

Dear FIA Candidate

Welcome to the course notes for the **Industry Issues and Trends Section** of the FISD FIA Syllabus.

This module is designed to prepare you to take the FISD FIA exam.

By using a combination of the videos and course notes - and working through the quiz - you should be ready and feel confident to pass the exam. (One without the other will not work effectively).

You have 60 days to view the videos as many times as you wish and you can also complete the quiz as many times as you wish during this period too. It is however advised that you download and save this pdf so that you can refer back to it should you need to after the 60 days have expired.

We have structured the course notes to match the order of our videos and have referred them back to the FISD syllabus. There are however many occasions when the sequencing of the videos is different to the order of the FISD syllabus - but it is all covered.

The course is divided into four main sections:

Section 1: The Markets

Section 2: The Data

Section 3: The Technology

Section 4: The Industry (**covered in this module**)

To book your FISD FIA exam, please visit <http://sia.net/fisdpc/test.asp> and click where it says "Register to take the FIA exam". When you pay for the exam please use discount code **lmod** to receive a **\$150 discount on the exam fee**. If you have any problems please contact the FISD co-ordinator David Anderson at email: david.anderson@atradia.com

Good luck!
Best wishes

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PS: We welcome your feedback and comments at hello@financemodules.com

SECTION 4: INDUSTRY ISSUES AND TRENDS

FISD general overview for the section

This part of the syllabus will be the most fluid and hence will be updated on a regular basis. You will need to demonstrate that you have a robust grasp of some of the key issues and associated trends that are influencing the development and evolution of the market and reference data industry.

We recommend that you read the news and stay informed of current business affairs.

**Finance Modules video:
Industry Issues & Trends – Module 1
Key Issues & Trends – Part 1
Time: 1 min 20 sec**

MARKET REGULATION AND MARKET STRUCTURE (FISD Syllabus 4.1)

FISD syllabus requires you to:

Demonstrate a broad understanding of how market structures are changing and why. You should have a robust, high level appreciation of key government regulations and their impact on the market and reference data industry.

FINANCE MODULES COURSE NOTES:

Market regulation and market structure

The key industry issues are primarily considered to be regulatory issues in the wake of September 2008 when the investment bank Lehman Brothers filed for bankruptcy (such as the Dodd Frank Act in the US).

- Focused blame on OTC and derivatives markets – particularly with exposures to swap instruments
- Outcome is the creation of the OFR (Office of Financial Research) and the proposed LEI (Legal Entity Identifier)

Commercial policies of suppliers which include:

- Licensing use of derived data – suppliers of data are generally averse to ceding ownership of data, even if derivative works are being produced from the data and the actual underlying content is not directly used as a result
- Licensing and ownership of data – suppliers of data primarily license its use, but do not transfer ownership
- Commercial policies around the “Unit of Count” – are a number of licensing methodologies used for setting commercial terms and rates
- Commercial policies around the evolution of individual licensed users to fewer machines as users are representative of the challenges faced when technological or user dynamics change over time and disrupt traditional pricing models to compensate suppliers of data.

**Finance Modules video:
Industry Issues & Trends – Module 2
Key Issue & Trends – Part 2
Time: 2 min 54 sec**

FINANCE MODULES COURSE NOTES:

Industry issues and trends:

Pending LEI (legal entity identifier)

- Implementing the global standard to identify a legally distinct entity engaging in financial transactions
- Global acceptance of, and application to, all securities and obligors
- The operational challenge of retooling systems to incorporate a new identifier schema

HFT Controversy

Do high frequency traders trade with an unfair advantage over general participants?

