

## ➤ RRI - Rolls-Royce Holdings PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ RSAI - RSA Insurance Group PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ RSEI - Riverstone Energy Ltd

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Citadel Securities (Europe) Limited (Program Three)

## ➤ RSWI - Renishaw PLC

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ RTLb - RTL Group SA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ RTNI - Restaurant Group PLC/The

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ RTOL - Rentokil Initial PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ RUIp - Rubis SCA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ RWAYm - RAI Way SpA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ RWE3d - RWE AG

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

## ➤ RWEd - RWE AG

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Hudson River Trading Europe Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ RWII - Renewi PLC

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Citadel Securities (Europe) Limited (Program Three)

## ➤ RXLp - Rexel SA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ RXp - Recylex SA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ RY4Ci - Ryanair Holdings PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Virtu Financial Ireland Ltd (Program Two)

## ➤ RYAL - Ryanair Holdings PLC

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Citadel Securities (Europe) Limited (Program Three)  
Hudson River Trading Europe Limited (Program Three)

## ➤ S24m - Il Sole 24 Ore SpA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ S32l - South32 Ltd

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ S92d - SMA Solar Technology AG

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ SAA1Vh - Sanoma OYJ

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Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ SAABBs - Saab AB

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BNP Paribas Arbitrage SNC (Program One and Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ SABe - Banco de Sabadell SA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Hudson River Trading Europe Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

## ➤ SABm - Sabaf SpA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ SAEd - Shop Apotheke Europe NV

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Citadel Securities (Europe) Limited (Program Three)

## ➤ SAFEI - Safestore Holdings PLC

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Citadel Securities (Europe) Limited (Program Three)

## ➤ SAFp - Safran SA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ SAGAl - Saga PLC

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ SAHNz - Schaffner Holding AG

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Citadel Securities (Europe) Limited (Program Three)

## ➤ SALMo - Salmar ASA

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Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

## ➤ SALm - Salini Impregilo SpA

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Citadel Securities (Europe) Limited (Program Three)  
Hudson River Trading Europe Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

## ➤ SAMPOh - Sampo Oyj

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BNP Paribas Arbitrage SNC (Program One and Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ SANDs - Sandvik AB

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BNP Paribas Arbitrage SNC (Program One and Three)  
Hudson River Trading Europe Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ SANNz - Santhera Pharmaceuticals Holding AG

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Citadel Securities (Europe) Limited (Program Three)

## ➤ SANTd - S&T AG

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Citadel Securities (Europe) Limited (Program Three)

#### ➤ SANE - Banco Santander SA

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BNP Paribas Arbitrage SNC (Program One and Three)  
 Hudson River Trading Europe Limited (Program Three)  
 Societe Generale London Branch (Program Three)  
 Tower Research Capital Europe Limited (Program Two)  
 Virtu Financial Ireland Ltd (Program Two)  
 XTX Markets Limited (Program Three)

#### ➤ SANp - Sanofi

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BNP Paribas Arbitrage SNC (Program One and Three)  
 Citadel Securities (Europe) Limited (Program Three)  
 My Capital Netherlands BV (Program Two)  
 Societe Generale London Branch (Program Three)  
 Tower Research Capital Europe Limited (Program Two)  
 Virtu Financial Ireland Ltd (Program Two)  
 XTX Markets Limited (Program Three)

#### ➤ SAPd - SAP SE

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BNP Paribas Arbitrage SNC (Program One and Three)  
 Citadel Securities (Europe) Limited (Program Three)  
 Jump Trading International Limited (Program Three)  
 Societe Generale London Branch (Program Three)  
 Tower Research Capital Europe Limited (Program Two)  
 Virtu Financial Ireland Ltd (Program Two)  
 XTX Markets Limited (Program Three)

#### ➤ SASs - SAS AB

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XTX Markets Limited (Program Three)

#### ➤ SAVEp - Savencia SA

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Citadel Securities (Europe) Limited (Program Three)

#### ➤ SAXd - Stroeer SE & Co KGaA

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Citadel Securities (Europe) Limited (Program Three)  
 Societe Generale London Branch (Program Three)  
 XTX Markets Limited (Program Three)

#### ➤ SBERl - Sberbank of Russia PJSC

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Citadel Securities (Europe) Limited (Program Three)

#### ➤ SBIDl - State Bank of India

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Citadel Securities (Europe) Limited (Program Three)

## ➤ SBMOa - SBM Offshore NV

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ SBOv - Schoeller-Bleckmann Oilfield Equipment AG

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Virtu Financial Ireland Ltd (Program Two)

## ➤ SBRYl - J Sainsbury PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ SBSd - STRATEC SE

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Citadel Securities (Europe) Limited (Program Three)

## ➤ SBTp - Oeneo SA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ SCABs - Svenska Cellulosa AB SCA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Optiver V.O.F. (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ SCHAo - Schibsted ASA

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Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ SCHNz - Schindler Holding AG

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Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

## ➤ SCHPz - Schindler Holding AG

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Hudson River Trading Europe Limited (Program Three)  
Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

## ➤ SCINl - Scottish Investment Trust PLC/Fund

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Citadel Securities (Europe) Limited (Program Three)

## ➤ SCMNz - Swisscom AG

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Tower Research Capital Europe Limited (Program Two)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ SCRp - SCOR SE

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
My Capital Netherlands BV (Program Two)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ SCTL - Softcat PLC

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Citadel Securities (Europe) Limited (Program Three)

## ➤ SCYRe - Sacyr SA

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Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ SDFd - K+S AG

