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NASDAQ OMX[®] MARKET INDEGRATION – CASE STUDIES EUROPE, NORDICS, BALTICS

Agenda

- Drivers for seeking regional collaboration
- Various regional market models
- Norex case study
- Baltic case study
- European post trade initiative T2S
- Success factors and pitfalls



DRIVERS OF REGIONAL COLLABORATION

Motivation to develop regional market and offering varies



- Domestic market growth below expectations
- Future growth unsatisfactory
- Push from exchanges, members, investors

- Regional collaboration as phase 1
- Aiming for market integration or even merger

- Trend that the region wants to be in
- Competition between regions and solo markets

- Share technology or even operations
- Economies of scale

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REGIONAL MARKET MODELS

Model should be flexible allowing enhancements

Market harmonisation is crucial



- Single pool of liquitidy, order routing
- Asset class based
- Regional offering
 - Indices
 - ETF's
 - Market data
 - Fee schedules
- Harmonized market pratices
 - Rules and regulations
 - Membership process
 - Post trade harmonization

• Shared technology and operations



NASDAQ *OMX*[°] Nordic Markets, a case study

NASDAQ OMX NORDIC 2012 Seven integrated cash markets Three integrated derivatives markets

7 cash markets

- Sweden, Denmark, Finland
- Iceland, Latvia, Lithuania, Estonia
- 900 bn USD market cap
- 2.5 bn USD daily turnover
- 640 listed companies
- 185 unique trading members

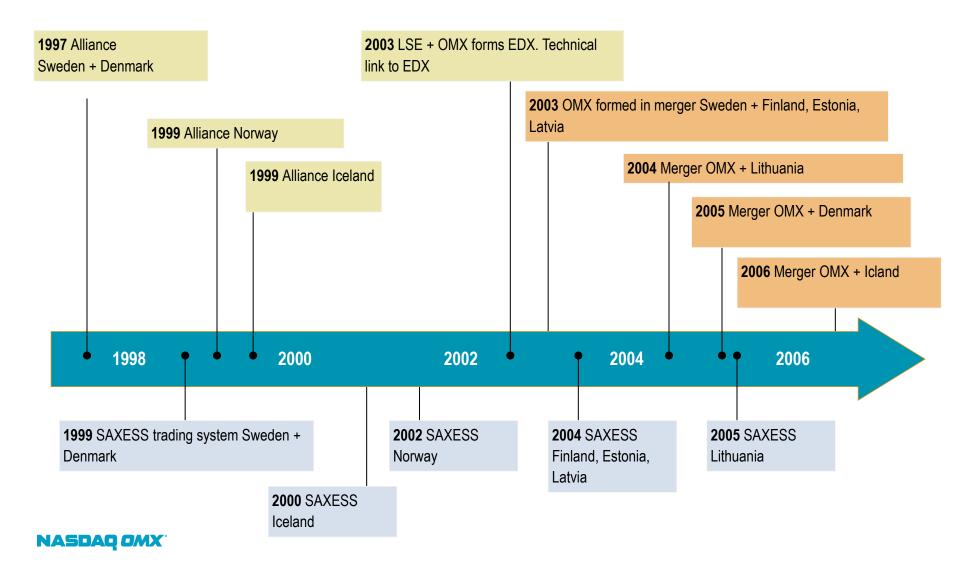
3 derivatives markets

- Sweden, Denmark, Finland
- 400,000 contracts per day



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The Nordic structure consolidated further through friendly mergers 2003 - 2006



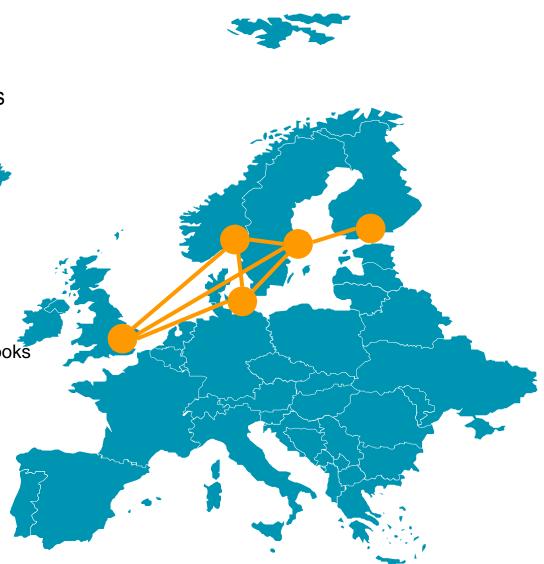
Derivatives Markets Cooperated through LEC "Linked Exhange Concept"

