



# AXON

a TRG Screen company 

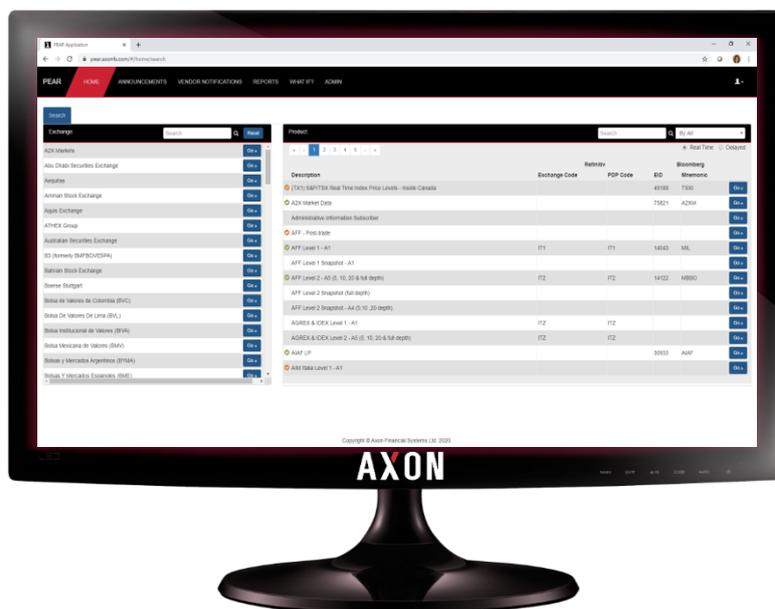
## PEAR User Guide

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## PEAR - What is it?

PEAR is Axon's online exchange compliance database and the knowledge centre that underpins the Axon platform. With an intuitive design, PEAR has a home page for each exchange giving customers access to dedicated sections on products, policies and copies of documents.



## PEAR - Benefits

1. Enables users to determine data usage costs by creating 'what if' scenarios.
2. Searchable information using vendor codes.
3. Allows the mapping of market data policies at product level rather than Exchange level, this, in turn, allows users to access targeted guidance to their queries efficiently. Previous exchange market data agreements, policies, pricing and announcements are maintained within Axon Knowledge and are accessible via PEAR.
4. Recognises searchable terms including Axon's proprietary standardised terms for Unit of Count. Standardised searchable terms allow for easy comparison between exchanges or products in addition to providing quick reference guidance.
5. Axon Knowledge includes product and licence hierarchy structures allowing users to quickly see which other products or licences are included within any given product or licence.
6. Includes details of announcements by exchanges and upcoming price changes to ensure that you stay up to date.

## PEAR - Home Page

PEAR Menu

PEAR Announcements Reminder

Manage your account

On the left-hand side, we have the various exchanges/exchange groups available within PEAR. The exchanges are split out by contract e.g. if we type 'Irish Stock Exchange' into the search bar it will refine the result to Euronext as they administer all of the market data for the Irish Stock Exchange. So essentially you can search for the exchange group e.g. Wiener Börse or alternatively search for the underlying market e.g. Macedonian (administered by Wiener Börse).

On the right-hand side, we have the related exchange products. Here you have the ability to search for a product using different criteria such as the Product Name or the associated Vendor Codes and so forth. For example, if we type 'NAS1', it will refine the results to show 'UTP Level 1' (PDP Code).

If there have been Announcements within PEAR since you last logged in, a reminder will appear (if applicable) at the top right corner of the PEAR Home Page showing you how many Announcements have been created since your last login. By clicking on the 'View' button a lightbox will appear showing you the list of Announcements that you may have missed.

The screenshot shows the PEAR application interface with a 'What's New?' lightbox overlay. The lightbox contains a table with the following data:

Exchange Name	Announcement Title	Announcement Types	
Intercontinental Exchange (ICE)	2020-03-11 Derived Data License Agreement Update	Document Change   Price Change - Licence	<a href="#">Go &gt;</a>
B3 (formerly BMFBOVESPA)	2020-03-06 B3 Revised Market Data Commercial Policy	Document Change   Policy Update	<a href="#">Go &gt;</a>
Oslo Bors	2020-01-27 Oslo market data will migrate to Euronext July 2020	Document Change   Exchange Participants   Product Decommission	<a href="#">Go &gt;</a>
SIX Swiss Exchange	2020-03-02 Agreement for Non-Display Information Usage	Document Change	<a href="#">Go &gt;</a>

The lightbox also features a 'Close' button at the bottom right. In the background, a notification banner at the top right indicates that announcements have been created since the last login, with a 'View' button. The main interface includes a search bar, a list of exchanges on the left, and a data table on the right with columns for PDP Code, EID, and Mnemonic.

## PEAR - Announcements Page

- To keep up-to-date with exchange announcements we have contact with the exchanges, additionally, we also monitor the exchange websites and documentation.
- We compare the documentation that we hold with that on the exchange website, therefore within our daily checks, if there has been a change, we will proceed to update PEAR as required.
- Once we make the changes within PEAR, we will create an announcement, which also includes a notification email inviting the PEAR user to review the changes within PEAR.
- The list of announcements on the *Announcements* page lists those that have been effective within the last 90 days and those that are effective in the future.

PEAR Application | pear.axonfs.com/#/announcements

PEAR HOME ANNOUNCEMENTS VENDOR NOTIFICATIONS REPORTS WHAT IF? ADMIN

Upcoming changes and those announced in the last 90 days

Sort/Filter By: Announcement Date | All Exchanges | All Announcement Types | All Policy Types

Restrict to Owned Products | Restrict to Held Licences | PDF | CSV | Reset

From: 2019-08-01 To: 2020-03-10 | This Week | This Month | Search

**Announced in Mar 2020**

<p><b>Title:</b> B3 Revised Market Data Commercial Policy</p> <p><b>Announcement Date:</b> 2020-03-06</p> <p><b>Announcement Types:</b> Document Change, Policy Update</p> <p><b>Policies Affected:</b> Unit of Count - Basis of Count, Unit of Count - Per Instance</p>	<p><b>Exchange:</b> B3 (formerly BMFBOVESPA)</p> <p><b>Effective Date:</b> 2020-02-27</p>	Go >
<p><b>Title:</b> Agreement for Non-Display Information Usage</p> <p><b>Announcement Date:</b> 2020-03-02</p> <p><b>Announcement Types:</b> Document Change</p> <p><b>Policies Affected:</b> Non Display - Reference Price Based Systems, Non Display Applications</p>	<p><b>Exchange:</b> SIX Swiss Exchange</p> <p><b>Effective Date:</b> 2020-01-01</p>	Go >

**Announced in Feb 2020**

<p><b>Title:</b> SZSE Fee Schedule for February 2020</p> <p><b>Announcement Date:</b> 2020-02-28</p> <p><b>Announcement Types:</b> Product Introduction, Document Change</p> <p><b>Policies Affected:</b> Unit of Count - Basis of Count, Unit of Count - Per Instance</p>	<p><b>Exchange:</b> Shenzhen Stock Exchange</p> <p><b>Effective Date:</b> 2020-07-01</p>	Go >
<p><b>Title:</b> Fee Changes effective 1 July 2020</p> <p><b>Announcement Date:</b> 2020-02-27</p> <p><b>Announcement Types:</b> Price Change - Product, Policy Update, Price Change - Licence, Document Change</p> <p><b>Policies Affected:</b> Private Investor Criteria</p>	<p><b>Exchange:</b> Euronext</p> <p><b>Effective Date:</b> 2020-07-01</p>	Go >
<p><b>Title:</b> Oslo Bors migration to Euronext July 2020</p> <p><b>Announcement Date:</b> 2020-02-27</p> <p><b>Announcement Types:</b> Product Introduction, Document Change</p> <p><b>Policies Affected:</b> Unit of Count - Natural User, Unit of Count - User Per Source, Unit of Count Non Display</p>	<p><b>Exchange:</b> Euronext</p> <p><b>Effective Date:</b> 2020-07-01</p>	Go >

Below is a summary of the features that have been incorporated into the Announcements page.

Feature/Capability	Function
<b>Sort/Filter</b>	Ability to refine announcements by different filters – can filter by: <ul style="list-style-type: none"> <li>▪ <b>Announcement Date</b> or <b>Effective Date</b> i.e. announcements that were published (announced) on a specific date or announcements that became/become effective on a specific date.</li> <li>▪ <b>Exchange</b> – Select a specific exchange to see the announcements affecting it.</li> <li>▪ <b>Announcement Type</b> – Refine announcements based on what they affect i.e. Policy Update, Policy Introduction, Document Change, Price Change, Product Decommission and Product Introduction.</li> <li>▪ <b>Policy Type</b> – Filter announcements based on the policy type affected i.e. Non-Display, Unit of Count, Derived Data and so forth.</li> </ul>
<b>Date Picker</b>	Ability to select a specific date range for either announcements ‘announced’ or ‘effective’ for that chosen date range. <b>Please note:</b> Only announcements that were either effective within the last 90 days or are upcoming are available on the announcements page.
<b>Export Capability</b>	Ability to export the announcements in PDF or CSV format. This allows you to: <ul style="list-style-type: none"> <li>▪ Export announcements based on the specific filter's input, if any. For example, export all announcements effective in March 2020.</li> </ul>
<b>‘This Week’ and ‘This Month’ Buttons</b>	Ability to quickly view announcements that are either ‘announced’ or ‘effective’ this week or this month.
<b>My Announcements</b>	Ability to only show announcements that are directly linked to any products owned and/or licences held. <b>Please note:</b> Clients must administer the products they subscribe to and licences they hold to using the Admin feature in PEAR for this function to work correctly. If you require any further information, please contact us: <a href="mailto:support@axonfs.com">support@axonfs.com</a>
<b>Search</b>	Ability to search for announcements based on: <ul style="list-style-type: none"> <li>▪ Exchange Name</li> <li>▪ Product Name/Description</li> <li>▪ PDP</li> <li>▪ Exchange Code</li> <li>▪ EID</li> <li>▪ Mnemonic</li> </ul>

## Additional Notes

### Announcement Date/Effective Date Filter

By default, when the *Announcements* page is loaded it will show the first page of announcements that have been *Announced* (published), starting with the most recent. For example, in the below, we can see that there are the following announcements for March and Feb 2020 (please note: there may be more announcements for current or other months, these can be viewed by selecting the additional pages to view – as outlined below).

The screenshot shows the PEAR Application interface. The navigation bar includes: PEAR, HOME, ANNOUNCEMENTS (highlighted), VENDOR NOTIFICATIONS, REPORTS, WHAT IF?, ADMIN. The main content area is titled "Upcoming changes and those announced in the last 90 days".

Filters and controls include:

- Sort/Filter By: Announcement Date (selected)
- All Exchanges (dropdown)
- All Announcement Types (dropdown)
- All Policy Types (dropdown)
- Restrict to Owned Products (checkbox)
- Restrict to Held Licences (checkbox)
- PDF, CSV, Reset buttons
- Page navigation: 1, 2, 3, 4 (with 1 selected)
- Date range: From: 2019-08-01, To: 2020-03-10
- Buttons: This Week, This Month, Search

Announcements are grouped by month:

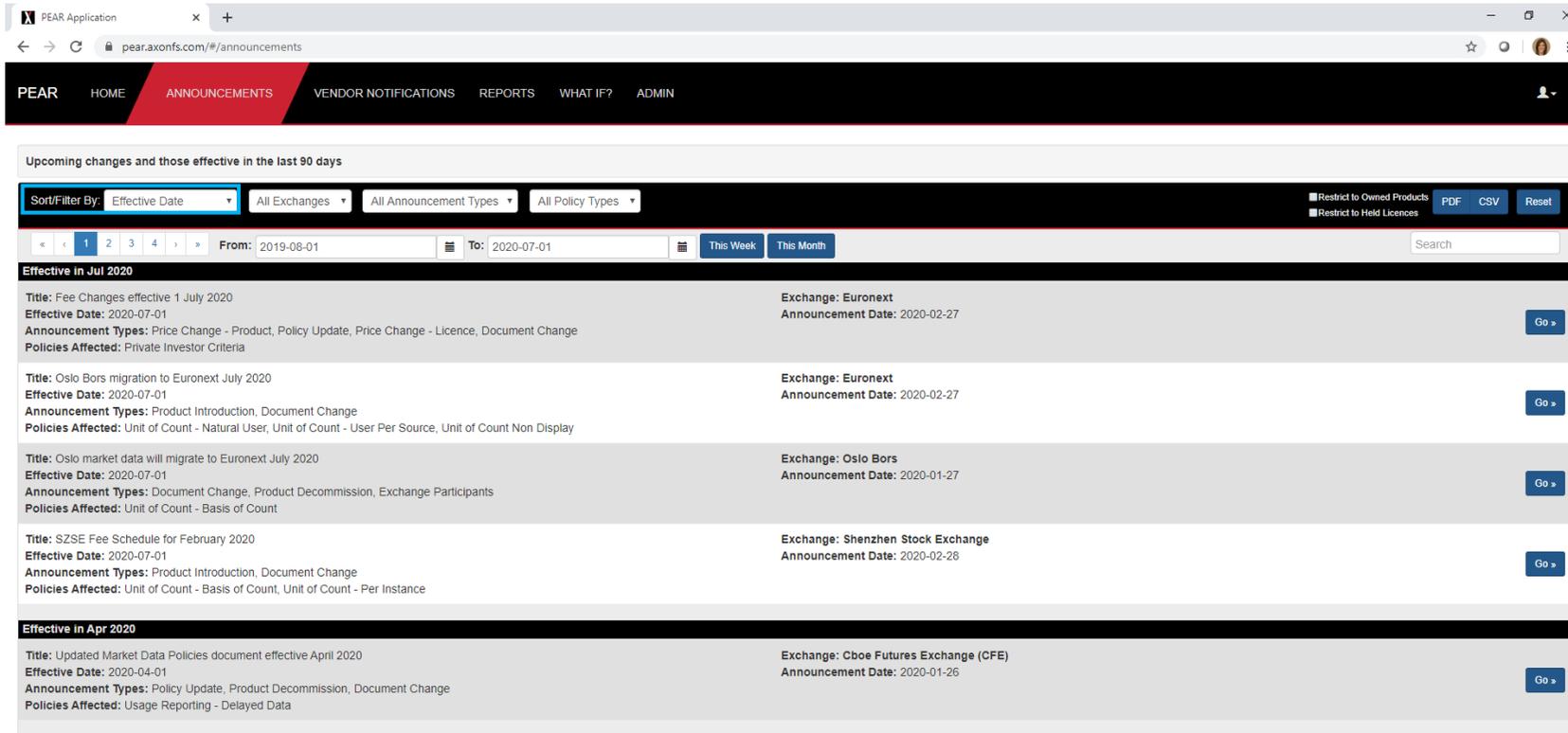
#### Announced in Mar 2020

<p><b>Title:</b> B3 Revised Market Data Commercial Policy  <b>Announcement Date:</b> 2020-03-06  <b>Announcement Types:</b> Document Change, Policy Update  <b>Policies Affected:</b> Unit of Count - Basis of Count, Unit of Count - Per Instance</p>	<p><b>Exchange:</b> B3 (formerly BMFBOVESPA)  <b>Effective Date:</b> 2020-02-27</p>	Go »
<p><b>Title:</b> Agreement for Non-Display Information Usage  <b>Announcement Date:</b> 2020-03-02  <b>Announcement Types:</b> Document Change  <b>Policies Affected:</b> Non Display - Reference Price Based Systems, Non Display Applications</p>	<p><b>Exchange:</b> SIX Swiss Exchange  <b>Effective Date:</b> 2020-01-01</p>	Go »