- Opinion #1: No, since HFT capitalises on arbitrage which eliminates mispricing and allows slower participants to trade at efficient (corrected) prices
- Opinion #2: HFT may be unfair to all slower participants if it is creating distortions in price due to the activity of HFT itself

Changing market structures

- Impact of LEI on securities identifiers
- Regulation on HFT and regulatory discussions that may lead to limitations on the time a trade can be reversed, which could all but end the advantages of high frequency trading
- Dodd Frank impact on derivatives – primarily around the treatment of swaps instruments

Key regulations

- Dodd Frank – a US legislative act in response to the financial crisis of 2008. It is designed to prevent a similar event in the future, along with multiple regulatory changes to the financial services industry (including the creation of the Office of Financial Research) and other new regulations for the derivatives markets pertaining particularly to the clearing and settlement of swap instruments
- ECB (European Central Bank) – “Data Utility” – where the ECB has promoted a common (public domain) data set of the underlying terms and conditions (e.g. reference data) about securities to be made available to all participants
- FTT (Financial Transaction Tax) – the expectation in the EU that all trades will be subject to a trading tax

**Finance Modules video:
Industry Issues & Trends – Module 3
Regulation-US Markets
Time: 3 min 32 sec**

THE US MARKETS (FISD Syllabus 4.1.1)

FISD syllabus requires you to:

Have a broad understanding of how the US Securities and Exchange Commission regulates the US equities markets with special attention to how this impacts market data. You should understand the key elements of the recent SEC regulation, NMS (National Market System), but with particular focus on how this affects market data. You should also understand how the US markets have changed in recent years, including:

- *The role of ECNs and ATs over recent years*
- *The spate of mergers and acquisitions amongst the major exchanges*
- *The role of “dark pools”*
- *The general concept of “best execution”*
- *The role of the US Consolidated Tape Association (CTA)*
- *The nature and impact of the “flash crash”*
- *The Dodd Frank Act - including the Office of Financial Research*

FINANCE MODULES COURSE NOTES

The US markets:

Mergers and acquisitions amongst major exchanges

Exchanges across the US have seen consolidation through mergers and acquisitions (M&A), and are increasingly becoming publicly traded. Examples include companies such as NASDAQ and the OMX group of exchanges, as well as the New York Stock Exchange (which went public then acquired ARCA, AMEX and merged with EuroNext). Much of the trend toward exchanges becoming public and the increased mergers and acquisitions activity has been seen as a way of improving the competitive advantage of exchanges in global markets. Two key drivers of the consolidation trend are the increased trading volumes and lower operational costs that come with increased scale.

The role of ECNs and ATs

In recent years, alternative trading venues such as ECNs (electronic communication networks) and ATs (alternative trading systems) have grown as alternatives to traditional exchanges, in part by offering unique services as crossing networks with features such as dark pools and anonymous trading to improve best execution. (To hear more about the roles of ECNs and ATs, watch the video that accompanies this section) Examples include: ARCA, Island, Instinet, Brut and BATS. Most ECNs and ATs have been acquired by exchanges (ARCA by NYSE and Island, Instinet and Brut by NASDAQ). (For an overview, see the exchange appendix)

Dark pools

Dark pools are crossing networks and practices that provide anonymity to participants with the expectation of crossing trades with less market impact and improved trade execution. (More information about dark pools is covered in the “Markets” section)

Best execution

Best execution is a challenge for large order size buys or sells and has the potential to create adverse market impact which has led to increased use and interest in crossing trades anonymously to avoid market impact and potential front running of trades, commonly executed by the use of “dark pools”.

- In financial markets, 'market impact' is the effect that a market participant has when it buys or sells an asset. It is the extent to which the buying or selling moves the price against the buyer or seller, i.e. upward when buying and downward when selling. It is closely related to market liquidity; in many cases "liquidity" and "market impact" are synonymous.
- Front running is the illegal practice of a stockbroker executing orders on a security for its own account while taking advantage of advance knowledge of pending orders from its customers. When orders previously submitted by its customers will predictably affect the price of the security, purchasing first for its own account gives the broker an unfair advantage, since it can expect to close out its position at a profit based on the new price level. The front running broker either buys for his own account (before filling customer buy orders that drive up the price), or sells (where the broker sells for its own account, before filling customer sell orders that drive down the price).