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BNP Paribas Arbitrage SNC (Program Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

## ➤ SDGp - Synergie SA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ SDLI - SDL PLC

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Virtu Financial Ireland Ltd (Program Two)



## ➤ SDPI - Schroder AsiaPacific Fund PLC

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Citadel Securities (Europe) Limited (Program Three)

## ➤ SDRCL - Schroders PLC

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Citadel Securities (Europe) Limited (Program Three)

## ➤ SDRYL - Superdry PLC

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

## ➤ SDRI - Schroders PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ SEBAs - Skandinaviska Enskilda Banken AB

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BNP Paribas Arbitrage SNC (Program One and Three)  
Optiver V.O.F. (Program Three)  
Societe Generale London Branch (Program Three)  
Tower Research Capital Europe Limited (Program Two)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ SECUBs - Securitas AB

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BNP Paribas Arbitrage SNC (Program One and Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ SEMu - Semapa-Sociedade de Investimento e Gestao

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

## ➤ SEMv - Semperit AG Holding

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Virtu Financial Ireland Ltd (Program Two)

## ➤ SEND - Senvion SA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ SEQII - Sequoia Economic Infrastructure Income Fund Ltd

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Citadel Securities (Europe) Limited (Program Three)

## ➤ SEQp - Sequana SA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ SESGp - SES SA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ SESLp - SES-imagotag SA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ SEVp - Suez

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ SFERm - Salvatore Ferragamo SpA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Optiver V.O.F. (Program Two and Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ SFLm - Safilo Group SpA

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

## ➤ SFQd - SAF-Holland SA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ SFSNz - SFS Group AG

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ SFZNz - Siegfried Holding AG

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Citadel Securities (Europe) Limited (Program Three)

#### ➤ SGCl - Stagecoach Group PLC

Citadel Securities (Europe) Limited (Program Three)  
 Virtu Financial Ireland Ltd (Program Two)  
 XTX Markets Limited (Program Three)

#### ➤ SGEI - Sage Group PLC/The

BNP Paribas Arbitrage SNC (Program One and Three)  
 Citadel Securities (Europe) Limited (Program Three)  
 Societe Generale London Branch (Program Three)  
 Virtu Financial Ireland Ltd (Program Two)  
 XTX Markets Limited (Program Three)

#### ➤ SGGDI - Surgutneftegas PJSC

Citadel Securities (Europe) Limited (Program Three)

#### ➤ SGKNz - St Galler Kantonalbank AG

Citadel Securities (Europe) Limited (Program Three)

#### ➤ SGLd - SGL Carbon SE

Citadel Securities (Europe) Limited (Program Three)  
 Virtu Financial Ireland Ltd (Program Two)  
 XTX Markets Limited (Program Three)

#### ➤ SGOp - Cie de Saint-Gobain

BNP Paribas Arbitrage SNC (Program One and Three)  
 Citadel Securities (Europe) Limited (Program Three)  
 My Capital Netherlands BV (Program Two)  
 Optiver V.O.F. (Program Three)  
 Societe Generale London Branch (Program Three)  
 Virtu Financial Ireland Ltd (Program Two)  
 XTX Markets Limited (Program Three)

#### ➤ SGREe - Siemens Gamesa Renewable Energy SA

BNP Paribas Arbitrage SNC (Program One and Three)  
 Societe Generale London Branch (Program Three)  
 Virtu Financial Ireland Ltd (Program Two)

#### ➤ SGROI - Segro PLC

BNP Paribas Arbitrage SNC (Program One and Three)  
 Citadel Securities (Europe) Limited (Program Three)  
 Societe Generale London Branch (Program Three)  
 Virtu Financial Ireland Ltd (Program Two)  
 XTX Markets Limited (Program Three)

#### ➤ SGRm - SAES Getters SpA

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Citadel Securities (Europe) Limited (Program Three)

#### ➤ SGSNz - SGS SA

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BNP Paribas Arbitrage SNC (Program Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Tower Research Capital Europe Limited (Program Two)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ SGM - SAES Getters SpA

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Citadel Securities (Europe) Limited (Program Three)

#### ➤ SHAd - Schaeffler AG

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BNP Paribas Arbitrage SNC (Program One)  
Citadel Securities (Europe) Limited (Program Three)  
Optiver V.O.F. (Program Three)  
Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

#### ➤ SHBAs - Svenska Handelsbanken AB

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BNP Paribas Arbitrage SNC (Program One and Three)  
Hudson River Trading Europe Limited (Program Three)  
Optiver V.O.F. (Program Three)  
Societe Generale London Branch (Program Three)  
Tower Research Capital Europe Limited (Program Two)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ SHBl - Shaftesbury PLC

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BNP Paribas Arbitrage SNC (Program One)  
Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ SHFd - SNP Schneider-Neureither & Partner SE

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Citadel Securities (Europe) Limited (Program Three)

#### ➤ SHIl - SIG PLC

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

➤ SHLd - Siemens Healthineers AG

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Citadel Securities (Europe) Limited (Program Three)

➤ SHOTs - Scandic Hotels Group AB

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XTX Markets Limited (Program Three)

➤ SHPL - Shire PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

➤ SIAI - Soco International PLC

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Citadel Securities (Europe) Limited (Program Three)

➤ SIEd - Siemens AG

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Tower Research Capital Europe Limited (Program Two)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

➤ SIFGa - SIF Holding NV

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Citadel Securities (Europe) Limited (Program Three)