#### Announced in Feb 2020

<p><b>Title:</b> SZSE Fee Schedule for February 2020  <b>Announcement Date:</b> 2020-02-28  <b>Announcement Types:</b> Product Introduction, Document Change  <b>Policies Affected:</b> Unit of Count - Basis of Count, Unit of Count - Per Instance</p>	<p><b>Exchange:</b> Shenzhen Stock Exchange  <b>Effective Date:</b> 2020-07-01</p>	Go »
<p><b>Title:</b> Fee Changes effective 1 July 2020  <b>Announcement Date:</b> 2020-02-27  <b>Announcement Types:</b> Price Change - Product, Policy Update, Price Change - Licence, Document Change  <b>Policies Affected:</b> Private Investor Criteria</p>	<p><b>Exchange:</b> Euronext  <b>Effective Date:</b> 2020-07-01</p>	Go »
<p><b>Title:</b> Oslo Bors migration to Euronext July 2020  <b>Announcement Date:</b> 2020-02-27  <b>Announcement Types:</b> Product Introduction, Document Change  <b>Policies Affected:</b> Unit of Count - Natural User, Unit of Count - User Per Source, Unit of Count Non Display</p>	<p><b>Exchange:</b> Euronext  <b>Effective Date:</b> 2020-07-01</p>	Go »

Alternatively, we can view announcements by *Effective Date* i.e. announcements that will become effective on a particular date. For example, in the below, we can see the view is ordering announcements by the effective date, ordered by the those furthest in the future. In the example, the *Euronext* announcements were announced (published) on February 27<sup>th</sup>, 2020 however, they don't become effective until July 1<sup>st</sup>, 2020.



The screenshot shows the PEAR Application interface with the following details:

- Navigation:** PEAR, HOME, ANNOUNCEMENTS (active), VENDOR NOTIFICATIONS, REPORTS, WHAT IF?, ADMIN.
- Section:** Upcoming changes and those effective in the last 90 days.
- Filters:** Sort/Filter By: Effective Date, All Exchanges, All Announcement Types, All Policy Types. Includes checkboxes for "Restrict to Owned Products" and "Restrict to Held Licences", and buttons for PDF, CSV, and Reset.
- Date Range:** From: 2019-08-01, To: 2020-07-01. Includes "This Week" and "This Month" buttons.
- Search:** Search input field.
- Announcements:**
  - Effective in Jul 2020**
    - Title:** Fee Changes effective 1 July 2020  
**Effective Date:** 2020-07-01  
**Announcement Types:** Price Change - Product, Policy Update, Price Change - Licence, Document Change  
**Policies Affected:** Private Investor Criteria  
**Exchange:** Euronext  
**Announcement Date:** 2020-02-27
    - Title:** Oslo Bors migration to Euronext July 2020  
**Effective Date:** 2020-07-01  
**Announcement Types:** Product Introduction, Document Change  
**Policies Affected:** Unit of Count - Natural User, Unit of Count - User Per Source, Unit of Count Non Display  
**Exchange:** Euronext  
**Announcement Date:** 2020-02-27
    - Title:** Oslo market data will migrate to Euronext July 2020  
**Effective Date:** 2020-07-01  
**Announcement Types:** Document Change, Product Decommission, Exchange Participants  
**Policies Affected:** Unit of Count - Basis of Count  
**Exchange:** Oslo Bors  
**Announcement Date:** 2020-01-27
    - Title:** SZSE Fee Schedule for February 2020  
**Effective Date:** 2020-07-01  
**Announcement Types:** Product Introduction, Document Change  
**Policies Affected:** Unit of Count - Basis of Count, Unit of Count - Per Instance  
**Exchange:** Shenzhen Stock Exchange  
**Announcement Date:** 2020-02-28
  - Effective in Apr 2020**
    - Title:** Updated Market Data Policies document effective April 2020  
**Effective Date:** 2020-04-01  
**Announcement Types:** Policy Update, Product Decommission, Document Change  
**Policies Affected:** Usage Reporting - Delayed Data  
**Exchange:** Cboe Futures Exchange (CFE)  
**Announcement Date:** 2020-01-26

## Viewing announcements older than ninety (90) days

The announcements page currently restricts announcements to those that have been effective in the last ninety (90) days and to those that will be effective in the future. If you wish to view announcements that are older than ninety (90) days, this can be done by viewing the announcements within each exchange. For example,

1. Select the *London Stock Exchange Group* from the list of exchanges in PEAR.
2. Once you're on the home page of the London Stock Exchange Group, select the *Announcements* under policies:

The screenshot displays the PEAR Application interface for the London Stock Exchange Group. The navigation menu includes HOME, ANNOUNCEMENTS, VENDOR NOTIFICATIONS, REPORTS, WHAT IF?, and ADMIN. The ANNOUNCEMENTS section is active, showing a search bar and a 'Exchange Details' button. Below this, the 'Exchange: London Stock Exchange Group (contact details)' is displayed. The main content area is divided into several sections:

- Headline Policies:** A list of policies with checkboxes, including 'Enterprise fees for Non Display Use', 'Optional direct reporting scheme which allows Natural User', 'Standard unit of count is User per Source', and 'User Per Source Netting'.
- Products:** A table listing products with columns for Product, Data Level, Timeliness, and State. The table includes rows for AIM Level 1, AIM Level 2, CurveGlobal Interest Rate Derivatives Level 1, CurveGlobal Interest Rate Derivatives Level 2, ETF / ETP Level 1, and ETF / ETP Level 2.
- Policies:** A list of policies with 'Go >' buttons. The 'Announcements' policy is highlighted in blue.
- Potential Cost Savings:** A list of potential cost savings with 'Go >' buttons.
- Document Category:** A section for document categories with a dropdown menu set to 'Agreement' and buttons for 'Add Contract +', 'Historical', and 'Current'. It lists documents like 'Terms and Conditions' and 'FTSE Partnership Index Series Non-Display Usage - Customer Declaration'.

3. By selecting the drop-down, you will be able to see a list of all announcements related to that specific exchange.

**PEAR Application**  
 https://pear.axonfs.com/#/home/policy/

**PEAR** HOME ANNOUNCEMENTS VENDOR NOTIFICATIONS REPORTS WHAT IF? ADMIN

London Stock Exchange Group | 2021-10-05 Pricing and Policy Changes for January 1, 2022

Search Exchange Details **Policy Details**

**Announcements (40):**

- 2021-10-05 Pricing and Policy Changes for January 1, 2022
- 2021-04-29 Euronext acquire Borsa Italiana
- 2022-01-27 Market Data Price List
- 2021-10-05 Pricing and Policy Changes for January 1, 2022**
- 2021-07-13 Borsa Italiana document branding update
- 2020-10-12 Pricing and Policy Changes for January 1, 2021
- 2020-11-16 LSE RNS Changes for January 2021
- 2020-03-16 LSE Revised Schedule A - Market Data Policies Document (No PEAR Updates)
- 2020-06-02 LSE Revision to Delayed Data and After Midnight Data Reporting Document
- 2020-01-22 FTSE Partnership Index Series Non Display updates
- 2020-01-16 RNS Pricing and Policy 2020 (No PEAR update)
- 2019-10-03 Pricing and Policy Changes for January 1, 2020
- 2019-11-21 ATP White Label Licence Application Form updated (No PEAR updates)
- 2019-11-15 LSE Guidelines Delayed Data and After Midnight Data Reporting
- 2019-05-03 MITCH Decommission
- 2019-10-30 LSE Revised Price List for 2020 (No PEAR update)
- 2019-01-21 RNS Pricing and Policy 2019 (No PEAR update)
- 2018-10-03 LSE Pricing & Policy Changes effective 2019
- 2018-12-03 Real Time Market Data Order Form update (no PEAR change)
- 2018-07-02 Private Investor Licence Introduced
- 2017-10-06 London Stock Exchange and Borsa Italiana Changes for January 2018

Effective Date: 2022-01-01

Policy Explanation:  
 London Stock Exchange has released the following:

- [Schedule A: Market Data Policies](#)
- [Schedule B: Market Data Price List](#)
- [Schedule C: Reporting](#)
- [Schedule D: Direct Reporting](#)
- [Schedule E: Market Data Audit](#)
- [Terms and Conditions](#)

**Policy Extracts**

**Associated Source Documents:** View all associated documents

Source Document: [Schedule A: Market Data Policies](#)  
 Document Version: Version 5.0  
 Effective Date: 2022-01-01  
 End Date:  
 Document Reference: Schedule A, Market Data Policies - Free trials - 6.4 to 6.7

6.4. A Redistributor may grant a one-off, single free trial of 30 days during which no Data Charges will apply. This will apply:  
 a) Per Natural User for display Devices;  
 b) Per End Customer location for Data delivered via datafeed.

6.5. The Redistributor must submit a Report for any free trial access provided throughout the month in accordance with the Reporting Schedule.

6.6. The LSE must approve in writing the contractual and technical controls put in place by any Redistributor prior to commencement of offering of free trials. These controls must prevent any misuse of free trial Data, including but not limited to: (i) preventing recurring free trials, (ii) limiting the free trial to 30 days per Professional User or Private Investor End Customer, and (iii) ensuring that appropriate terms and conditions are in place to govern the free trial period.

6.7. Prior written permission must be sought from the LSE for any free trial Data to be delivered via datafeed.

**Associated Products**

- AIM Level 1 Go >
- AIM Level 2 Go >
- ETF / ETP Level 1 Go >
- ETF / ETP Level 2 Go >
- European Level 1 Go >
- European Level 2 Go >

**Associated Licences** State: Current

- AIM Level 1 Non Display - Client Facilitation - Member Go >
- AIM Level 1 Non Display - Client Facilitation - Non-Member Go >
- AIM Level 1 Non Display - Principal - Member Go >
- AIM Level 1 Non Display - Principal - Non-Member Go >
- AIM Level 1 Non Display - Trading Platforms - Member Go >
- AIM Level 1 Non Display - Trading Platforms - Non-Member Go >

**Associated Policies**

- Fee Waivers - APAC Retail Promotion Go >
- Fee Waivers - Free Trials Go >

**Associated Vendor Notifications**

- DN202465 London Stock Exchange Group - Price Change Go >

## PEAR - Exchange Page

In this example we have selected the *London Stock Exchange Group* from the list of exchanges in PEAR:

The screenshot displays the PEAR application interface for the London Stock Exchange Group. The page is organized into several sections:

- Navigation Bar:** Includes 'PEAR', 'HOME', 'ANNOUNCEMENTS', 'VENDOR NOTIFICATIONS', 'REPORTS', 'WHAT IF?', and 'ADMIN'.
- Search Bar:** Contains 'Exchange Details'.
- Exchange:** 'London Stock Exchange Group (contact details)' with a 'MICs' button.
- Headline Policies:** A list of policies with checkboxes, including 'Non Display Policy', 'Natural User Netting', and 'User Per Source Netting'.
- Products:** A table listing products and their data levels.
 

Product	Data Level	Action
AIM Level 1	Level 1	Go >
AIM Level 2	Level 2 - Full Depth	Go >
CurveGlobal Interest Rate Derivatives Level 1	Level 1	Go >
CurveGlobal Interest Rate Derivatives Level 2	Level 2 - Full Depth	Go >
ETF / ETP Level 1	Level 1	Go >
ETF / ETP Level 2	Level 2 - Full Depth	Go >
- Policies:** A list of policy categories with 'Go >' buttons, including 'Announcements', 'Derived Data', 'End of Day', 'Fee Waivers', 'Market Data Audit', 'Member Discount', 'Non Display', 'Private Investor', and 'Quote Metering'.
- Potential Cost Savings:** A list of cost-saving categories with 'Go >' buttons, including 'Announcements', 'Derived Data', 'Fee Waivers', 'Member Discount', 'Non Display', 'Private Investor', 'Service Facilitator', and 'Unit of Count Display'.
- Document Category:** A section for document management with filters for 'Agreement', 'Add Contract', 'Historical', and 'Current'. It lists documents like 'Terms and Conditions' and 'FTSE Partnership Index Series Non-Display Usage - Customer Declaration'.

- For each Exchange, we have a home page displaying 5 tabs.
- On the top left, we have 'Headline Policies' - a snapshot of the main areas of policy that our end users are interested in:

**1. Does the exchange have a non-display policy?**

**2. Does the exchange offer natural user netting?** That is, if one user had a Refinitiv terminal and a Bloomberg terminal could they could net those and just pay for one.

**3. Does the exchange offer user per source netting?** For example, if someone in a DACS environment had a max count of 2 or 3, they could login simultaneously two or three times and you will only have to report it once.

- On the right, we have the 'Products' offered by the exchange. Here you can refine your view by various markets offered by the exchange, if applicable. For example, you could view the various product offerings of either the LSE European and/or International markets.
- On the bottom left, we have the various areas of policy ('Policies') for the exchange, for example, derived data, non-display, unit of count and so forth.
- The next tab along, is the 'Potential Cost Savings', essentially a subset of the policies that are here. They're policies that could be positive to the end-user, for example, private investor rates, developer exemptions and so forth.
- Then in the final tab - the bottom right tab, these are all the source documents ('Document Category') from the exchange, so the exchange agreements, policies, price lists and so on. Not only do we hold the current version of the documentation, but we also hold historical copies that are generally removed from the exchange websites, if available.
  - ComPEAR is a feature that gives you the ability to compare in detail, previous exchange documents with the current versions side-by-side
  - The download link is a link to the documents we hold on our servers
  - The online version link is a link to the exchanges' website version of the document

## ComPEAR

With the ComPEAR feature, users can compare in detail, previous exchange documents with the current versions side-by-side. ComPEAR highlights the changes/differences between the documents allowing you to perform comparisons in seconds.

For this example, we have selected *Aequitas* Exchange and selected the *Price List* 'Document Category' type. We have selected the 'Data Fee Schedule' document and then we clicked *ComPEAR*.

The screenshot displays the PEAR Application interface for the Aequitas exchange. The main content area is divided into several sections:

- Exchange: Aequitas** (contact details)
- Headline Policies**: Includes Non Display Policy, Natural User Netting, and User Per Source Netting.
- Products**: A table listing various securities products with filters for Timeliness (Real Time, Delayed) and State (Current, Expired).
 