(For more information on the concept of best execution, see section 1.4)

Reg NMS

Reg NMS (Regulation National Market System) is a regulation described by the SEC (Securities Exchange Commission) as "a series of initiatives designed to modernise and strengthen the national market system for equity securities." It was established in 2007 and seeks to foster both "competition among individual markets and competition among individual orders" in order to promote efficient and fair price formation across securities markets.

In 1972, before the SEC began its pursuit of a national market system, the market for securities was quite fragmented.

The same stock sometimes traded at different prices at different trading venues and the NYSE ticker tape did not report transactions of NYSE-listed stocks that took place on regional exchanges or on other over-the-counter securities markets. This fragmentation made it difficult for traders to comparison shop. In 1975, Congress authorised the SEC to facilitate a national market system.

Reg NMS (or Regulation National Market System) mandates exchanges to provide the National Best Bid and Offer price.

- The organisations that disseminate quotes to distribute the “NBBO” are the CTA and the UTP
 - CTA (consolidated tape association) is administered by the NYSE on NYSE and AMEX listings and oversees the dissemination of real-time trade and quote information
 - UTP (uniform tape protocol) is administered by NASDAQ on NASDAQ and regional listings

Other key trends

- The Flash Crash of 6 May 2010 saw the Dow drop 998 points (9%) based on automated trading rules that triggered a cascading sell-off in the market.
- The Dodd Frank Act – resulted in the establishment of the OFR (Office of Financial Research) to provide oversight on stresses to the financial markets (“systemic risk”) as a mechanism to try to prevent a repeat of the financial crisis of September 2008.

**Finance Modules video:
Industry Issues & Trends – Module 4
Regulation – EU
Time: 2 min 13 sec**

4.1.2 THE EUROPEAN UNION AND MIFID (FISD Syllabus 4.1.2)

FISD syllabus requires you to:

Understand the recent changes in EU regulation such as MiFid and KYC and the broad implication that MiFid has for market data. You should also understand the changing face of the European equities markets, including:

- *The impact on national exchanges*
- *The role of multilateral trading facilities*
- *The impact and consequences of market fragmentation and the general concept of “best execution”*
- *The concept of a European Consolidated Tape (ECT)*
- *EU competition law – including recent reviews eg. proprietary symbologies*

FINANCE MODULES COURSE NOTES

The European Union and MiFid:

The impact on national exchanges

The EU is moving from a local (27 countries) to a more cross border, “one EU”, market. MiFid removed what is sometimes called the “concentration rule” which made it compulsory to trade certain stocks on the national exchange for that country. The EU is all about freedom of movement and freedom of trade within the EU – the old style “concentration rules” were an obstacle to freedom of trade across borders and therefore were outlawed in MiFid.

- MiFid is the acronym for “Markets in Financial Instrument Directive”
- The objective of MiFid is to facilitate improved cross border (cross market) trading. From a market data perspective two key elements are the principles of Pre Trade Transparency and Post Trade Transparency. It is these two principles that drive changes in the way market data is collected, delivered and charged for
- Regulated Market - as the name suggests these are the most regulated markets e.g. the major stock exchanges such as the LSE, Deutsch Börse etc. They operate in a very similar manner to MTFs but MTFs operate under lighter touch regulations.
- 'Systematic Internaliser' - MiFid replaces rules in many markets that require trades to be executed at local exchanges. Instead, banks will be allowed to act as "systematic internalisers", matching customer orders internally rather than showing these to the market. Systematic internalisers (SIs), traditionally called market makers, are investment firms who could match “buy” and “sell” orders from clients in-house, provided that they conform to certain criteria. Instead of sending orders to a central exchange such as the London Stock Exchange, banks can match them with other orders on their own book. Examples of such firms are Credit Suisse and UBS. SIs are able compete directly with stock exchanges and automated dealing systems, but they have to make such dealings transparent. They have to show a price before a trade is made. After a trade is made, they have to give information about the transaction, just like conventional trading exchanges.
- MiFid supported the creation of “multi-lateral trading facilities” or “MTF” to enable cross border trading to take place more efficiently
- Self study: http://en.wikipedia.org/wiki/Markets_in_Financial_Instruments_Directive