➤ SIIP - Societe pour l'Informatique Industrielle

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Citadel Securities (Europe) Limited (Program Three)

➤ SIKAz - Sika AG

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Citadel Securities (Europe) Limited (Program Three)

➤ SIMc - SimCorp A/S

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Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

➤ SIOEb - Sioen Industries NV

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Citadel Securities (Europe) Limited (Program Three)

➤ SIPHp - Societe Internationale de Plantations d'Heveas SA

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Citadel Securities (Europe) Limited (Program Three)

➤ SIPb - Sipef NV

Citadel Securities (Europe) Limited (Program Three)

➤ SISd - First Sensor AG

Citadel Securities (Europe) Limited (Program Three)

➤ SISm - Societa Iniziative Autostradali e Servizi SpA

Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

➤ SIX2d - Sixt SE

Citadel Securities (Europe) Limited (Program Three)

➤ SIX3d - Sixt SE

Citadel Securities (Europe) Limited (Program Three)

➤ SK3i - Smurfit Kappa Group PLC

BNP Paribas Arbitrage SNC (Program One and Three)  
Hudson River Trading Europe Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

➤ SKABs - Skanska AB

BNP Paribas Arbitrage SNC (Program One and Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

➤ SKBd - Koenig & Bauer AG

Citadel Securities (Europe) Limited (Program Three)

➤ SKFBs - SKF AB

BNP Paribas Arbitrage SNC (Program One and Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

➤ SKGl - Smurfit Kappa Group PLC

BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

#### ➤ SKp - SEB SA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ SLAI - Standard Life Aberdeen PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

#### ➤ SLBp - Schlumberger Ltd

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Citadel Securities (Europe) Limited (Program Three)

#### ➤ SLHNz - Swiss Life Holding AG

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

#### ➤ SLIGRa - Sligro Food Group NV

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

#### ➤ SLII - Standard Life Investment Property Income Trust Ltd

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Citadel Securities (Europe) Limited (Program Three)

#### ➤ SLTd - Schaltbau Holding AG

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Citadel Securities (Europe) Limited (Program Three)

#### ➤ SMCPp - SMCP SA

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Citadel Securities (Europe) Limited (Program Three)

#### ➤ SMDSI - DS Smith PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ SMHNd - SUESS MicroTec SE

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Citadel Securities (Europe) Limited (Program Three)

## ➤ SMINL - Smiths Group PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ SMPL - St Modwen Properties PLC

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ SMSDL - Samsung Electronics Co Ltd

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Citadel Securities (Europe) Limited (Program Three)

## ➤ SMSNL - Samsung Electronics Co Ltd

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Citadel Securities (Europe) Limited (Program Three)

## ➤ SMTI - Scottish Mortgage Investment Trust PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

## ➤ SMWHL - WH Smith PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ SNBNz - Schweizerische Nationalbank

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Citadel Securities (Europe) Limited (Program Three)

## ➤ SNGd - Singulus Technologies AG

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Citadel Securities (Europe) Limited (Program Three)

## ➤ SNNI - Sanne Group PLC

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Citadel Securities (Europe) Limited (Program Three)

## ➤ SNRI - Senior PLC

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)



#### ➤ SNL - Smith & Nephew PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ SOBIs - Swedish Orphan Biovitrum AB

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BNP Paribas Arbitrage SNC (Program One and Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ SOFb - Sofina SA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ SOLp - SOITEC

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Citadel Securities (Europe) Limited (Program Three)  
Hudson River Trading Europe Limited (Program Three)

#### ➤ SOLBb - Solvay SA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ SOLm - SOL SpA

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Citadel Securities (Europe) Limited (Program Three)

#### ➤ SONCu - Sonae Capital SGPS SA

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Citadel Securities (Europe) Limited (Program Three)

#### ➤ SONlu - Sonae Industria SGPS SA

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Citadel Securities (Europe) Limited (Program Three)

#### ➤ SONu - Sonae SGPS SA

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ SOONz - Sonova Holding AG

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

## ➤ SOPHl - Sophos Group PLC

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ SOPp - Sopra Steria Group

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

## ➤ SOWd - Software AG

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ SOM - Sogefi SpA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ SOP - Somfy SA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ SPDI - Sports Direct International PLC

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ SPIEp - SPIE SA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)

## ➤ SPIl - Spire Healthcare Group PLC

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

#### ➤ SPMm - Saipem SpA

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BNP Paribas Arbitrage SNC (Program Three)  
Citadel Securities (Europe) Limited (Program Three)  
Optiver V.O.F. (Program Two and Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ SPRd - Axel Springer SE

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ SPSNz - Swiss Prime Site AG

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

#### ➤ SPTI - Spirent Communications PLC

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

#### ➤ SPXI - Spirax-Sarco Engineering PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ SQIp - Sqli SA

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Citadel Securities (Europe) Limited (Program Three)

#### ➤ SQNz - Swissquote Group Holding SA

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Citadel Securities (Europe) Limited (Program Three)

#### ➤ SRBANO - SpareBank 1 SR-Bank ASA

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XTX Markets Limited (Program Three)

#### ➤ SRCGz - Sunrise Communications Group AG

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

## ➤ SREll - Schroder Real Estate Investment Trust Ltd

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Citadel Securities (Europe) Limited (Program Three)

## ➤ SRENz - Swiss Re AG

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Tower Research Capital Europe Limited (Program Two)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ SREl - Sirius Real Estate Ltd

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Citadel Securities (Europe) Limited (Program Three)