Product	Data Level	Action
Other Traded Securities - Level 1 - NEO-D	Level 1	Go >
Other Traded Securities - Level 1 - NEO-L	Level 1	Go >
Other Traded Securities - Level 1 - NEO-N	Level 1	Go >
NEO Exchange Listed Securities Level 1 & Level 2 - NEO-D	Level 2 - Full Depth	Go >
NEO Exchange Listed Securities Level 1 & Level 2 - NEO-L	Level 2 - Full Depth	Go >
NEO Exchange Listed Securities Level 1 & Level 2 - NEO-N	Level 2 - Full Depth	Go >
- Policies**: A list of policy categories such as Announcements, Derived Data, End of Day, Fee Waivers, Market Data Audit, Non Display, Private Investor, Reporting, and Service Facilitator.
- Potential Cost Savings**: A list of cost-saving categories including Fee Waivers, Private Investor, Service Facilitator, and Unit of Count Display.
- Document Category: Price List**: A table showing document details. The 'Data Fee Schedule' document is highlighted.
 

Document Name	Version	Date	Actions
Data Fee Schedule	Version: June 1, 2019	2019-06-01	Download, ComPEAR, Online Version
NEO Historical Data Agreement	Version: 2019/01/30	2019-01-30	Download, ComPEAR, Online Version
NEO Data Fee Change - November 1 2017		2017-09-01	Download, ComPEAR
Connectivity Services Fee Schedule	Version: June 1, 2017	2017-06-01	Download, ComPEAR

After clicking 'ComPEAR' you are presented with a lightbox (pop-up) with the previous documents to run a comparison against. In this example, we selected the previous 'Data Fee Schedule'. Then we clicked the 'ComPEAR' button in the lightbox.

The screenshot shows the PEAR Application interface with a 'Compare Exchange Documents' lightbox open. The lightbox displays the following table:

Title	Version	End Date	Selection
Aequitas NEO Historical Data Agreement	Version: 20150918	2015-09-18	<input type="radio"/>
Connectivity Services Fee Schedule	Version: 20150217	2015-02-17	<input type="radio"/>
Data Fee Schedule	Version: 2018/10/29	2018-10-29	<input checked="" type="radio"/>
Data Fee Schedule	Version: June 1, 2018	2018-06-01	<input type="radio"/>

The lightbox also includes a 'Selected Document' section showing 'Data Fee Schedule | Version: June 1, 2019 | 2019-06-01' and a 'ComPEAR' button at the bottom right.

Below is the 'ComPEAR' tab showing the previous document on the left and the current document on the right. Text that was deleted is highlighted in red (on the left), text that was added is highlighted in green (on the right). For example, below you can see the fees have changed for both the *Other Traded Securities Level 1 and Level 2 NEO-L and NEO-N* products.

The screenshot displays the 'ComPEAR' application interface, showing a side-by-side comparison of two document versions. The left version shows fees for professional and retail users, with some values in red indicating deletion. The right version shows updated fees, with some values in green indicating addition. A new section '3. NON-DISPLAY FEES' is also visible on the right.

**2.1 DISPLAY FEES FOR PROFESSIONAL USERS**

	NEO-L	NEO-N	NEO-D
NEO Listed Securities - Level 1 & Level 2	Free	Free	Free
Other Traded Securities - Level 1	<del>\$6.50</del>	<del>\$8.00</del>	\$0.00
Other Traded Securities - Level 2	<del>\$15.00</del>	<del>\$18.75</del>	\$0.00

**2.2 DISPLAY FEES FOR RETAIL PROFESSIONAL USERS**

	NEO-L	NEO-N	NEO-D
NEO Listed Securities - Level 1 & Level 2	Free	Free	Free
Other Traded Securities - Level 1	\$1.50	\$1.50	\$0.00
Other Traded Securities - Level 2	\$3.00	\$3.00	\$0.00

**2.1 DISPLAY FEES FOR PROFESSIONAL USERS**

	NEO-L	NEO-N	NEO-D
NEO Listed Securities - Level 1 & Level 2	Free	Free	Free
Other Traded Securities - Level 1	\$9.20	\$9.85	\$0.00
Other Traded Securities - Level 2	\$21.00	\$22.70	\$0.00

**2.2 DISPLAY FEES FOR RETAIL PROFESSIONAL USERS**

	NEO-L	NEO-N	NEO-D
NEO Listed Securities - Level 1 & Level 2	Free	Free	Free
Other Traded Securities - Level 1	\$1.50	\$1.50	\$0.00
Other Traded Securities - Level 2	\$3.00	\$3.00	\$0.00

**2.3 DISPLAY FEES FOR NON-PROFESSIONAL USERS**

	NEO-L	NEO-N	NEO-D
NEO Listed Securities - Level 1 & Level 2	Free	Free	Free
Other Traded Securities - Level 1 & Level 2	Free	Free	Free

**3. NON-DISPLAY FEES**

Non-display fees apply when NEO Exchange Data is used in an application that is not for display use. Applications are classified as relating to either trading or analysis and the fees apply per Data Recipient (i.e., the signatory to a Data Agreement) and, if applicable, per each of its Affiliates. For further explanation, please see the Data Instructions.

**3.1 NON-DISPLAY FEES FOR NEO EXCHANGE LISTED SECURITIES**

## PEAR - Exchange Product Page

In this example we have selected *European Level 2* from the list of Products for the London Stock Exchange Group:

The screenshot shows the PEAR application interface for the product 'European Level 2' (Product ID: LSE007). The page is divided into several sections:

- Product Overview:** Displays 'Level 2 - Full Depth', 'Delay Period: 15 minutes', and 'MICs: XLON'.
- Associated Policies:** A list of policies with 'Go' buttons: Announcements, Derived Data, End of Day, and Fee Waivers.
- Vendors:** Shows 'Refinitiv' and 'Bloomberg' as vendors for 'London Stock Exchange - European Service L1+L2'. It also lists 'Exchange Code: DT2', 'PDP Code: DT2', and 'Fee: GBP 27.52 per month' starting from '2020-01-01'.
- Data Charges:** A table with tabs for 'Historical' and 'Current'.
 

Client Type	Use Type	Fee	Effective Date	End Date
Private Investor	Display	GBP 4.10 per month	2014-01-01	
Professional	Display	EUR 25.72 per month	2020-01-01	

Private Investor Rate additionally includes International Level 2 data.
- Hierarchy:** Shows 'International Level 2' with a green checkmark, indicating it is included.
- Licences:** A table with tabs for 'Historical' and 'Current'. The 'Licence Type' is set to 'Application Usage'.
 

Licence Name	Timeliness	Client Type	Fee	Effective Date	End Date
International Level 2 Other Application Usage	Real Time	Professional	Banded	2020-01-01	

- On the top left, we have some high-level information, so the data level, the delay period (if applicable) and the associated MICs (Market Identifier Code) with that product.

- Below we have the 'Data Charges' - these vary by exchange in terms of the user type offered. Depending on the exchange, we also hold the historical pricing information which can be viewed by selecting the 'Historical' radio button (if available). In the above example, we can see that there are two (2) "states" of pricing – Historical and Current.
- To the bottom of the page, we have the 'Licences' that are associated with the product. We also group the licences by 'Licence Type', again this varies by exchange but generally speaking we have derived data, external redistribution, non-display etc. Again, we also have historical pricing for the licences (if available).
- To the top right, we have the 'Vendors' pricing for both Refinitiv and Bloomberg, some may be empty as the Vendor may not carry the product.
- Below this tab, is the 'Hierarchy' tab, within PEAR we have built-in a parent-child relationship, as exchanges tend to include Level 1 data as part of the Level 2 subscription – this is reflected here, if applicable.
- Finally, we have the 'Associated Policies' tab, essentially these are the policies that this exchange product is related to. (Note: this is particularly useful where exchanges split out policies by products, for example, Nasdaq differentiate between their non-display policies for U.S. and European products).

## PEAR - Exchange Policy Page

In this example we have selected *Non Display | Non Display – Other Application Usage* from the list of Non Display Policies for the London Stock Exchange Group:

The screenshot displays the PEAR Application interface for the 'Non Display - Other Application Usage' policy. The interface is divided into several sections:

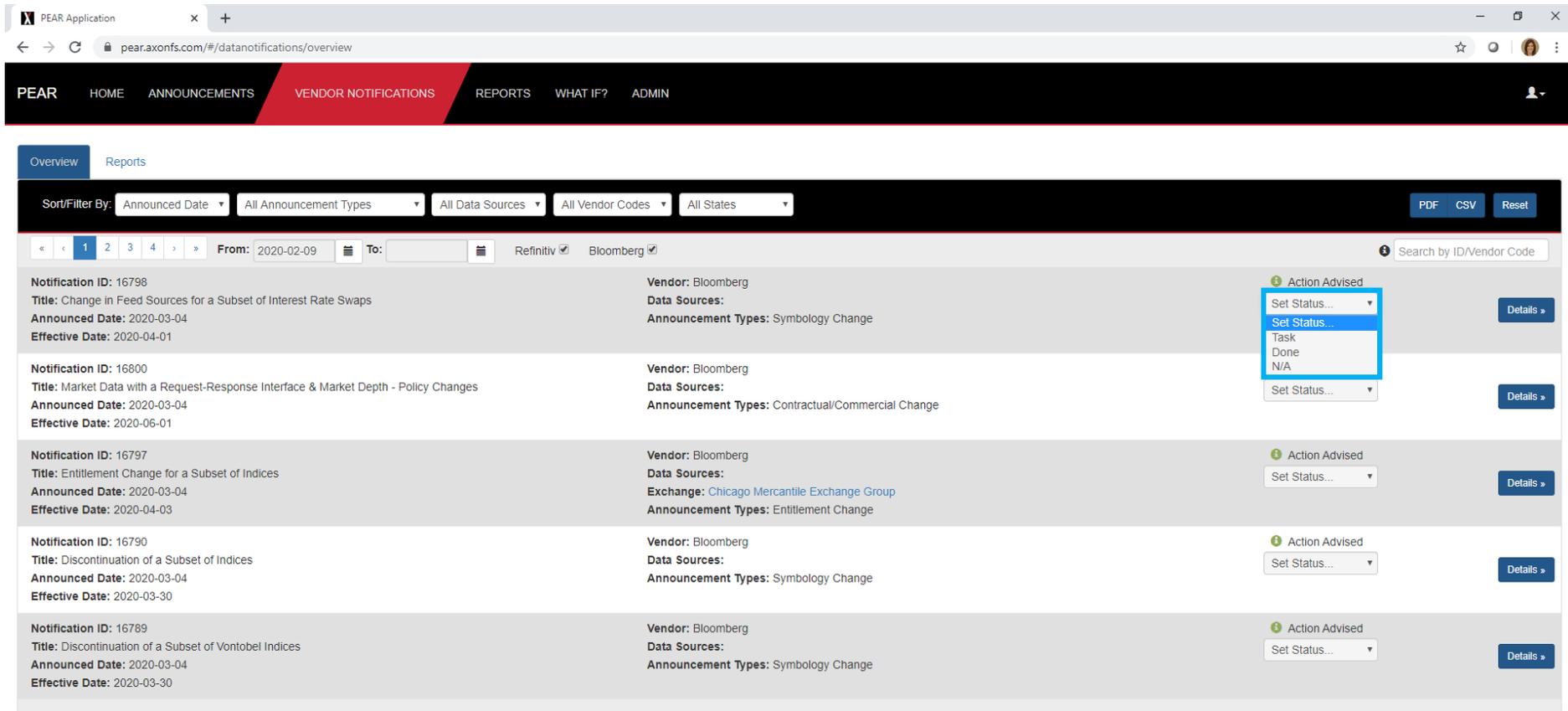
- Header:** Includes navigation tabs (HOME, ANNOUNCEMENTS, etc.) and a search bar.
- Policy Overview:** Shows the policy name, effective date (2016-01-01), and end date. It includes a 'Policy Explanation' section with a detailed text area and a 'Requires Pre-approval' section with a list of usage categories (Fund Administration, Portfolio Management, Quantitative Analysis, Risk Management, Any use other than Display).
- Policy Extracts:** A section with a pagination control and a list of associated source documents. The first document is 'Schedule A: Market Data Policies', Version 5.0, effective from 2022-01-01. It includes a '1. Definitions' section stating that Application Usage means Non-Display and/or Other Application Usage Licence Charges.
- Associated Products:** A list of products associated with the policy, including AIM Level 1, AIM Level 2, CurveGlobal Interest Rate Derivatives Level 1 and 2, ETF / ETP Level 1 and 2, and European Level 1 and 2. Each product has a 'Go >' button.
- Associated Licences:** A list of licences associated with the policy, including AIM Level 1 Other Application Usage, AIM Level 2 Other Application Usage, CurveGlobal Interest Rate Derivatives Level 1 and 2 Other Application Usage, ETF / ETP Level 1 and 2 Other Application Usage, and International Level 1 and 2 Other Application Usage. Each licence has a 'Go >' button.

- On the top left, we have the 'Policy Explanation', which is our explanation of the information contained within the exchange's documentation, as referenced below in the 'Policy Extracts'.

- The 'Policy Extracts' contain all the information from the exchange documentation - policy, agreement, price list and so forth that refer to the area of policy that we are explaining. There is also the option of viewing the document which the extract was taken from by selecting the 'Source Document' hyperlink.
- To the right, we have the 'Associated Products' and 'Associated Licences' that this policy applies to.