The role of multilateral trading facilities

Derived out of MiFid to increase cross-market trading across the EU. They are very similar to fully regulated exchanges

– who fall under the designation “regulated markets”. The key difference is that MTFs operate under lighter touch regulation.

The impact and consequences of market fragmentation and the general concept of “best execution”

EU market fragmentation is not currently helpful for obtaining best execution, because an “NBBO” may not be apparent or visible to all participants across the EU markets. There is an explicit compulsion with MiFid for participants to demonstrate best execution. Furthermore, an explicit objective of MiFid is to improve transparency, which is necessary if one needs to demonstrate/prove best execution.

The concept of a European Consolidated Tape (ECT)

Supports MiFid objectives for increased cross border trading within the EU. The concept of a consolidated tape was not addressed forcefully in MiFid I but has come to the fore with MiFid II. An ECT would provide a single consolidated view of European best bid and offer (effectively an EBBO).

EU competition law

Including recent reviews e.g. proprietary symbologies – exemplifies the EU’s willingness to step into commercial policies of market data providers more directly than regulatory bodies in the past. One recent example relates to an EU ruling on the open use of Thomson Reuters RIC codes.

The EU has been more engaged in reviewing the commercial practices of market data vendors. It has made rulings on competitive or anti-competitive business and licensing practices of several market data vendors, much more so than in other markets.

**Finance Modules video:
Industry Issues & Trends – Module 5
Regulation – Global
Time: 1 min 10 sec**

GLOBAL (FISD Syllabus 4.1.3)

FISD syllabus requires you to:

Have a thorough understanding of some of the global regulation of the financial markets, taking special note of how they might affect market and reference data. Including Basel II and III.

You should have a broad appreciation for how regulation is dealt with outside of Europe and the USA – for example how the regulatory framework in Asia Pacific is different from the USA and EU. And you should have a broad appreciation of key structural changes in Asia Pacific including M&A activity.

FINANCE MODULES COURSE NOTES:

Regulation – Global

A key difference in regulation across the globe is that the US has a single regulatory authority in the SEC and the FED.

The UK, and more importantly, Europe, also has a single regulatory authority in the European Commission and the ECB. Asia Pacific countries all operate under separate national/local regulatory authorities – there is not a coordinated and consolidated regulatory framework across this region.

BASEL II and III – banking regulations on capital requirements and risk (Self study: http://en.wikipedia.org/wiki/Basel_III)

Governments – primary national regulators who are also key participants in the market as borrowers (e.g. treasury bonds and sovereign debt).

Central banks – control monetary policy and money supply, manage interest rates at a macro level

Sample central banks by country:

- US: Federal Reserve (FED)
- UK: Bank of England
- Japan: Bank of Japan

Sample Asian market regulatory environment

- FSA Japan
- CSRC (China Securities Regulatory Commission)

**Finance Modules video:
Industry Issues & Trends – Module 6
Automation, History, EDM & SRI
Time: 5 min 48 sec**

AUTOMATION IN THE FINANCIAL MARKETS (FISD Syllabus 4.2)

FISD requires that you understand:

How market “automation” has evolved in recent years and specifically how that automation has impacted market data. You should also have a broad understanding of:

- *Algorithmic trading*
- *Automated execution services including DMA (Direct Market Access)*
- *Data and trade entry latency*
- *Data traffic and update*
- *High frequency*
- *Proximity hosting*
- *Machine readable news (e.g. tagging news for sentiment)*