## ➤ SRGm - Snam SpA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
My Capital Netherlands BV (Program Two)  
Optiver V.O.F. (Program Two and Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ SRIm - Servizi Italia SpA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ SRPl - Serco Group PLC

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ SRPp - SRP Groupe SA

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Citadel Securities (Europe) Limited (Program Three)  
Hudson River Trading Europe Limited (Program Three)

## ➤ SRSm - Saras SpA

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Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ SRT3d - Sartorius AG

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)

#### ➤ SRTd - Sartorius AG

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Citadel Securities (Europe) Limited (Program Three)

#### ➤ SSABAs - SSAB AB

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BNP Paribas Arbitrage SNC (Program One and Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ SSABBs - SSAB AB

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Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ SSAI - Sistema PJSFC

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Citadel Securities (Europe) Limited (Program Three)

#### ➤ SSEI - SSE PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Hudson River Trading Europe Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Tower Research Capital Europe Limited (Program Two)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ SSLm - Societa Sportiva Lazio SpA

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Citadel Securities (Europe) Limited (Program Three)

#### ➤ SSPGI - SSP Group Plc

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

#### ➤ ST5d - Steico SE

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Citadel Securities (Europe) Limited (Program Three)

#### ➤ STANI - Standard Chartered PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ STBo - Storebrand ASA

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Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ STCKI - Stock Spirits Group PLC

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Citadel Securities (Europe) Limited (Program Three)

## ➤ STERVh - Stora Enso OYJ

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BNP Paribas Arbitrage SNC (Program One and Three)  
Optiver V.O.F. (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ STERs - Stora Enso OYJ

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Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ STFp - Stef SA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ STGc - Scandinavian Tobacco Group A/S

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Hudson River Trading Europe Limited (Program Three)

## ➤ STHRI - STthree PLC

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Citadel Securities (Europe) Limited (Program Three)

## ➤ STJI - St James's Place PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ STLZ - Schmolz + Bickenbach AG

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Citadel Securities (Europe) Limited (Program Three)

## ➤ STMNz - Straumann Holding AG

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Hudson River Trading Europe Limited (Program Three)  
Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

## ➤ STMd - Stabilus SA

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ STMm - STMicroelectronics NV

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BNP Paribas Arbitrage SNC (Program Three)  
Citadel Securities (Europe) Limited (Program Three)  
Optiver V.O.F. (Program Two and Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ STMp - STMicroelectronics NV

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BNP Paribas Arbitrage SNC (Program Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ STNTp - Stentys

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Citadel Securities (Europe) Limited (Program Three)

## ➤ STO3d - STO SE & Co KGaA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ STObI - Stobart Group Ltd

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ STRNa - Stern Groep NV

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Citadel Securities (Europe) Limited (Program Three)

## ➤ STRv - Strabag SE

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Virtu Financial Ireland Ltd (Program Two)

## ➤ STSl - Securities Trust of Scotland PLC

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Citadel Securities (Europe) Limited (Program Three)

## ➤ STSm - Ansaldo STS SpA

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

## ➤ SUBCo - Subsea 7 SA

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Optiver V.O.F. (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ SUNz - Sulzer AG

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Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

## ➤ SURd - Surteco Group SE

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Citadel Securities (Europe) Limited (Program Three)

## ➤ SUp - Schneider Electric SE

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
My Capital Netherlands BV (Program Two)  
Societe Generale London Branch (Program Three)  
Tower Research Capital Europe Limited (Program Two)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ SVSTI - Severstal PJSC

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ SVSl - Savills PLC

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ SVTL - Severn Trent PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)



## ➤ SW1d - SHW AG

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Citadel Securities (Europe) Limited (Program Three)

## ➤ SWEDAs - Swedbank AB

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BNP Paribas Arbitrage SNC (Program One and Three)  
Optiver V.O.F. (Program Three)  
Societe Generale London Branch (Program Three)  
Tower Research Capital Europe Limited (Program Two)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ SWMAs - Swedish Match AB

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BNP Paribas Arbitrage SNC (Program One and Three)  
Hudson River Trading Europe Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ SWPp - Sword Group

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Citadel Securities (Europe) Limited (Program Three)

## ➤ SWp - Sodexo SA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
My Capital Netherlands BV (Program Two)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ SXSl - Spectris PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ SXXl - Sirius Minerals PLC

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Citadel Securities (Europe) Limited (Program Three)

## ➤ SY1d - Symrise AG

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ SYDBc - Sydbank A/S

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Optiver V.O.F. (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ SYNCl - Syncona Ltd

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Citadel Securities (Europe) Limited (Program Three)

## ➤ SYNTI - Synthomer PLC

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ SYTd - Softing AG

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Citadel Securities (Europe) Limited (Program Three)

## ➤ SZGd - Salzgitter AG

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Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ SZUd - Suedzucker AG

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Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

## ➤ TALKI - TalkTalk Telecom Group PLC

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ TAMNz - Tamedia AG

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Citadel Securities (Europe) Limited (Program Three)

## ➤ TASm - Tas Tecnologia Avanzata dei Sistemi SpA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ TATEI - Tate & Lyle PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

➤ [TBCGL - TBC Bank Group PLC](#)

Citadel Securities (Europe) Limited (Program Three)

➤ [TC1d - Tele Columbus AG](#)

Citadel Securities (Europe) Limited (Program Three)

➤ [TCAPI - TP ICAP PLC](#)

BNP Paribas Arbitrage SNC (Program One)  
Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

➤ [TCGL - Thomas Cook Group PLC](#)

Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

➤ [TCHp - Technicolor SA](#)

Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

➤ [TCSl - TCS Group Holding PLC](#)

Citadel Securities (Europe) Limited (Program Three)

➤ [TECNz - Tecan Group AG](#)

Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

➤ [TEDl - Ted Baker PLC](#)

Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

➤ [TEFe - Telefonica SA](#)

BNP Paribas Arbitrage SNC (Program One and Three)  
Societe Generale London Branch (Program Three)  
Tower Research Capital Europe Limited (Program Two)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ TEGd - TAG Immobilien AG

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Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ TEL2Bs - Tele2 AB

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BNP Paribas Arbitrage SNC (Program One and Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ TELIAh - Telia Co AB

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Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ TELIAs - Telia Co AB

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BNP Paribas Arbitrage SNC (Program One and Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ TELo - Telenor ASA

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Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ TEMNz - Temenos AG

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

## ➤ TEMl - Templeton Emerging Markets Investment Trust PLC

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

## ➤ TENm - Tenaris SA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Optiver V.O.F. (Program Two and Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

➤ [TEPl - Telecom Plus PLC](#)

Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

➤ [TEPp - Teleperformance](#)

Citadel Securities (Europe) Limited (Program Three)

➤ [TERm - TerniEnergia SpA](#)

Citadel Securities (Europe) Limited (Program Three)

➤ [TERp - Terreis](#)

Citadel Securities (Europe) Limited (Program Three)

➤ [TESBb - Tessengerlo Group SA](#)

Citadel Securities (Europe) Limited (Program Three)

➤ [TESp - Tessi SA](#)

Citadel Securities (Europe) Limited (Program Three)

➤ [TFIm - TREVI - Finanziaria Industriale SpA](#)

Citadel Securities (Europe) Limited (Program Three)

➤ [TFIp - Television Francaise 1](#)

Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

➤ [TGSo - TGS NOPEC Geophysical Co ASA](#)

Optiver V.O.F. (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

➤ [TGYMm - Technogym SpA](#)

Citadel Securities (Europe) Limited (Program Three)

➤ [THEPp - Thermador Groupe](#)

Citadel Securities (Europe) Limited (Program Three)

#### ➤ THULEs - Thule Group AB

XTX Markets Limited (Program Three)

#### ➤ TIFSl - TI Fluid Systems PLC

Citadel Securities (Europe) Limited (Program Three)

#### ➤ TIK1Vh - Tikkurila Oyj

XTX Markets Limited (Program Three)

#### ➤ TIMd - Zeal Network SE

Citadel Securities (Europe) Limited (Program Three)

#### ➤ TIPm - Tamburi Investment Partners SpA

Citadel Securities (Europe) Limited (Program Three)

#### ➤ TISm - Tiscali SpA

Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

#### ➤ TITRm - Telecom Italia SpA/Milano

Citadel Securities (Europe) Limited (Program Three)  
My Capital Netherlands BV (Program Two)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ TITm - Telecom Italia SpA/Milano

BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
My Capital Netherlands BV (Program Two)  
Optiver V.O.F. (Program Two and Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ TKAd - thyssenkrupp AG

BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Hudson River Trading Europe Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ TKAv - Telekom Austria AG

Virtu Financial Ireland Ltd (Program Two)

#### ➤ TKBPz - Thurgauer Kantonalbank

Citadel Securities (Europe) Limited (Program Three)

#### ➤ TKTTp - Tarkett SA

Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

#### ➤ TKWYa - Takeaway.com NV

Citadel Securities (Europe) Limited (Program Three)

#### ➤ TL5e - Mediaset Espana Comunicacion SA

BNP Paribas Arbitrage SNC (Program One and Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ TLGd - TLG Immobilien AG

Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

#### ➤ TLWl - Tullow Oil PLC

BNP Paribas Arbitrage SNC (Program Three)  
Citadel Securities (Europe) Limited (Program Three)  
Optiver V.O.F. (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ TLXd - Talanx AG

Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ TMPLI - Temple Bar Investment Trust PLC/Fund

Citadel Securities (Europe) Limited (Program Three)

## ➤ TNETb - Telenet Group Holding NV

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ TNGp - Transgene SA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ TODm - Tod's SpA

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Citadel Securities (Europe) Limited (Program Three)  
Hudson River Trading Europe Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ TOM2a - TomTom NV

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ TOMo - Tomra Systems ASA

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Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ TOPc - Topdanmark A/S

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Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ TPEd - PVA TePla AG

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Citadel Securities (Europe) Limited (Program Three)

## ➤ TPKI - Travis Perkins PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ TPOUL - Third Point Offshore Investors Ltd

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Citadel Securities (Europe) Limited (Program Three)



#### ➤ TPS1Vh - Technopolis OYJ

XTX Markets Limited (Program Three)

#### ➤ TRELBS - Trelleborg AB

BNP Paribas Arbitrage SNC (Program One and Three)  
 Hudson River Trading Europe Limited (Program Three)  
 Societe Generale London Branch (Program Three)  
 Virtu Financial Ireland Ltd (Program Two)  
 XTX Markets Limited (Program Three)

#### ➤ TREe - Tecnicas Reunidas SA

BNP Paribas Arbitrage SNC (Program One and Three)  
 Virtu Financial Ireland Ltd (Program Two)

#### ➤ TRIGL - Renewables Infrastructure Group Ltd/The

Citadel Securities (Europe) Limited (Program Three)

#### ➤ TRIp - Trigano SA

Citadel Securities (Europe) Limited (Program Three)  
 Hudson River Trading Europe Limited (Program Three)