## PEAR - Vendor Notifications

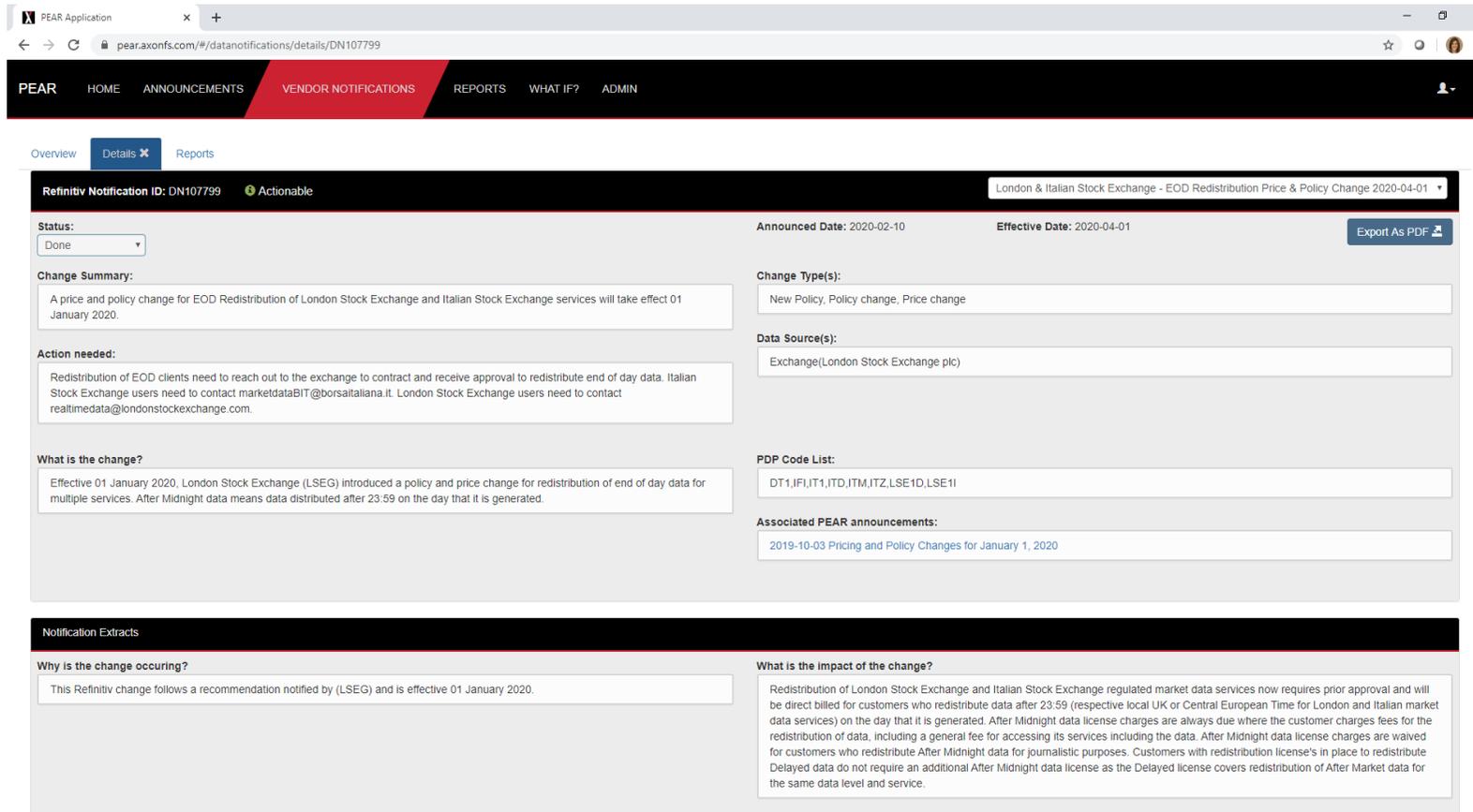
The *Vendor Notifications* page is a centralised store of both the Bloomberg and Refinitiv Data Notifications. Similar to the *Announcements* page in PEAR, users can filter Vendor Notifications by 'Announced Date', 'Effective Date', 'Announcement Types' and so forth. There are two flags that are set by Axon either 'Review Advised' (denoted by an orange 'i') or 'Action Advised' (denoted by a green 'i'). Users can then set a status for the Vendor Notification, if required, by selecting the 'Set Status...' drop-down and setting it to either 'Task', 'Done' or 'N/A'.



The screenshot shows the PEAR application interface for Vendor Notifications. The navigation bar includes 'PEAR', 'HOME', 'ANNOUNCEMENTS', 'VENDOR NOTIFICATIONS' (highlighted), 'REPORTS', 'WHAT IF?', and 'ADMIN'. The main content area has tabs for 'Overview' and 'Reports'. Below the tabs are filter controls: 'Sort/Filter By:' with dropdowns for 'Announced Date', 'All Announcement Types', 'All Data Sources', 'All Vendor Codes', and 'All States'. There are also 'PDF', 'CSV', and 'Reset' buttons. The notification list includes columns for ID, Title, Announced Date, Effective Date, Vendor, Data Sources, and Announcement Types. A search bar 'Search by ID/Vendor Code' is on the right. A dropdown menu for 'Set Status...' is open, showing options: 'Task', 'Done', and 'N/A'. The list contains five notifications, all marked as 'Action Advised'.

Notification ID	Title	Announced Date	Effective Date	Vendor	Data Sources	Announcement Types	Status	Details
16798	Change in Feed Sources for a Subset of Interest Rate Swaps	2020-03-04	2020-04-01	Bloomberg		Symbology Change	Action Advised	Details
16800	Market Data with a Request-Response Interface & Market Depth - Policy Changes	2020-03-04	2020-06-01	Bloomberg		Contractual/Commercial Change	Review Advised	Details
16797	Entitlement Change for a Subset of Indices	2020-03-04	2020-04-03	Bloomberg	Chicago Mercantile Exchange Group	Entitlement Change	Action Advised	Details
16790	Discontinuation of a Subset of Indices	2020-03-04	2020-03-30	Bloomberg		Symbology Change	Action Advised	Details
16789	Discontinuation of a Subset of Vontobel Indices	2020-03-04	2020-03-30	Bloomberg		Symbology Change	Action Advised	Details

By clicking on the ‘Details’ button for a particular Vendor Notification you will be presented with a screen similar to the below. Rather than a clunky, information-overload view, users are presented with organised extracts from either the Bloomberg or Refinitiv Data Notifications, such as ‘Change Summary’, ‘Change Type (s)’ and so forth.



The screenshot shows the 'PEAR Application' interface. The browser address bar displays 'pear.axonfs.com/#/datanotifications/details/DN107799'. The navigation menu includes 'PEAR', 'HOME', 'ANNOUNCEMENTS', 'VENDOR NOTIFICATIONS', 'REPORTS', 'WHAT IF?', and 'ADMIN'. The 'VENDOR NOTIFICATIONS' section is active, showing tabs for 'Overview', 'Details', and 'Reports'. The 'Details' view for Refinitiv Notification ID: DN107799 is displayed, with a status of 'Done' and an 'Actionable' icon. The notification title is 'London & Italian Stock Exchange - EOD Redistribution Price & Policy Change 2020-04-01'. Key details include:
 

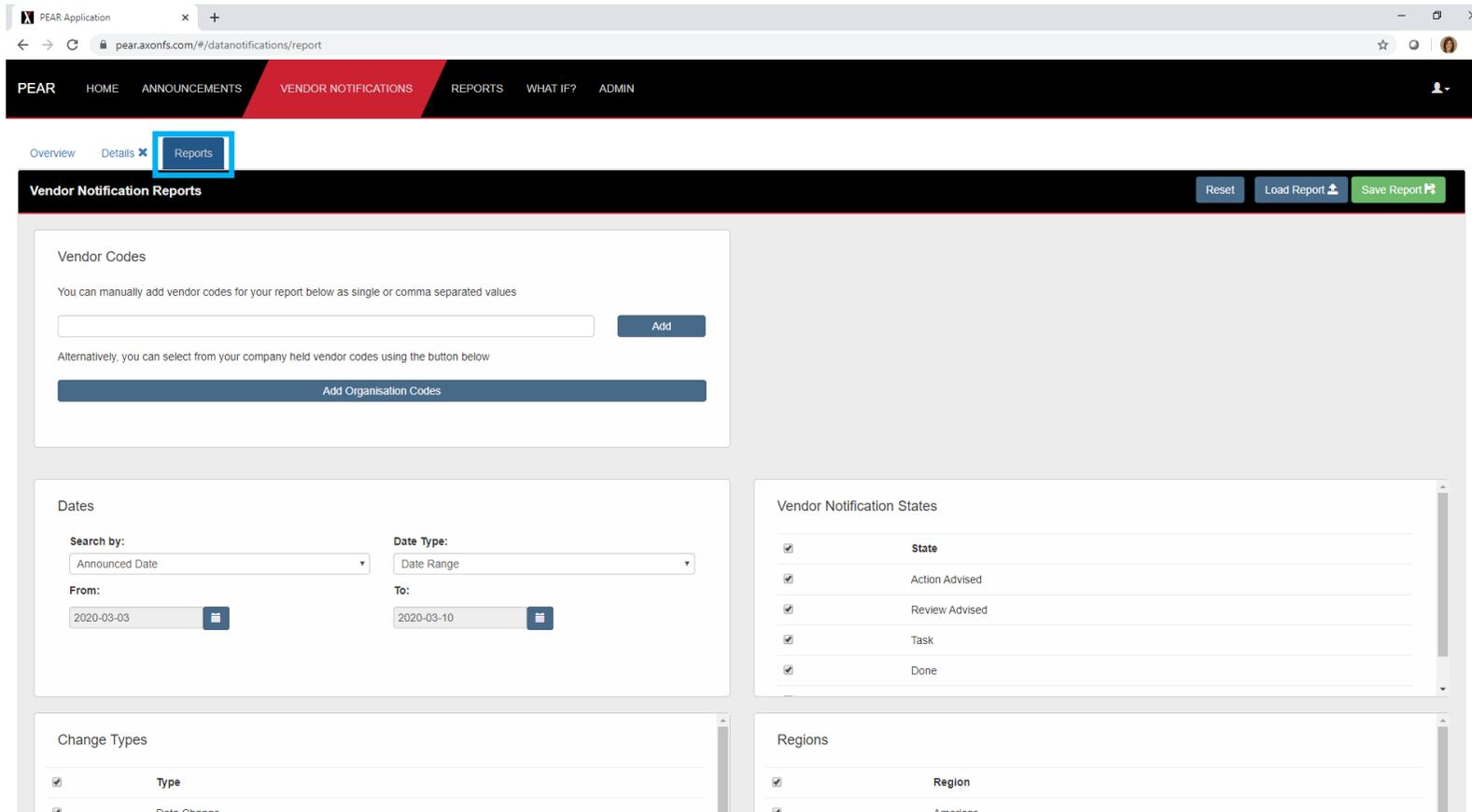
- Status:** Done
- Announced Date:** 2020-02-10
- Effective Date:** 2020-04-01
- Change Summary:** A price and policy change for EOD Redistribution of London Stock Exchange and Italian Stock Exchange services will take effect 01 January 2020.
- Change Type(s):** New Policy, Policy change, Price change
- Data Source(s):** Exchange(London Stock Exchange plc)
- PDP Code List:** DT1,IFI,IT1,ITD,ITM,ITZ,LSE1D,LSE1I
- Associated PEAR announcements:** 2019-10-03 Pricing and Policy Changes for January 1, 2020

 The 'Notification Extracts' section contains two sub-sections:
 

- Why is the change occurring?:** This Refinitiv change follows a recommendation notified by (LSEG) and is effective 01 January 2020.
- What is the impact of the change?:** Redistribution of London Stock Exchange and Italian Stock Exchange regulated market data services now requires prior approval and will be direct billed for customers who redistribute data after 23:59 (respectively local UK or Central European Time for London and Italian market data services) on the day that it is generated. After Midnight data license charges are always due where the customer charges fees for the redistribution of data, including a general fee for accessing its services including the data. After Midnight data license charges are waived for customers who redistribute After Midnight data for journalistic purposes. Customers with redistribution license's in place to redistribute Delayed data do not require an additional After Midnight data license as the Delayed license covers redistribution of After Market data for the same data level and service.

**Note:** The Vendor Notifications ‘Details’ view will differ slightly depending on whether you are viewing a Bloomberg or Refinitiv Notification.

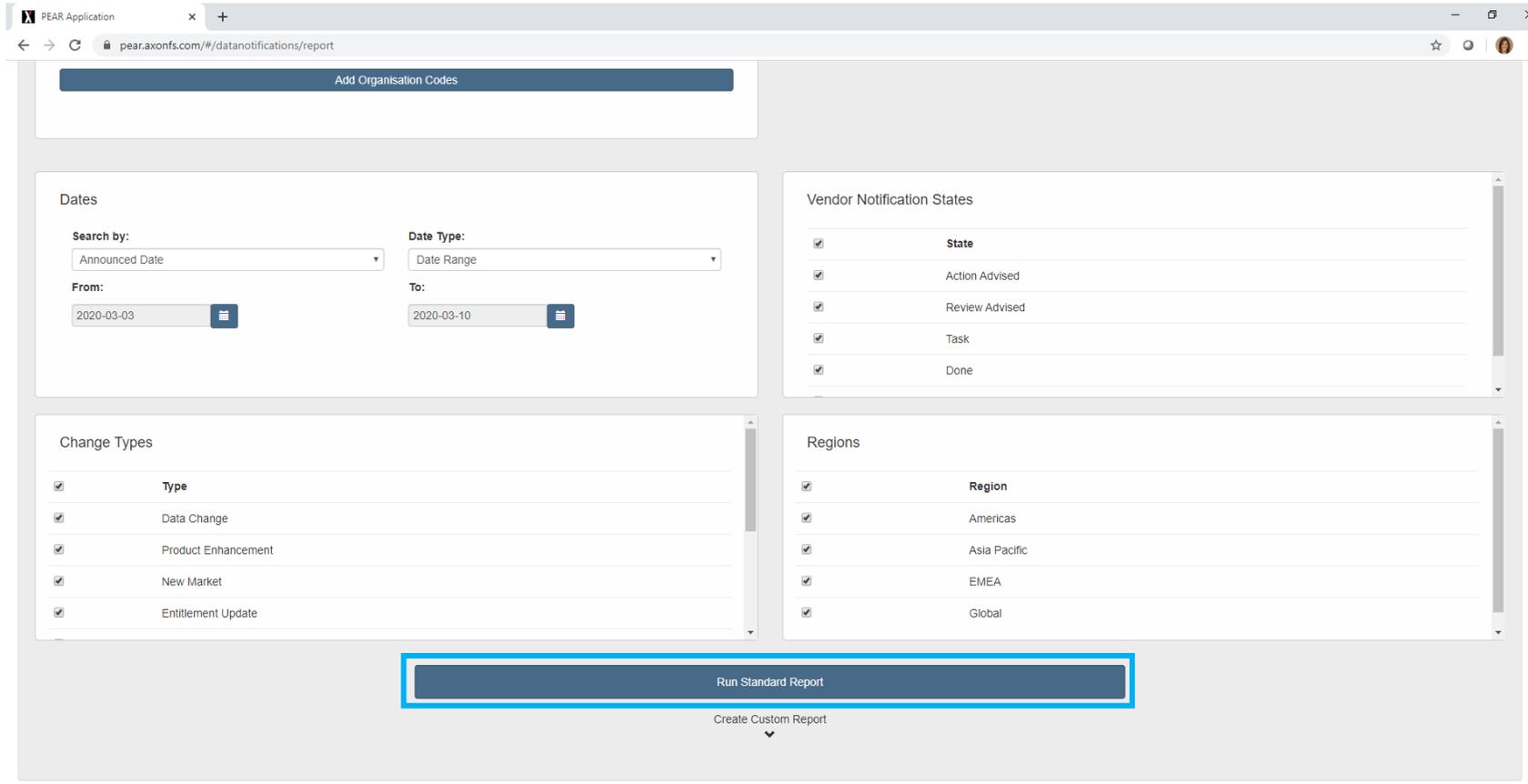
Users can also run reports on Vendor Notifications. By clicking on the 'Reports' tab, users will be presented with the below. There are two report types users can run - 'Standard Report' or 'Custom Report' (these options can be found at the bottom of the 'Reports' tab page, as shown in the next screenshot). All reports can be saved and then re-run for later use.