FINANCE MODULES COURSE NOTES:

Automation in the Financial Markets:

- Automated execution services including DMA (Direct Market Access) – DMA describes electronic trading facilities that allow buy side firms (investors) to access liquidity for securities they may wish buy or sell. Normally, trading on the exchange’s order book is restricted to broker-dealers and market making firms that are members of the exchange, but, with DMA buy side firms are able to use the trading infrastructure of sell side firms and have more control over how their trades are executed. Today, DMA is often combined with algorithmic trading giving access to many different trading strategies.
- Data and trade entry latency – the time delay between data’s availability or submission of data until it is available to the receiver.
- Data traffic and update rates – the aggregation of all bid, offer and trade data from an exchange, expressed as the “tick rate” of participant data inputs which in turn is broadcast as real time exchange data. Tick rates include each individual update and create the “data traffic” or “update rates” of essentially all inputs – which may exceed hundreds of thousands to millions of updates each second.
- High frequency trading – the practice of buying and selling in and out of positions, often within the time span of milliseconds to take advantage of mispricing or other market price characteristics that offer minute profits but taken repeatedly over the course of time.
 - Latency – the underlying driver for increased speed, controlled by reducing the distance light must travel.
 - Primarily around low latency and algo trading – faster speed requirements spawned co-lo and proximity trading.
 Note some political pressure on technique as it is perceived to offer “greater advantage”
- Proximity hosting – typically third party service providers with co-located infrastructure providing low latency services. The phrases of “proximity hosting” and “co-location” are often used interchangeably in common usage. However, originally “proximity hosting” meant in close proximity to the trading venue whereas ‘co-location’ meant actually in the same location as the trading venue.
- Machine readable news (e.g. tagging news for sentiment) – The next generation of algo models are making use of elementised news to drive decision making. Note that news is text data rather than integer (number) data.

ENTERPRISE DATA MANAGEMENT (FISD Syllabus 4.3)

FISD syllabus requires you to:

Have a broad understanding of the concept and scope of “EDM” and the broad debates surrounding the creation of robust and comprehensive enterprise data management. This should include an understanding of:

- *Data governance*
- *How data models are being deployed and used*
- *New initiatives such as the ECB’s desire to create a “data utility”*

FINANCE MODULES COURSE NOTES:

Enterprise Data Management

- Enterprise data management (EDM) focuses on the creation, maintenance and integration of accurate, consistent and transparent data across the entire organisation
- EDM is part of data governance that demonstrates control and management of data coverage, quality, accuracy and reliability.
- How data models are being deployed and used – control and management of data such as decision rules for arbitrating and correcting data variances, standards and practices.
- New initiatives such as the ECB’s (European Central Bank) desire to create a “data utility” – a concept put forward in Europe to make publicly available the core set of reference data to improve the accuracy and standardisation of security’s descriptive data across all participants.

Financial Crisis and LEI

- September 2008 – regulators point of view was that “no one knew their full exposure to instrument types or to counterparties”.
- Data models – focused on move from issue to entity.
- Driving the development of LEI (Legal Entity Identifier) – in the process of implementation and adoption.
- ECB and OFR (European Central Bank and US “Office of Financial Research”)
 - Working together on LEI and a global securities identifier standard
 - ECB seeks public access to issue level data with a data utility
- LEI expected to be “public domain” – available to participants at no cost
 - Cost borne by issuers non-consumers
 - Admin - SWIFT and DTCC (US Depository Trust & Clearing Corporation)

COMMERCIAL, CONTRACTUAL, ECONOMIC AND POLITICAL (FISD Syllabus 4.4)

FISD syllabus requires you to:

Demonstrate a broad understanding of some of the key and recent debates surrounding market and reference data, including:

- *The debate around what is the optimum “unit of count” for data contracts*
- *The debate around intellectual property rights (ownership) for data, including the redistribution of data and derived data.*
- *The problems of “data piracy”*
- *The contentious issue of data audits*
- *The increasing use of outsourcing and/or offshoring for market data admin functions*
- *The relevance and impact of the increasing use of Service Level Agreements (SLAs) in the delivery and ongoing support of market data services*
- *The nature and format of peer groups that have emerged and evolved*

You should be able to demonstrate a broad grasp of some of the macro economic factors affecting our industry, including:

- *The origins and impact of the “credit crisis/crunch”*
- *The “sub prime” mortgage market*
- *Interbank lending rates e.g. Libor*
- *Hedge funds – in general*
- *How a growing interest in “socially responsible investing” (SRI) is affecting demands on market data services*

FINANCE MODULES COURSE NOTES:

Key Market Data Issues - Commercial, Contractual, Economic & Political

Optimum “unit of count”

Unit of count is to pay for use not right to use in order to provide economies of scale. For many years the prime “unit of count” for charging for data was “per user” (sometimes referred to as “eyeballs”). However, with the advent of computers (e.g. algos), this measurement unit became out of date and ineffective as the number of human users diminished and more and more computer applications came to consumer market data. New types of unit of count have come into being which is causing a highly contentious and confusing area of commercial policy.

Intellectual property rights

IP (intellectual property) rights relate to the question of who owns public data. Many consumers (e.g. banks) are also inputers of data via their trading function. There has been a long standing argument about whether the data vendors or exchanges actually “own” the data. Current commercial practice is based on the assumption that they do. However, many banks continue to argue that this is incorrect. Data vendors and exchanges are equally clear in their belief that the current approach is correct. So the argument continues.

Piracy

There is a lack of IP laws and practices especially with free streaming data. There is an ongoing problem with some consumers of data not admitting to using certain fee liable data and hence not paying for it. This is one thing that has prompted many data providers to conduct “audits” where they physically visit a consumer and manually check what data that user is consuming. This misreporting of data usage (i.e. data piracy) can be on an individual basis and a firm by firm basis – in some cases concerns have been raised about the attitudes and culture of an entire country.

Audits

Data audits are the typical enforcement control imposed by data suppliers (vendors, exchanges) to ensure compliant licensing with the supplier's content when control of the content has passed from the supplier to the consumer.

Market data admin offshoring

Market data admin offshoring is an attempt to lower the cost of generic admin functions. Service Level Agreement (SLA) impact Ten years ago SLAs were virtually nonexistent, but with the advent of the dot com businesses, they are now common.

Peer groups

Increasing in relevance due to their ability to influence issues and set standards and practices.

Recent Issue History

- Credit crisis/crunch – aka the financial meltdown of September 2008
 - Saw the fall of Lehman Brothers (picked up by Barclays)
 - Merrill Lynch (picked up by Bank of America)
 - AIG (bailed out by US govt. who underwrote protection on many failed instruments)
- Subprime mortgage market that took down Bear Stearns in June 2008, was a warning sign of the financial crisis to follow
- Hedge funds – arbitrage mispricing, controversial on excesses and short strategies
- Libor – role in subprime as “underlying index for rate resets”
 - London Interbank Offered Rate – rates rose excessively due to illegal manipulation by banks which drove a spiralling of unsustainable mortgage rates and the credit crunch
 - News – in July 2012, it was widely reported that Barclays manipulated markets with Bank of England knowledge
- Socially Responsible Investing (SRI) – “Green” / “Sin Free” / “Anti-Terrorist State”

You have now reached the end of the Industry Issues & Trends Section.

Feel free to watch the videos again, study the notes and research some of the terminology if you need to.

You can also work through the quiz as a “mock exam” to test your knowledge as many times as you like.

The other sections that the FISD FIA Syllabus covers are:

- The Markets
- The Data
- The Technology

To book the FISD FIA exam visit: <http://sifa.net/fisdpc/test.asp>

Good luck!

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