#### ➤ TRNm - Terna Rete Elettrica Nazionale SpA

BNP Paribas Arbitrage SNC (Program One and Three)  
 Citadel Securities (Europe) Limited (Program Three)  
 My Capital Netherlands BV (Program Two)  
 Optiver V.O.F. (Program Two and Three)  
 Societe Generale London Branch (Program Three)  
 Virtu Financial Ireland Ltd (Program Two)  
 XTX Markets Limited (Program Three)

#### ➤ TRYGc - Tryg A/S

Societe Generale London Branch (Program Three)  
 Virtu Financial Ireland Ltd (Program Two)  
 XTX Markets Limited (Program Three)

#### ➤ TRYI - TR Property Investment Trust PLC - Ordinary Shares

Citadel Securities (Europe) Limited (Program Three)

#### ➤ TSCOl - Tesco PLC

BNP Paribas Arbitrage SNC (Program One and Three)  
 Citadel Securities (Europe) Limited (Program Three)  
 Societe Generale London Branch (Program Three)  
 Tower Research Capital Europe Limited (Program Two)  
 Virtu Financial Ireland Ltd (Program Two)  
 XTX Markets Limited (Program Three)

➤ [TTId - Tom Tailor Holding SE](#)

Citadel Securities (Europe) Limited (Program Three)

➤ [TTKd - Takkt AG](#)

Citadel Securities (Europe) Limited (Program Three)

➤ [TTR1d - Technotrans SE](#)

Citadel Securities (Europe) Limited (Program Three)

➤ [TUBb - Financiere de Tubize SA](#)

Citadel Securities (Europe) Limited (Program Three)

➤ [TUI1d - TUI AG](#)

Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

➤ [TUUI - TUI AG](#)

BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

➤ [TWEKAa - TKH Group NV](#)

Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

➤ [TWI - Taylor Wimpey PLC](#)

BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

➤ [TXTm - TXT e-solutions SpA](#)

Citadel Securities (Europe) Limited (Program Three)

➤ [TYMNI - Tyman PLC](#)

Citadel Securities (Europe) Limited (Program Three)

## ➤ UAIL - U & I Group PLC

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Citadel Securities (Europe) Limited (Program Three)

## ➤ UANCL - Urban & Civic PLC

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Citadel Securities (Europe) Limited (Program Three)

## ➤ UBIm - Unione di Banche Italiane SpA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
My Capital Netherlands BV (Program Two)  
Optiver V.O.F. (Program Two and Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ UBip - Ubisoft Entertainment SA

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BNP Paribas Arbitrage SNC (Program Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ UBSGz - UBS Group AG

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Hudson River Trading Europe Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Tower Research Capital Europe Limited (Program Two)  
XTX Markets Limited (Program Three)

## ➤ UBXNz - u-blox Holding AG

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ UCBb - UCB SA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ UCGm - UniCredit SpA

BNP Paribas Arbitrage SNC (Program One and Three)  
 Citadel Securities (Europe) Limited (Program Three)  
 Hudson River Trading Europe Limited (Program Three)  
 My Capital Netherlands BV (Program Two)  
 Optiver V.O.F. (Program Two and Three)  
 Societe Generale London Branch (Program Three)  
 Virtu Financial Ireland Ltd (Program Two)  
 XTX Markets Limited (Program Three)

#### ➤ UDGL - UDG Healthcare PLC

BNP Paribas Arbitrage SNC (Program One and Three)  
 Citadel Securities (Europe) Limited (Program Three)  
 XTX Markets Limited (Program Three)

#### ➤ UGp - Peugeot SA

BNP Paribas Arbitrage SNC (Program One and Three)  
 Citadel Securities (Europe) Limited (Program Three)  
 My Capital Netherlands BV (Program Two)  
 Societe Generale London Branch (Program Three)  
 Virtu Financial Ireland Ltd (Program Two)  
 XTX Markets Limited (Program Three)

#### ➤ UHRNz - Swatch Group AG/The

Citadel Securities (Europe) Limited (Program Three)  
 Societe Generale London Branch (Program Three)  
 XTX Markets Limited (Program Three)

#### ➤ UHRz - Swatch Group AG/The

BNP Paribas Arbitrage SNC (Program One and Three)  
 Citadel Securities (Europe) Limited (Program Three)  
 Societe Generale London Branch (Program Three)  
 Virtu Financial Ireland Ltd (Program Two)  
 XTX Markets Limited (Program Three)

#### ➤ UKCML - UK Commercial Property REIT Ltd

Citadel Securities (Europe) Limited (Program Three)

#### ➤ UKWl - Greencoat UK Wind PLC/Funds

Citadel Securities (Europe) Limited (Program Three)

#### ➤ ULEl - Ultra Electronics Holdings PLC

Citadel Securities (Europe) Limited (Program Three)  
 Virtu Financial Ireland Ltd (Program Two)  
 XTX Markets Limited (Program Three)

### ➤ ULVRL - Unilever PLC

BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

### ➤ UMlb - Umicore SA

BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

### ➤ UN01d - Uniper SE

BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Hudson River Trading Europe Limited (Program Three)  
Societe Generale London Branch (Program Three)

### ➤ UNAA - Unilever NV

BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Tower Research Capital Europe Limited (Program Two)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

### ➤ UNIAA - Unilever NV

Citadel Securities (Europe) Limited (Program Three)

### ➤ UNIRm - Unieuro SpA

Citadel Securities (Europe) Limited (Program Three)