The screenshot shows the 'Vendor Notification Reports' page in the PEAR Application. The page has a dark navigation bar with 'PEAR', 'HOME', 'ANNOUNCEMENTS', 'VENDOR NOTIFICATIONS', 'REPORTS', 'WHAT IF?', and 'ADMIN'. The 'Reports' tab is highlighted in blue. Below the navigation bar, there are buttons for 'Reset', 'Load Report', and 'Save Report'. The main content area is divided into several sections:

- Vendor Codes:** A section with a text input field and an 'Add' button. Below it, a button labeled 'Add Organisation Codes'.
- Dates:** A section with 'Search by:' (set to 'Announced Date') and 'Date Type:' (set to 'Date Range'). It also has 'From:' and 'To:' date pickers, both set to '2020-03-03' and '2020-03-10' respectively.
- Vendor Notification States:** A list of states with checkboxes: 'State', 'Action Advised', 'Review Advised', 'Task', and 'Done'. All are checked.
- Change Types:** A list of types with checkboxes: 'Type' and 'Data Channel'. Both are checked.
- Regions:** A list of regions with checkboxes: 'Region' and 'Americas'. Both are checked.

There are several criteria that users can run Vendor Notification reports on such as the 'Change Types' i.e. Price Change, New Market and so forth. The 'Vendor Notification States' i.e. Action Advised, Task and so forth. The 'Regions' i.e. Asia Pacific, Global and so forth.

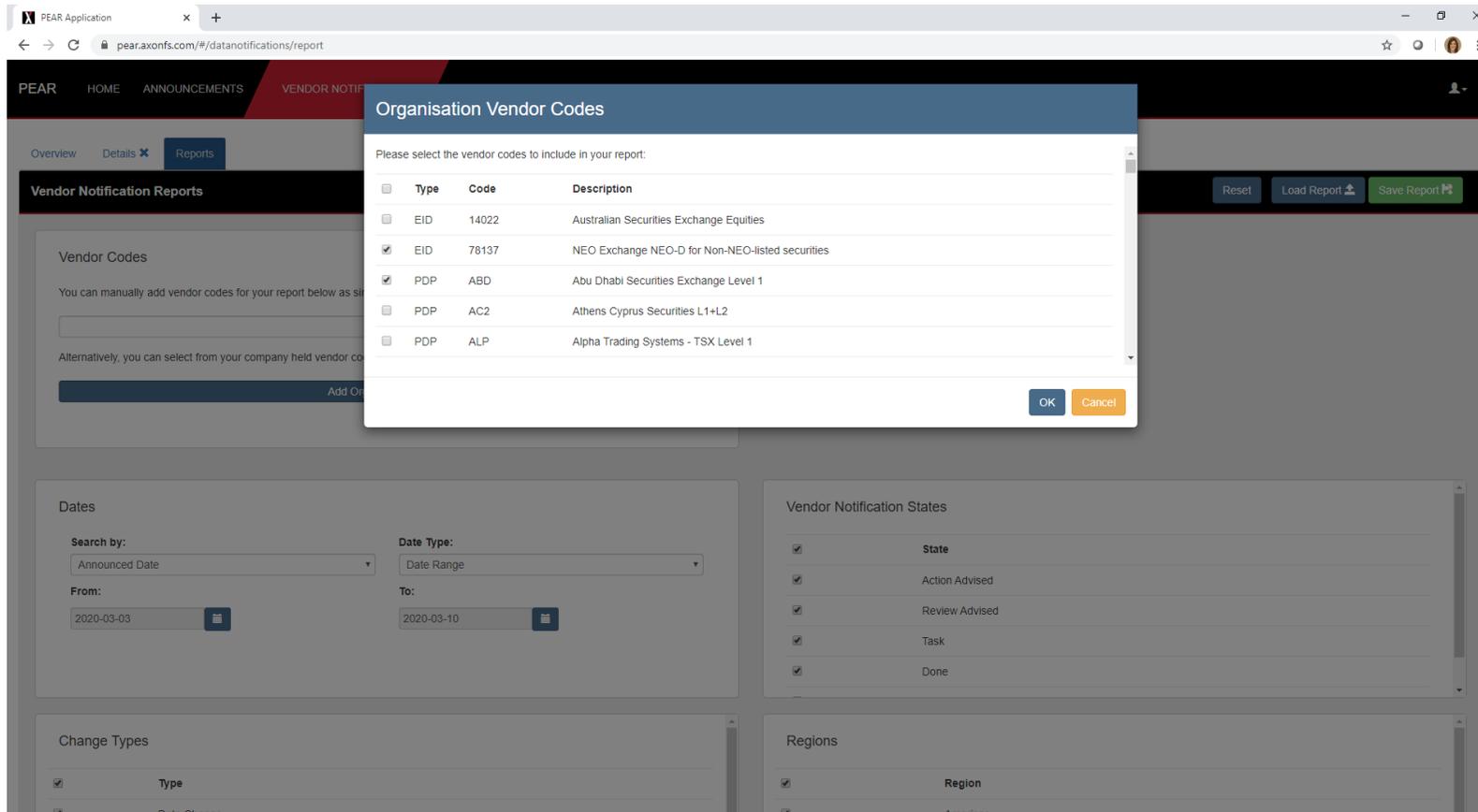


The screenshot shows a web browser window with the URL `pear.axonfs.com/#/datanotifications/report`. The page contains several filter sections:

- Add Organisation Codes**: A blue button at the top.
- Dates**: Includes a "Search by:" dropdown (set to "Announced Date"), a "Date Type:" dropdown (set to "Date Range"), and "From:"/ "To:" date pickers (set to 2020-03-03 and 2020-03-10).
- Vendor Notification States**: A list with checkboxes for "State", "Action Advised", "Review Advised", "Task", and "Done", all of which are checked.
- Change Types**: A list with checkboxes for "Type", "Data Change", "Product Enhancement", "New Market", and "Entitlement Update", all of which are checked.
- Regions**: A list with checkboxes for "Region", "Americas", "Asia Pacific", "EMEA", and "Global", all of which are checked.

At the bottom, there is a blue button labeled "Run Standard Report" which is highlighted with a red box. Below it is a link for "Create Custom Report" with a downward arrow.

There is also the option to add your firm's Vendor Codes (EID or PDP). This means that users can refine the Vendor Notifications view to only show Vendor Notification's that are directly linked to their held Vendor Codes. You can manually add an EID or PDP below as single or comma-separated values or alternately Admin users can upload them, and they can subsequently be selected from the list (as shown in the lightbox (pop-up) below). We will show you how to administer Vendor Codes as an Admin user next.



For PEAR Admin users, they have the option to upload a CSV file of their firm's Vendor Codes (EID or PDP) so that on the *Vendor Notifications* tab 'Overview' option, users will be able to refine the view to Vendor Notifications that are directly linked to their firm's Vendor Codes. By clicking on the *Admin* tab from the menu and then the 'Vendor Codes' tab, users will be presented with the below. To the left, in this example, are the already loaded Vendor Codes. To add more, either enter the values manually by a comma-separated value or alternatively click 'Add Vendor Codes' and then download the 'Template', complete it, and upload the Vendor Codes specific to your firm.

The screenshot shows the PEAR Application Admin interface. The main menu includes PEAR, HOME, ANNOUNCEMENTS, VENDOR NOTIFICATIONS, REPORTS, WHAT IF?, and ADMIN. The ADMIN tab is selected, and the Vendor Codes sub-tab is active. A table titled 'User Defined Vendor Codes' lists various codes with columns for Code Type, Vendor Code, and Description. A modal window titled 'Add Vendor Codes' is open, showing an 'Enter Codes' field with an example 'BL1, 001234' and an 'Add' button, and an 'Upload File' section with a 'Choose File' button and a 'Template' link. A red arrow points from the 'Add Vendor Codes' button in the modal to the 'Add Vendor Codes' button in the main interface.

Code Type	Vendor Code	Description
EID	14022	Australian Securities Exchange Equities
EID	78137	NEO Exchange NEO-D for Non-NEO-listed securities
PDP	ABD	Abu Dhabi Securities Exchange Level 1
PDP	AC2	Athens Cyprus Securities L1+L2
PDP	ALP	Alpha Trading Systems - TSX Level 1
PDP	ALV	Alpha Trading Systems - TSX Venture Level 1
PDP	AMM	Amman Stock Exchange
PDP	ART	Aquis
PDP	ASE	NYSE MKT
PDP	ASX	Australian Stock Exchange
PDP	ATH	Athens Securities Level 1 (includes ATHEX Indices)
PDP	BC1	Cboe Europe Level 1
PDP	BCD	Vendor code not known to PEAR
PDP	BEC	Vendor code not known to PEAR
PDP	BFE	Vendor code not known to PEAR
PDP	BMC	BM&F Commodity & Futures Level 1
PDP	BSE	BSE India Spot Market Level 1 (India, Bhutan, Nepal)
PDP	BSI	BSE India Indices (India, Bhutan, Nepal)
PDP	BU1	Budapest Stock Exchange Level 1 Package
PDP	BUE	BOLSAS Y MERCADOS ARGENTINOS Level 1
PDP	BUH	Bucharest Stock Exchange Level 1
PDP	CAI	Egyptian Exchange L1+L2
PDP	CAS	Bourse De Casablanca
PDP	CBT	Chicago Board of Trade (Argentina, Chile, Peru and Uruguay)
PDP	CEC	ICE Futures US
PDP	CEG	Canadian Exchange Group
PDP	CEG1	Vendor code not known to PEAR
PDP	CGD	Vendor code not known to PEAR
PDP	CH1	Chi-X Canada CXC TSX LEVEL 1

**Note:** When you add the Vendor Codes and then save them, if there are Products which match the Vendor Codes that you have added, you can add them to your firm's product list. So, for example, in the above, if you had added EID - '14022' you would have had the option to map it to Product - 'Australian Securities Exchange Equities'.

## PEAR - Reports Page

The screenshot shows the PEAR Reports page with the following elements:

- Navigation:** PEAR, HOME, ANNOUNCEMENTS, VENDOR NOTIFICATIONS, **REPORTS**, WHAT IF?, ADMIN.
- Search:** Select Report: Policy Search [Run]
- Exchange:** Search [Reset]
  - Select one or more Exchanges:
    - A2X Markets
    - Abu Dhabi Securities Exchange
    - Aequitas NEO Exchange
    - Amman Stock Exchange
    - Aquis Exchange
    - Aquis Stock Exchange NEX
- Product:** Search [By All]
  - Restrict to Owned Products
  - Real Time
  - Delayed
- Results Table:**

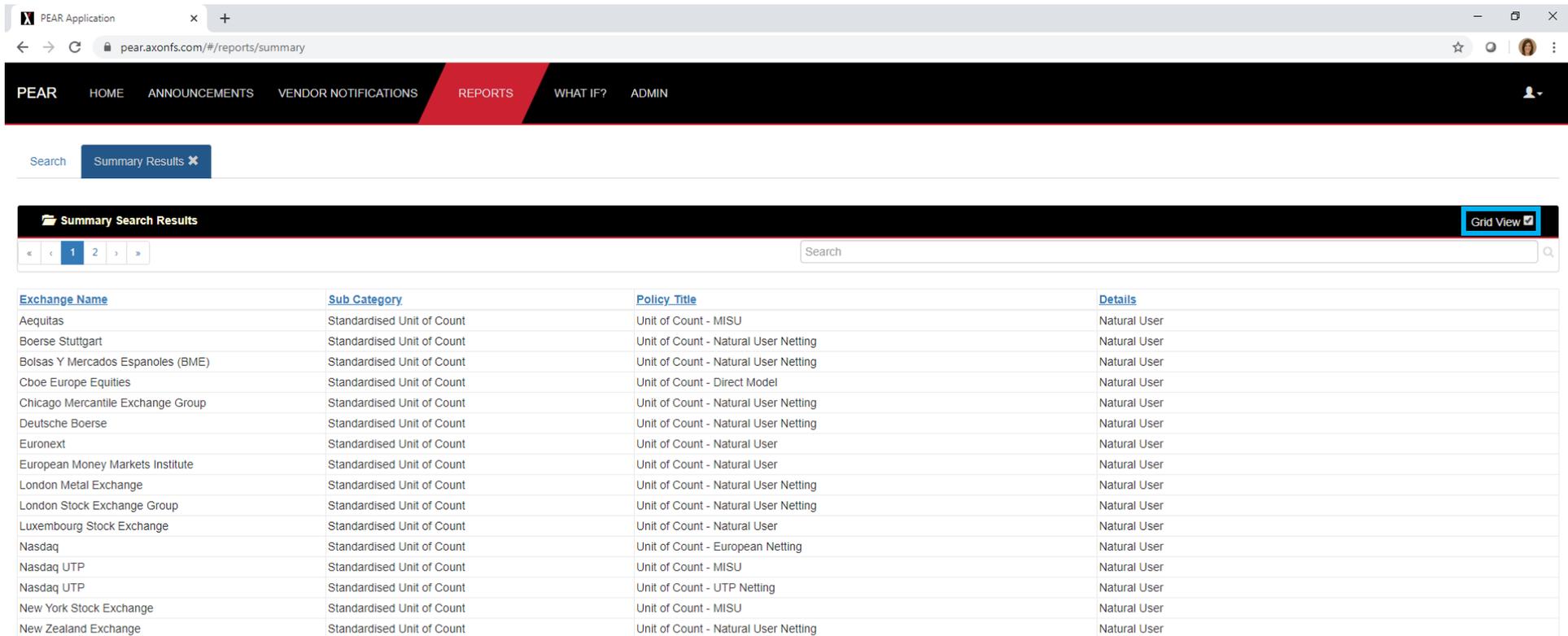
Description	Exchange Code	PDP Code	EID	Mnemonic
<input type="checkbox"/> (TX1) S&P/TSX Real Time Index Price Levels - Inside Canada			49188	TSXI
<input type="checkbox"/> A2X Market Data			75621	A2XM
<input type="checkbox"/> Administrative Information Subscriber				
<input checked="" type="checkbox"/> AFF Level 1 - A1				
<input checked="" type="checkbox"/> AFF Level 2 - A5 (5, 10, 20 & full depth)				
<input checked="" type="checkbox"/> AGREX & IDEX Level 1 - A1	ITZ		ITZ	
- Filters:**
  - Saved Criteria:** Show
  - Policy Type:**
    - Member Discount
    - Non Display
    - Private Investor
    - Quote Metering
    - Reporting
    - Service Facilitator
    - Unit of Count Display
    - Unit of Count Non Display
  - Subcategory Title:**
    - Basis of Count
    - Standardised Unit of Count
  - Subcategory:**
    - Subcategory
    - Actual Usage
    - Enterprise
    - Natural User
    - Not Specified
    - Per Instance
    - Per Instance/Application

If you wish to run a report based on your own subscriptions. Select the 'Restrict to Owned Products'. This will mean the results will be filtered to only show your owned products.

Note: You first need to administer your subscriptions using the *Admin* tab on PEAR.

- The *Reports* page allows us to essentially interrogate the system based on the meta-data we store at the policy level. There are 4 types of Reports we can run, namely Policy Search, Summary Search, Licence Search and Data Charge Search.
- For example, we can select all the exchanges and run a 'Summary Search' based upon the *Unit of Count Display* 'Policy Type' and select the *Standardised Unit of Count* for the 'Subcategory Type', and finally select the *Natural User* 'Subcategory'.
- As a result, we can view a snapshot of all exchanges within PEAR that currently offer Natural User Netting.
- The results may also be exported as a PDF or CSV.

- The report criteria can also be saved and used by all users across the firm.
- The below is a 'Grid View' of the exchange's that offer Natural User netting.

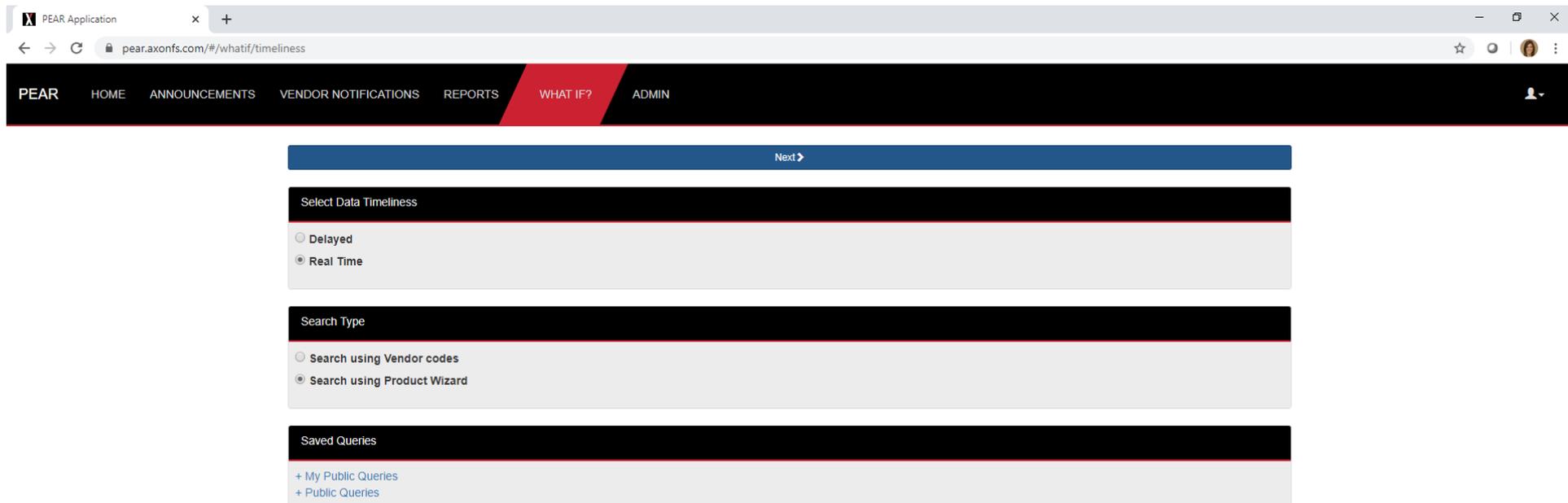


The screenshot shows a web browser window with the URL `pear.axonfs.com/#/reports/summary`. The navigation menu includes: PEAR, HOME, ANNOUNCEMENTS, VENDOR NOTIFICATIONS, REPORTS (highlighted), WHAT IF?, and ADMIN. A search bar contains the text "Summary Results". Below the search bar, a "Summary Search Results" header is visible with a "Grid View" button. A pagination control shows "1 2" and a search input field. The main content is a table with the following data:

Exchange Name	Sub Category	Policy Title	Details
Aequitas	Standardised Unit of Count	Unit of Count - MISU	Natural User
Boerse Stuttgart	Standardised Unit of Count	Unit of Count - Natural User Netting	Natural User
Bolsas Y Mercados Espanoles (BME)	Standardised Unit of Count	Unit of Count - Natural User Netting	Natural User
Cboe Europe Equities	Standardised Unit of Count	Unit of Count - Direct Model	Natural User
Chicago Mercantile Exchange Group	Standardised Unit of Count	Unit of Count - Natural User Netting	Natural User
Deutsche Boerse	Standardised Unit of Count	Unit of Count - Natural User Netting	Natural User
Euronext	Standardised Unit of Count	Unit of Count - Natural User	Natural User
European Money Markets Institute	Standardised Unit of Count	Unit of Count - Natural User	Natural User
London Metal Exchange	Standardised Unit of Count	Unit of Count - Natural User Netting	Natural User
London Stock Exchange Group	Standardised Unit of Count	Unit of Count - Natural User Netting	Natural User
Luxembourg Stock Exchange	Standardised Unit of Count	Unit of Count - Natural User	Natural User
Nasdaq	Standardised Unit of Count	Unit of Count - European Netting	Natural User
Nasdaq UTP	Standardised Unit of Count	Unit of Count - MISU	Natural User
Nasdaq UTP	Standardised Unit of Count	Unit of Count - UTP Netting	Natural User
New York Stock Exchange	Standardised Unit of Count	Unit of Count - MISU	Natural User
New Zealand Exchange	Standardised Unit of Count	Unit of Count - Natural User Netting	Natural User

## PEAR - What If?

- 'What If' is our cost analysis tool, allowing users to determine how much specific datasets and markets would cost to implement.
- Users have the ability to query different types of data usage i.e. Display, Non-Display and Data Derivation.
- The results will output the data charges (the terminal fees) and the licences. The system will also calculate the monthly/yearly cost taking into consideration whether the data charge/licence fee is included in another chosen product/licence (within a product/licence hierarchy (parent/child)).



The screenshot shows a web browser window with the URL `pear.axonfs.com/#/whatif/timeliness`. The navigation bar includes links for PEAR, HOME, ANNOUNCEMENTS, VENDOR NOTIFICATIONS, REPORTS, WHAT IF? (highlighted), and ADMIN. The main content area features a blue 'Next' button at the top. Below it are three sections: 'Select Data Timeliness' with radio buttons for 'Delayed' and 'Real Time' (selected); 'Search Type' with radio buttons for 'Search using Vendor codes' and 'Search using Product Wizard' (selected); and 'Saved Queries' with links for '+ My Public Queries' and '+ Public Queries'.

## What If Example

Click the 'What If' tab from the PEAR menu. In this example, we have selected the following for our query:

1. **Data Timeliness:** Real Time | **Search Type:** Search using Product Wizard
2. **Exchange:** London Stock Exchange Group | **Data Level Filter:** Level 1 and Level 2 – Full Depth
3. **Product:** International Level 2 and International Level 1
4. **Usage of Data:** Display
5. **Display Type:** External | **User Types:** Professional | **London Stock Exchange Group Options:** Non-Member | **Number of Users:** 20 | **Calculate cost in:** GBP

Below are the results from the What If query. In this example, you can see the hierarchy within PEAR has calculated that *International Level 2* data charges only apply, as the *International Level 1* is included in Level 2.

6. Additionally, the hierarchy structure also applies to licences. In the example below, the licences with an  icon beside them identify that those licences are included in the International Level 2 Redistribution Licence. If you click on the icon it will display a pop-up explaining this.

Note: Please also review the section [Licence Picker What If Example](#) for other examples.

Can change to show calculations in a different currency.

Can view either 'Per Month' or 'Per Year' pricing.

Ability to view future pricing, if available.

Can change number of users to see difference in cost calculations.

**Data Charge Results**

Exchange	Product	Timeliness	Price	Monthly Cost (GBP)	Fee Type
London Stock Exchange Group	International Level 2	Real Time	GBP 93.62 per month	GBP 1,872.40	Non-Member
London Stock Exchange Group	International Level 1	Real Time	GBP 0 per month	GBP 0.00	Non-Member

**Licence Fee Results**

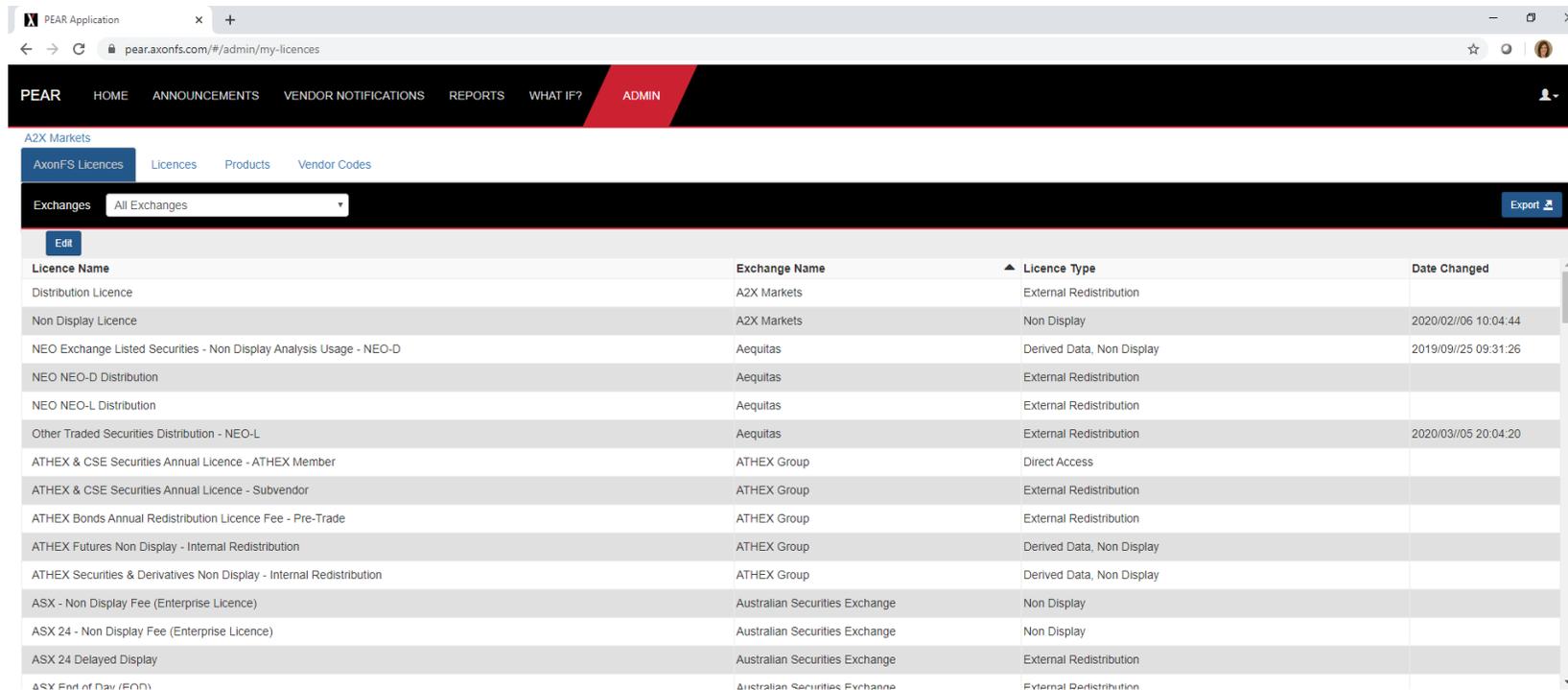
Real Time | Delayed | Next Day

Exchange	Licence Name	Price	Monthly Cost (GBP)
London Stock Exchange Group	International Level 2 Redistribution Licence	GBP 27,009.00 per year	GBP 2,250.75
London Stock Exchange Group	International Level 2 ATP Raw Data	GBP 35,176.00 per year	GBP 0.00
London Stock Exchange Group	International Level 1 Redistribution Licence	GBP 14,714.00 per year	GBP 0.00
London Stock Exchange Group	Pager & GSM Phone Redistribution Licence	GBP 4,705.00 per year	GBP 0.00
London Stock Exchange Group	PDA over GPRS networks Redistribution Licence	GBP 4,705.00 per year	GBP 0.00
London Stock Exchange Group	International Level 1 ATP Raw Data	GBP 14,067.00 per year	GBP 0.00
London Stock Exchange Group	Per price request Level 1	GBP 4,705.00 per year	GBP 0.00

**Exchange Rates**

## PEAR - Admin

- The product/licence picker feature within PEAR makes life easier for users by applying a simple colour-coding process to highlight the licences a firm holds and the products they use.
- A green tick indicates products used and licences held by the firm, and an orange tick indicates products and licences which are associated/included with the licences held and products used.
- The 'What If' functionality enables firms to generate a cost-calculation based on products and licences that are specific to them, by excluding costs for licences held by the firm. This provides firms with a much more accurate cost projection of their proposed data-usage.
- All licences and products marked by an administrator via the new Admin tab are visible to all users throughout your firm level, making it easier for all internal users to understand the firm's current licensing and product subscriptions.
- Please note: You must register to become an administrator of PEAR to enable this functionality by contacting our Helpdesk at [support@axonfs.com](mailto:support@axonfs.com).