### ➤ UNIm - Unipol Gruppo SpA

BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Hudson River Trading Europe Limited (Program Three)  
My Capital Netherlands BV (Program Two)  
Optiver V.O.F. (Program Two and Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ UPMh - UPM-Kymmene OYJ

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BNP Paribas Arbitrage SNC (Program One and Three)  
 Hudson River Trading Europe Limited (Program Three)  
 Optiver V.O.F. (Program Three)  
 Societe Generale London Branch (Program Three)  
 Virtu Financial Ireland Ltd (Program Two)  
 XTX Markets Limited (Program Three)

#### ➤ UPONOh - Uponor OYJ

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Virtu Financial Ireland Ltd (Program Two)  
 XTX Markets Limited (Program Three)

#### ➤ URWa - Unibail-Rodamco-Westfield

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Citadel Securities (Europe) Limited (Program Three)  
 My Capital Netherlands BV (Program Two)

#### ➤ USm - UnipolSai Assicurazioni SpA

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BNP Paribas Arbitrage SNC (Program One and Three)  
 Citadel Securities (Europe) Limited (Program Three)  
 My Capital Netherlands BV (Program Two)  
 Optiver V.O.F. (Program Two and Three)  
 Societe Generale London Branch (Program Three)  
 Virtu Financial Ireland Ltd (Program Two)  
 XTX Markets Limited (Program Three)

#### ➤ UTDId - United Internet AG

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BNP Paribas Arbitrage SNC (Program One and Three)  
 Citadel Securities (Europe) Limited (Program Three)  
 Societe Generale London Branch (Program Three)  
 Virtu Financial Ireland Ltd (Program Two)  
 XTX Markets Limited (Program Three)

#### ➤ UTGl - UNITE Group PLC/The

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Citadel Securities (Europe) Limited (Program Three)  
 XTX Markets Limited (Program Three)

#### ➤ UUl - United Utilities Group PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
 Citadel Securities (Europe) Limited (Program Three)  
 Societe Generale London Branch (Program Three)  
 Virtu Financial Ireland Ltd (Program Two)  
 XTX Markets Limited (Program Three)

#### ➤ V3Vd - VITA 34 AG

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Citadel Securities (Europe) Limited (Program Three)

➤ V6Cd - Viscom AG

Citadel Securities (Europe) Limited (Program Three)

➤ VACNz - VAT Group AG

BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)

➤ VACp - Pierre & Vacances SA

Citadel Securities (Europe) Limited (Program Three)

➤ VALMTh - Valmet OYJ

Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

➤ VALNz - Valora Holding AG

Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

➤ VANb - Van de Velde NV

Citadel Securities (Europe) Limited (Program Three)

➤ VAOd - Vapiano SE

Citadel Securities (Europe) Limited (Program Three)

➤ VAR1d - Varta AG

Citadel Securities (Europe) Limited (Program Three)

➤ VASTBb - Vastned Retail Belgium NV

Citadel Securities (Europe) Limited (Program Three)

➤ VASTNa - Vastned Retail NV

Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

➤ VBKd - VERBIO Vereinigte BioEnergie AG

Citadel Securities (Europe) Limited (Program Three)

#### ➤ VBXd - Voltabox AG

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Citadel Securities (Europe) Limited (Program Three)

#### ➤ VCTI - Victrex PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ VCTp - Vicat SA

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ VECl - Vectura Group PLC

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

#### ➤ VERv - Verbund AG

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Virtu Financial Ireland Ltd (Program Two)

#### ➤ VETz - Vetropack Holding AG

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Citadel Securities (Europe) Limited (Program Three)

#### ➤ VGPa - VGP NV

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Citadel Securities (Europe) Limited (Program Three)

#### ➤ VIB3d - Villeroy & Boch AG

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Citadel Securities (Europe) Limited (Program Three)

#### ➤ VIEp - Veolia Environnement SA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
My Capital Netherlands BV (Program Two)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ VIFNz - Vifor Pharma AG

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)



## ➤ VIGv - Vienna Insurance Group AG Wiener Versicherung Gruppe

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Virtu Financial Ireland Ltd (Program Two)

## ➤ VIHd - VIB Vermoegen AG

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Citadel Securities (Europe) Limited (Program Three)

## ➤ VIRPp - Virbac SA

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

## ➤ VISe - Viscofan SA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ VIVp - Vivendi SA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ VKp - Vallourec SA

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Hudson River Trading Europe Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ VLAp - Valneva SE

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Citadel Securities (Europe) Limited (Program Three)

## ➤ VLKa - Van Lanschot Kempenn NV

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Citadel Securities (Europe) Limited (Program Three)

## ➤ VNAd - Vonovia SE

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
XTX Markets Limited (Program Three)

#### ➤ VODL - Vodafone Group PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Tower Research Capital Europe Limited (Program Two)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ VOEv - voestalpine AG

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Optiver V.O.F. (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ VOLVAs - Volvo AB

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Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ VOLVBs - Volvo AB

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BNP Paribas Arbitrage SNC (Program One and Three)  
Hudson River Trading Europe Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Tower Research Capital Europe Limited (Program Two)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ VONNz - Vontobel Holding AG

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

#### ➤ VOSd - Vossloh AG

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Citadel Securities (Europe) Limited (Program Three)

#### ➤ VOW3d - Volkswagen AG

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ VOWd - Volkswagen AG

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Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

➤ [VPBNz - VP Bank AG](#)

Citadel Securities (Europe) Limited (Program Three)

➤ [VPKa - Koninklijke Vopak NV](#)

BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

➤ [VQTd - va-Q-tec AG](#)

Citadel Securities (Europe) Limited (Program Three)

➤ [VSVSl - Vesuvius PLC](#)

Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

➤ [VT9d - VTG AG](#)

Citadel Securities (Europe) Limited (Program Three)

➤ [VTBRI - VTB Bank PJSC](#)

Citadel Securities (Europe) Limited (Program Three)

➤ [VTCl - Vitec Group PLC/The](#)

Citadel Securities (Europe) Limited (Program Three)

➤ [VWSc - Vestas Wind Systems A/S](#)

Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

➤ [VZNz - VZ Holding AG](#)

Citadel Securities (Europe) Limited (Program Three)

➤ [WACd - Wacker Neuson SE](#)

Citadel Securities (Europe) Limited (Program Three)

## ➤ WAFd - Siltronic AG

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BNP Paribas Arbitrage SNC (Program Three)  
Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ WALLBs - Wallenstam AB

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XTX Markets Limited (Program Three)

## ➤ WAVEp - Wavestone

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Citadel Securities (Europe) Limited (Program Three)

## ➤ WCHd - Wacker Chemie AG

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Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ WDHc - William Demant Holding A/S

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Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ WDId - Wirecard AG

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BNP Paribas Arbitrage SNC (Program Three)  
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Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ WDLd - windeln.de SE

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Citadel Securities (Europe) Limited (Program Three)

## ➤ WDPb - Warehouses De Pauw CVA

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ WEHBb - Wereldhave Belgium NV

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Citadel Securities (Europe) Limited (Program Three)

#### ➤ WEIRL - Weir Group PLC/The

BNP Paribas Arbitrage SNC (Program Three)  
Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ WESa - Wessanen

Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

#### ➤ WGI - John Wood Group PLC

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Optiver V.O.F. (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ WHAa - Wereldhave NV

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Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ WIEv - Wienerberger AG

Virtu Financial Ireland Ltd (Program Two)

#### ➤ WINd - Diebold Nixdorf AG

Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

#### ➤ WIZZl - Wizz Air Holdings Plc

XTX Markets Limited (Program Three)

#### ➤ WKBNz - Walliser Kantonalbank

Citadel Securities (Europe) Limited (Program Three)

#### ➤ WKLa - Wolters Kluwer NV

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Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ WKPL - Workspace Group PLC

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Citadel Securities (Europe) Limited (Program Three)  
XTX Markets Limited (Program Three)

## ➤ WL6d - Heidelberg Pharma AG

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Citadel Securities (Europe) Limited (Program Three)

## ➤ WLNp - Worldline SA/France

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Citadel Securities (Europe) Limited (Program Three)

## ➤ WMHL - William Hill PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

## ➤ WPCTI - Woodford Patient Capital Trust PLC/The Fund

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Citadel Securities (Europe) Limited (Program Three)

## ➤ WPPI - WPP PLC

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Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Tower Research Capital Europe Limited (Program Two)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ WPYL - Worldpay Inc

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Citadel Securities (Europe) Limited (Program Three)

## ➤ WRT1Vh - Wartsila OYJ Abp

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BNP Paribas Arbitrage SNC (Program One and Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ WSUd - Washtec AG

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Citadel Securities (Europe) Limited (Program Three)

## ➤ WTANI - Witan Investment Trust PLC

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Citadel Securities (Europe) Limited (Program Three)

## ➤ WTBL - Whitbread PLC

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ WUWd - Wuestenrot & Wuerttembergische AG

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Citadel Securities (Europe) Limited (Program Three)

## ➤ WWHL - Worldwide Healthcare Trust PLC/Fund

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Citadel Securities (Europe) Limited (Program Three)

## ➤ XFABp - X-Fab Silicon Foundries SE

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Citadel Securities (Europe) Limited (Program Three)  
Hudson River Trading Europe Limited (Program Three)

## ➤ XILp - Xilam Animation SA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ XPRm - Exprivia SpA

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Citadel Securities (Europe) Limited (Program Three)

## ➤ YARo - Yara International ASA

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Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

## ➤ YITh - YIT OYJ

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Virtu Financial Ireland Ltd (Program Two)

## ➤ YPSNz - Ypsomed Holding AG

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Citadel Securities (Europe) Limited (Program Three)

## ➤ YSNd - Secunet Security Networks AG

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Citadel Securities (Europe) Limited (Program Three)

## ➤ ZAGv - Zumtobel Group AG

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Virtu Financial Ireland Ltd (Program Two)

## ➤ ZALd - Zalando SE

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BNP Paribas Arbitrage SNC (Program One and Three)  
Citadel Securities (Europe) Limited (Program Three)  
Societe Generale London Branch (Program Three)

## ➤ ZGz - Zuger Kantonalbank AG

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Citadel Securities (Europe) Limited (Program Three)

## ➤ ZIL2d - ElringKlinger AG

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Citadel Securities (Europe) Limited (Program Three)  
Virtu Financial Ireland Ltd (Program Two)

## ➤ ZO1d - zooplus AG

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Citadel Securities (Europe) Limited (Program Three)

## ➤ ZOTe - Zardoya Otis SA

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Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ ZURNz - Zurich Insurance Group AG

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BNP Paribas Arbitrage SNC (Program One and Three)  
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Societe Generale London Branch (Program Three)  
Virtu Financial Ireland Ltd (Program Two)  
XTX Markets Limited (Program Three)

## ➤ ZVm - Zignago Vetro SpA

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Citadel Securities (Europe) Limited (Program Three)