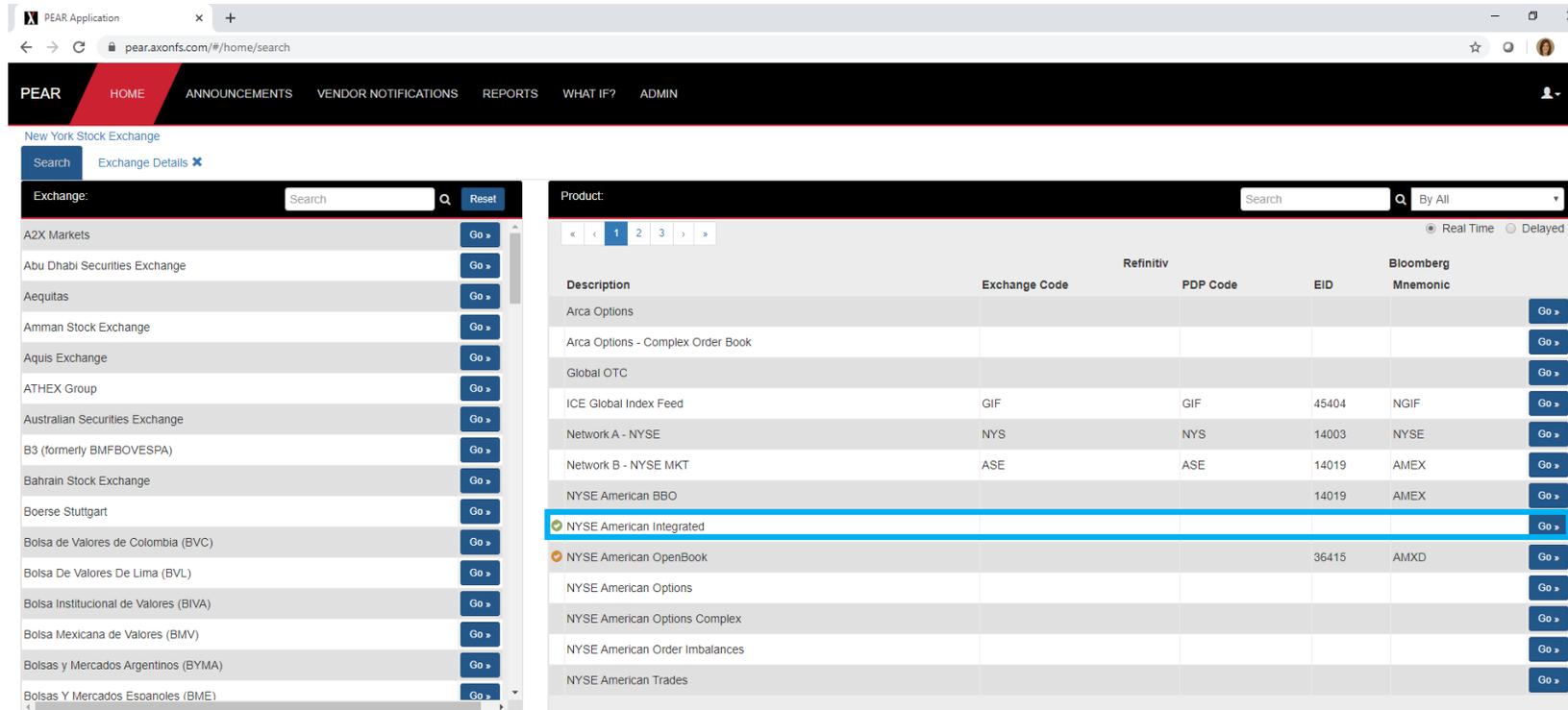


The screenshot shows the PEAR Admin interface. The top navigation bar includes 'PEAR', 'HOME', 'ANNOUNCEMENTS', 'VENDOR NOTIFICATIONS', 'REPORTS', 'WHAT IF?', and 'ADMIN'. Below the navigation bar, there are tabs for 'AxonFS Licences', 'Licences', 'Products', and 'Vendor Codes'. The 'AxonFS Licences' tab is active, and a dropdown menu shows 'All Exchanges'. An 'Export' button is visible in the top right corner of the table area. The table below lists various licences with columns for Licence Name, Exchange Name, Licence Type, and Date Changed.

Licence Name	Exchange Name	Licence Type	Date Changed
Distribution Licence	A2X Markets	External Redistribution	
Non Display Licence	A2X Markets	Non Display	2020/02/06 10:04:44
NEO Exchange Listed Securities - Non Display Analysis Usage - NEO-D	Aequitas	Derived Data, Non Display	2019/09/25 09:31:26
NEO NEO-D Distribution	Aequitas	External Redistribution	
NEO NEO-L Distribution	Aequitas	External Redistribution	
Other Traded Securities Distribution - NEO-L	Aequitas	External Redistribution	2020/03/05 20:04:20
ATHEX & CSE Securities Annual Licence - ATHEX Member	ATHEX Group	Direct Access	
ATHEX & CSE Securities Annual Licence - Subvendor	ATHEX Group	External Redistribution	
ATHEX Bonds Annual Redistribution Licence Fee - Pre-Trade	ATHEX Group	External Redistribution	
ATHEX Futures Non Display - Internal Redistribution	ATHEX Group	Derived Data, Non Display	
ATHEX Securities & Derivatives Non Display - Internal Redistribution	ATHEX Group	Derived Data, Non Display	
ASX - Non Display Fee (Enterprise Licence)	Australian Securities Exchange	Non Display	
ASX 24 - Non Display Fee (Enterprise Licence)	Australian Securities Exchange	Non Display	
ASX 24 Delayed Display	Australian Securities Exchange	External Redistribution	
ASX End of Day (EOD)	Australian Securities Exchange	External Redistribution	

## Admin - Licence Picker Example

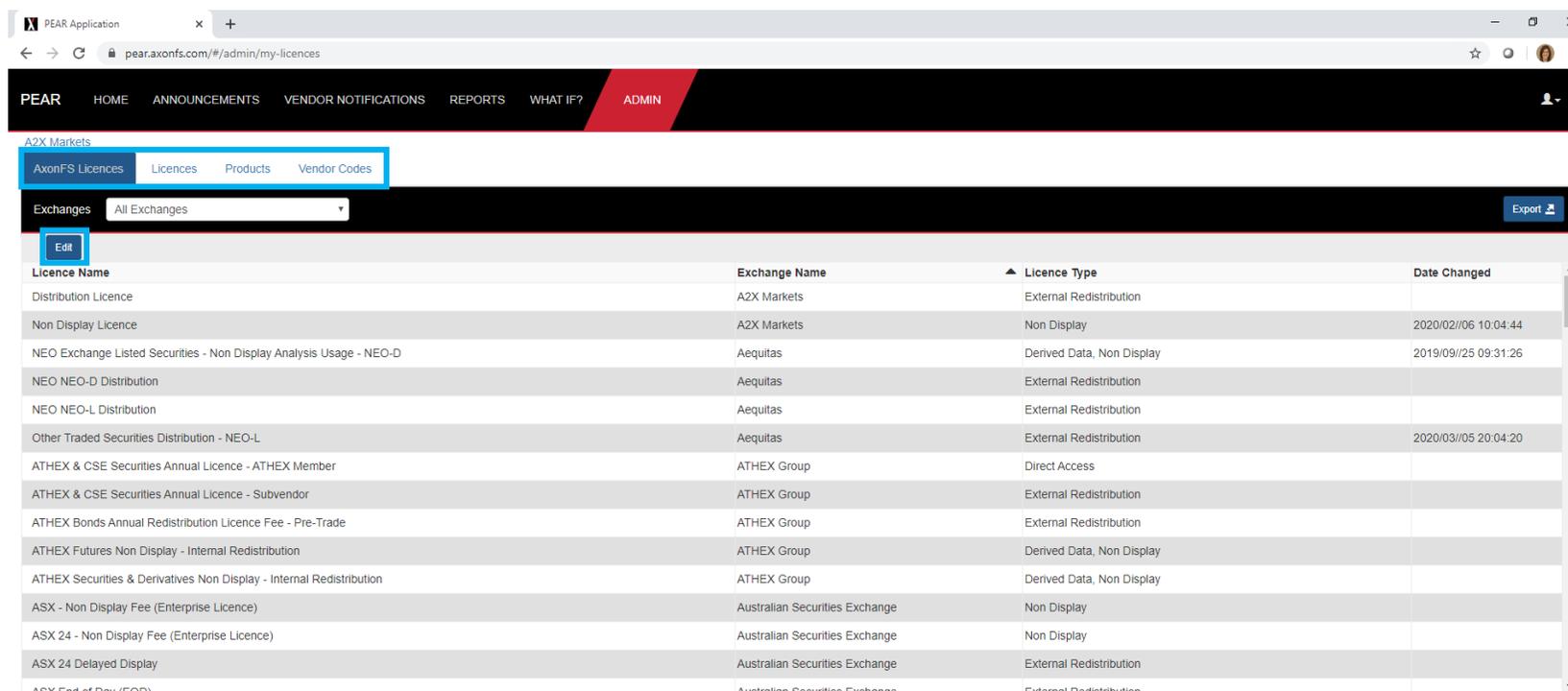
In the example below, we are currently on the home page of PEAR and have selected the *London Stock Exchange Group*. The *UK Level 2* product is a product that we currently subscribe to as identified by the  icon. The products which have the  icon associated with them are those which are included within the subscribed product. So, in this case, *NYSE American Integrated* includes *NYSE American OpenBook*.



The screenshot shows the PEAR application interface. The top navigation bar includes 'PEAR', 'HOME', 'ANNOUNCEMENTS', 'VENDOR NOTIFICATIONS', 'REPORTS', 'WHAT IF?', and 'ADMIN'. The main content area is titled 'New York Stock Exchange' and features a search bar and a list of exchanges. The 'Exchange Details' section is active, showing a list of exchanges with 'Go >' buttons. The 'Product' section is also active, showing a list of products with columns for Description, Exchange Code, Refinitiv PDP Code, EID, and Bloomberg Mnemonic. The 'NYSE American Integrated' product is highlighted in blue, and the 'NYSE American OpenBook' product is highlighted in orange, indicating it is included within the subscribed product.

Description	Exchange Code	Refinitiv PDP Code	EID	Bloomberg Mnemonic	
Arca Options					<a href="#">Go &gt;</a>
Arca Options - Complex Order Book					<a href="#">Go &gt;</a>
Global OTC					<a href="#">Go &gt;</a>
ICE Global Index Feed	GIF	GIF	45404	NGIF	<a href="#">Go &gt;</a>
Network A - NYSE	NYS	NYS	14003	NYSE	<a href="#">Go &gt;</a>
Network B - NYSE MKT	ASE	ASE	14019	AMEX	<a href="#">Go &gt;</a>
NYSE American BBO			14019	AMEX	<a href="#">Go &gt;</a>
 NYSE American Integrated					<a href="#">Go &gt;</a>
 NYSE American OpenBook			36415	AMXD	<a href="#">Go &gt;</a>
NYSE American Options					<a href="#">Go &gt;</a>
NYSE American Options Complex					<a href="#">Go &gt;</a>
NYSE American Order Imbalances					<a href="#">Go &gt;</a>
NYSE American Trades					<a href="#">Go &gt;</a>

If you have administrative rights, you will have the ability to administer both the products used and licences held by your firm. Click the 'Admin' tab from the PEAR menu - you will be presented with a similar screen to the below:



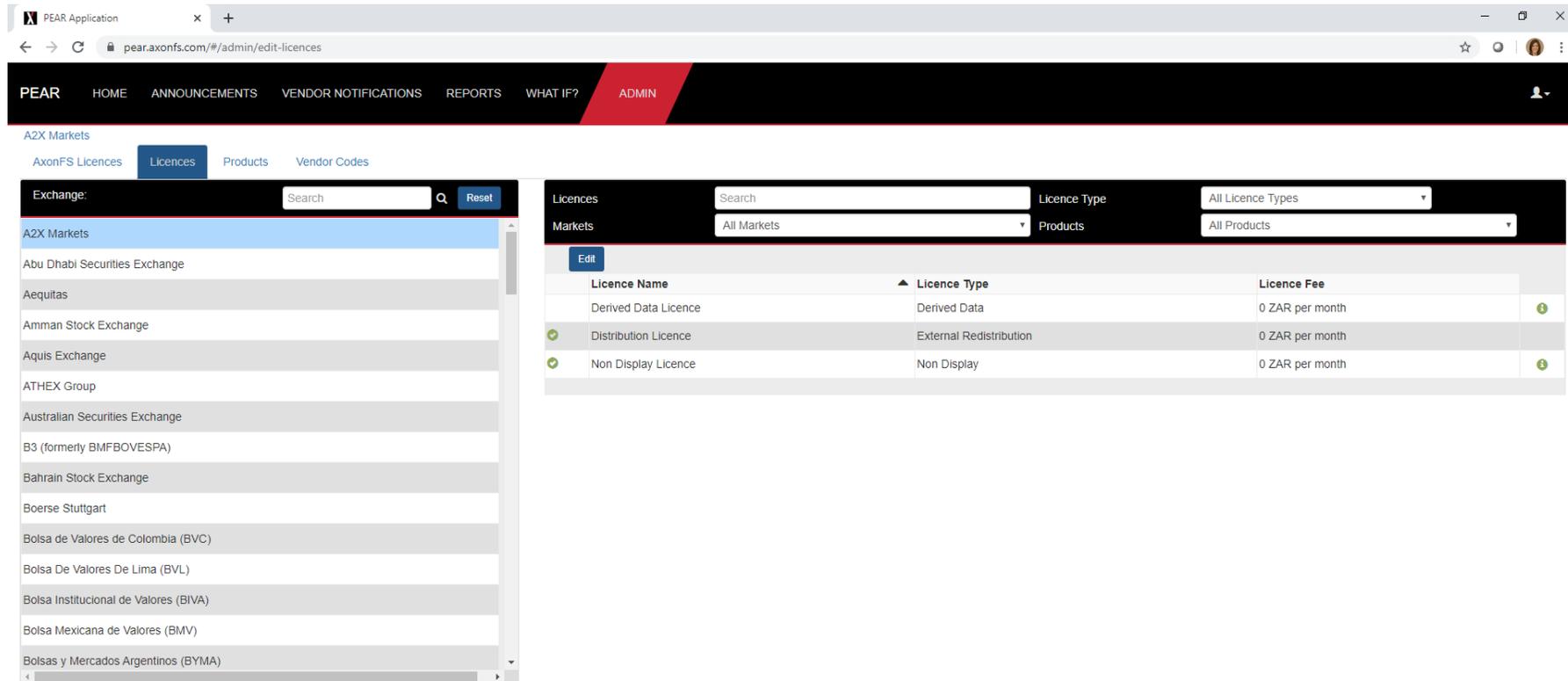
The screenshot shows the PEAR Application Admin interface. The top navigation bar includes 'PEAR', 'HOME', 'ANNOUNCEMENTS', 'VENDOR NOTIFICATIONS', 'REPORTS', 'WHAT IF?', and 'ADMIN'. Below this, there are tabs for 'AxonFS Licences', 'Licences', 'Products', and 'Vendor Codes'. The 'Licences' tab is active, and an 'Edit' button is highlighted. The main content area shows a table of licences with columns for 'Licence Name', 'Exchange Name', 'Licence Type', and 'Date Changed'. An 'Export' button is visible in the top right corner of the table area.

Licence Name	Exchange Name	Licence Type	Date Changed
Distribution Licence	A2X Markets	External Redistribution	
Non Display Licence	A2X Markets	Non Display	2020/02/06 10:04:44
NEO Exchange Listed Securities - Non Display Analysis Usage - NEO-D	Aequitas	Derived Data, Non Display	2019/09/25 09:31:26
NEO NEO-D Distribution	Aequitas	External Redistribution	
NEO NEO-L Distribution	Aequitas	External Redistribution	
Other Traded Securities Distribution - NEO-L	Aequitas	External Redistribution	2020/03/05 20:04:20
ATHEX & CSE Securities Annual Licence - ATHEX Member	ATHEX Group	Direct Access	
ATHEX & CSE Securities Annual Licence - Subvendor	ATHEX Group	External Redistribution	
ATHEX Bonds Annual Redistribution Licence Fee - Pre-Trade	ATHEX Group	External Redistribution	
ATHEX Futures Non Display - Internal Redistribution	ATHEX Group	Derived Data, Non Display	
ATHEX Securities & Derivatives Non Display - Internal Redistribution	ATHEX Group	Derived Data, Non Display	
ASX - Non Display Fee (Enterprise Licence)	Australian Securities Exchange	Non Display	
ASX 24 - Non Display Fee (Enterprise Licence)	Australian Securities Exchange	Non Display	
ASX 24 Delayed Display	Australian Securities Exchange	External Redistribution	
ASX End of Day (EOD)	Australian Securities Exchange	External Redistribution	

You will see 4 tabs within the Admin area of PEAR – Company (name of your firm) Licences, Licences, Products and Vendor Codes.

In the initial view (as above), you will be presented with a list of licences your firm currently holds. It is possible from this view to remove any licences you hold by selecting 'Edit' and unticking the licence(s) you want to remove. Changes will not be reflected until you select 'Save' once in edit mode.

Next, if you click the 'Licences' tab, you will see a screen similar to the below (please note, that the exchange at the top of the Exchange list will be selected by default).



The screenshot shows the PEAR Application Admin interface. The top navigation bar includes 'PEAR', 'HOME', 'ANNOUNCEMENTS', 'VENDOR NOTIFICATIONS', 'REPORTS', 'WHAT IF?', and 'ADMIN'. Below this, there are tabs for 'AxonFS Licences', 'Licences', 'Products', and 'Vendor Codes'. The 'Licences' tab is active.

On the left side, there is a search bar for 'Exchange:' with a search icon and a 'Reset' button. Below the search bar is a list of exchange names, with 'A2X Markets' selected. The list includes:

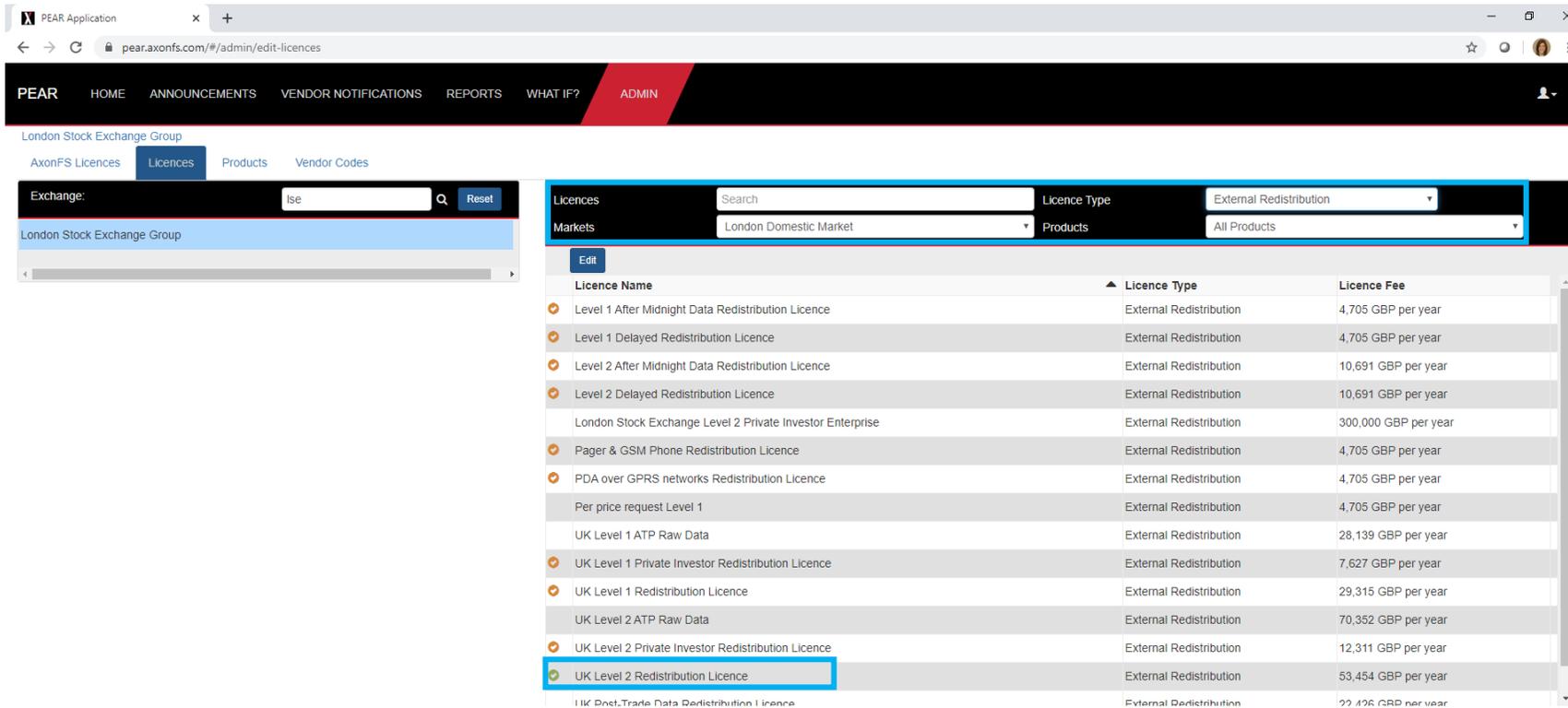
- A2X Markets
- Abu Dhabi Securities Exchange
- Aequitas
- Amman Stock Exchange
- Aquis Exchange
- ATHEX Group
- Australian Securities Exchange
- B3 (formerly BMFBOVESPA)
- Bahrain Stock Exchange
- Boerse Stuttgart
- Bolsa de Valores de Colombia (BVC)
- Bolsa De Valores De Lima (BVL)
- Bolsa Institucional de Valores (BIVA)
- Bolsa Mexicana de Valores (BMV)
- Bolsas y Mercados Argentinos (BYMA)

On the right side, there is a search bar for 'Licences' and a dropdown for 'Licence Type' set to 'All Licence Types'. Below this is a table of licence types:

Licence Name	Licence Type	Licence Fee	
Derived Data Licence	Derived Data	0 ZAR per month	ⓘ
Distribution Licence	External Redistribution	0 ZAR per month	ⓘ
Non Display Licence	Non Display	0 ZAR per month	ⓘ

In our example, we will select the *London Stock Exchange Group*. Then we will select the *London Domestic Market* and *External Redistribution* ‘Licence Type’. In the screen below you can see that we currently hold the *UK Level 2 Redistribution Licence* for External Distribution. Again, using the orange tick icon identifiers we can see that included in our *UK Level 2 Redistribution Licence* is the external distribution licence for *UK Level 1*, as well as others.

From this view, you can add/remove licences by selecting ‘Edit’ and ticking/unticking the licence you want to hold/remove. Changes will not be reflected until you click ‘Save’ once in edit mode. Moreover, there is also the option to filter licences by either using the search option below by typing in the licence name or by selecting to filter licences by either the Licence Type and/or at the Market and/or Product level.



The screenshot shows the PEAR Application interface. The browser address bar is `pear.axonfs.com/#/admin/edit-licences`. The navigation menu includes: PEAR, HOME, ANNOUNCEMENTS, VENDOR NOTIFICATIONS, REPORTS, WHAT IF?, ADMIN. The breadcrumb trail is: London Stock Exchange Group > AxonFS Licences > Licences > Products > Vendor Codes.

The main content area has the following filters:

- Exchange:
- Licences:
- Licence Type:
- Markets:
- Products:

An  button is visible above the table.

Licence Name	Licence Type	Licence Fee
<input checked="" type="checkbox"/> Level 1 After Midnight Data Redistribution Licence	External Redistribution	4,705 GBP per year
<input checked="" type="checkbox"/> Level 1 Delayed Redistribution Licence	External Redistribution	4,705 GBP per year
<input checked="" type="checkbox"/> Level 2 After Midnight Data Redistribution Licence	External Redistribution	10,691 GBP per year
<input checked="" type="checkbox"/> Level 2 Delayed Redistribution Licence	External Redistribution	10,691 GBP per year
London Stock Exchange Level 2 Private Investor Enterprise	External Redistribution	300,000 GBP per year
<input checked="" type="checkbox"/> Pager & GSM Phone Redistribution Licence	External Redistribution	4,705 GBP per year
<input checked="" type="checkbox"/> PDA over GPRS networks Redistribution Licence	External Redistribution	4,705 GBP per year
Per price request Level 1	External Redistribution	4,705 GBP per year
UK Level 1 ATP Raw Data	External Redistribution	28,139 GBP per year
<input checked="" type="checkbox"/> UK Level 1 Private Investor Redistribution Licence	External Redistribution	7,627 GBP per year
<input checked="" type="checkbox"/> UK Level 1 Redistribution Licence	External Redistribution	29,315 GBP per year
UK Level 2 ATP Raw Data	External Redistribution	70,352 GBP per year
<input checked="" type="checkbox"/> UK Level 2 Private Investor Redistribution Licence	External Redistribution	12,311 GBP per year
<input checked="" type="checkbox"/> UK Level 2 Redistribution Licence	External Redistribution	53,454 GBP per year
UK Post-Trade Data Redistribution Licence	External Redistribution	22,126 GBP per year

Next, we will view the 'Products' tab, click on 'Products' - you will see a screen similar to the below. Again, like the home page of PEAR and the licences view, we can see that we currently hold the following product as identified by the green tick icon: *UK Level 2* and included in our subscription are *UK Level 1* and *UK Post Trade data* products as denoted by the orange tick icon. Please note: *TRADEcho – LSE* which is included with UK Level 2 is not displayed in this view as we have filtered by the *London Domestic Market*.

The screenshot shows the 'Products' tab in the PEAR application. The left sidebar lists various exchanges, and the main area displays a table of products. The table is filtered by 'London Domestic Market'. The products listed are:

Description	Exchange Code	Thomson Reuters PDP Code	EID	Bloomberg Mnemonic
UK Level 1	LM1	LSE1D	14014	UK1
UK Level 1	LS1	LSE1D	14014	UK1
UK Level 2	LM2	LSE2D	14076	UK2
UK Level 2	LS2	LSE2D	14076	UK2
UK Post Trade data				

Similarly, to the licence editor, here you can add/remove products by selecting 'Edit' and ticking/unticking the product you want to hold/remove. Changes will not be reflected until you click 'Save' once in edit mode. Again, there is also the option to filter products, by either using the search option below by typing in either the product name, Refinitiv Exchange code or PDP code, Bloomberg EID or Mnemonic, MIC or Operating MIC, or to select a Market.

## Admin - Licence Picker What If Example

One of the features of the licence picker is the ability for firms to generate a cost-calculation based on products and licences that are specific to them, by excluding costs for licences held by the firm. Click the 'What If?' tab from the PEAR menu. In this example, we have selected the following for our query inputs (please note, in our example, we currently subscribe to the *UK Level 2* product:

1. **Data Timeliness:** Real Time | **Search Type:** Search using Product Wizard
2. **Exchange:** London Stock Exchange Group | **Data Level Filter:** Level 1 and Level 2 – Full Depth
3. **Product:** UK Level 2 and UK Level 1
4. **Usage of Data:** Display
5. **Display Type:** External | **User Types:** Professional | **London Stock Exchange Group Options:** Non-Member | **Number of Users:** 20 | **Calculate cost in:** GBP

Below are the results from the 'What If' query. In this example, you can see that the calculations exclude the licences that we currently hold. Additionally, the hierarchy within PEAR has calculated that *UK Level 2* data charges only apply, as *UK Level 1* is included in Level 2.

PEAR Application | https://pear.axonfs.com/#/whatif/results

PEAR HOME ANNOUNCEMENTS VENDOR NOTIFICATIONS REPORTS WHAT IF? ADMIN

Back Save Query Export Restart

Current Price Total: GBP 3,367.00 GBP Per Month Users: 20

### Data Charge Results

Exchange	Product	Timeliness	Price	Monthly Cost (GBP)	Fee Type
London Stock Exchange Group	UK Level 2	Real Time	GBP 168.35 per month	GBP 3,367.00	Non-Member
London Stock Exchange Group	UK Level 1	Real Time	GBP 0 per month	GBP 0.00	Non-Member

### Licence Fee Results

Exchange	Licence Name	Price	Monthly Cost (GBP)
London Stock Exchange Group	UK Level 2 Redistribution Licence	GBP 52,150.00 per year	GBP 0.00
London Stock Exchange Group	UK Level 1 Redistribution Licence	GBP 28,600.00 per year	GBP 0.00
London Stock Exchange Group	UK Level 2 ATP Raw Data	GBP 68,636.00 per year	GBP 0.00
London Stock Exchange Group	Pager & GSM Phone Redistribution Licence	GBP 4,590.00 per year	GBP 0.00
London Stock Exchange Group	PDA over GPRS networks Redistribution Licence	GBP 4,590.00 per year	GBP 0.00
London Stock Exchange Group	UK Level 1 ATP Raw Data	GBP 27,453.00 per year	GBP 0.00
London Stock Exchange Group	Per price request Level 1	GBP 4,590.00 per year	GBP 0.00

Exchange Rates

It is also possible to select the licence you currently hold to be included in the total cost calculation, as below:

PEAR Application | https://pear.axonfs.com/#/whatif/results

PEAR HOME ANNOUNCEMENTS VENDOR NOTIFICATIONS REPORTS WHAT IF? ADMIN

Back Save Query Export Restart

Current Price: Total: GBP 7,712.83 GBP Per Month Users: 20

#### Data Charge Results

Exchange	Product	Timeliness	Price	Monthly Cost (GBP)	Fee Type	
<input checked="" type="checkbox"/>	London Stock Exchange Group	UK Level 2	Real Time	GBP 168.35 per month	GBP 3,367.00	Non-Member
<input type="checkbox"/>	London Stock Exchange Group	UK Level 1	Real Time	GBP 0 per month	GBP 0.00	Non-Member

#### Licence Fee Results

Exchange	Licence Name	Price	Monthly Cost (GBP)	
<input checked="" type="checkbox"/>	London Stock Exchange Group	UK Level 2 Redistribution Licence	GBP 52,150.00 per year	GBP 4,345.83
<input type="checkbox"/>	London Stock Exchange Group	UK Level 1 Redistribution Licence	GBP 28,600.00 per year	GBP 0.00
<input type="checkbox"/>	London Stock Exchange Group	UK Level 2 ATP Raw Data	GBP 68,636.00 per year	GBP 0.00
<input type="checkbox"/>	London Stock Exchange Group	Pager & GSM Phone Redistribution Licence	GBP 4,590.00 per year	GBP 0.00
<input type="checkbox"/>	London Stock Exchange Group	PDA over GPRS networks Redistribution Licence	GBP 4,590.00 per year	GBP 0.00
<input type="checkbox"/>	London Stock Exchange Group	UK Level 1 ATP Raw Data	GBP 27,453.00 per year	GBP 0.00
<input type="checkbox"/>	London Stock Exchange Group	Per price request Level 1	GBP 4,590.00 per year	GBP 0.00

Exchange Rates

Again, as we have selected the *UK Level 2 Redistribution Licence*, the *UK Level 1 Redistribution Licence* will remain excluded from the total cost calculations as it is included in the Level 2 licence.