As part of NOREX, participating exchanges also linked their derivatives markets

- Norway
- Sweden
- Finland
- Denmark
- London

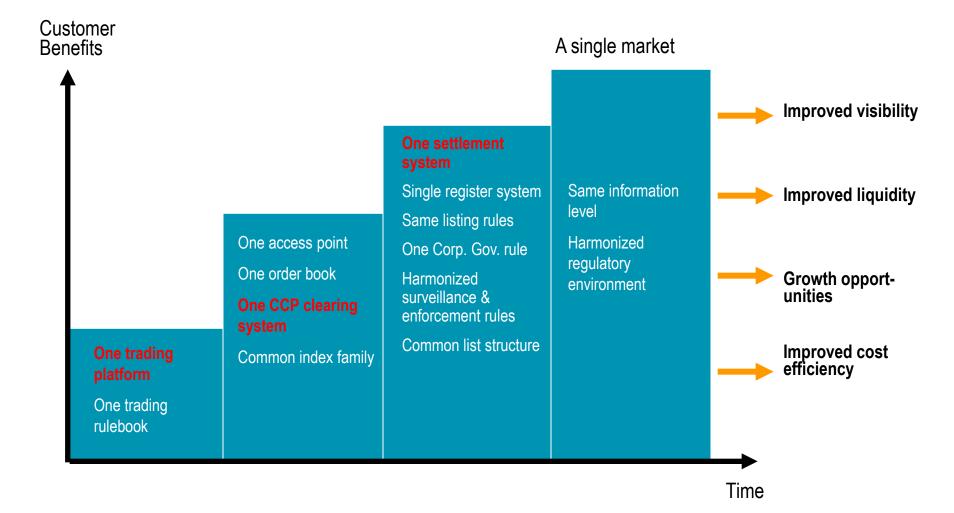
Benefits

Single point of liquidity – shared order books Single point of access – hubs and links Unified membership process Unified trader licenses Harmonised trading and member rules Shared IT (HW, NW, SW, data centres) Local regulations 80 % harmonized



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THE NORDIC INTEGRATION ROADMAP



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Smaller exchanges are winners in integrated markets

(Comparison: 2005 to integration Year)



Norway, Joined in 2002

2002 – 2005 Norway increased turnover by 220%, while Sweden increased turnover by 35%



KAUPHÖLL ÍSLANDS Iceland Stock Exchange

Iceland, Joined in 2000

2000 – 2005 Iceland increased turnover by 470%, while Sweden turnover was unchanged

Tallinn Stock Exchange

Estonia, Joined in 2004

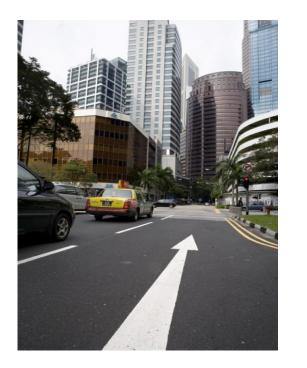
2004-2005 Estonia increased turnover by 190%, while Sweden turnover increased by 9%

Significant synergies			
elgimiedin eyrielgiee	Finland	Realized	
	Q303	synergies	
Total cost base	77 MUSD	31 MUSD	42%
IT	35 MUSD	22 MUSD	67%
Non-IT	42 MUSD	9 MUSD	23%
IT	77 MUSD 35 MUSD	31 MUSD 22 MUSD	679

Source: OMX strategic review 2005

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THE NORDIC MODEL IN SUMMARY



- All liquidity remains local/regional
- All sales staff remain local
- Local entities remain regulated and supervised by local authorities
- Regional harmonization of market practices a joint effort
- Use of common platform to get full efficiency benefit and enable easy access to and within the region
- Integration through both alliances and mergers "friendly" approach



Project setup & key success factors







Governance

- Implemented as a company
- Equal ownership and board representation among the exchange members
- Consensus decisions

Structure

- Responsible project manager from each party with mandate to make binding decisions
- Small project teams
- Tight interaction between board and project managers

Financials

- Alliance had no revenues each party bore its own costs
- · The only shared cost was joint marketing efforts
- · New Alliance members allowed to enter alliance for nominal fee



NASDAQ *OMX*[°] Baltic Market, a case study

Pan-Baltic cross-border C&S solution



- Common Baltic cross-border link solution between Estonian CSD, Latvian CSD and Lithuanian CSD since 2005
 - ✓ Baltic stock exchanges transactions
 - ✓ Free of payment transfers
 - Real time over-the-counter (OTC) delivery-versus-payment (DVP) transactions
- Trades are settled according to the "Issuer Model", i.e. settlement takes place in the securities' domicile CSD
 - It is sufficient to have a securities account in one of the Baltic CSDs and settle all Baltic securities transactions to that account, via the pan-Baltic cross-border depositories link
- Cash leg of securities transactions is settled in "issuer's country" in central bank money where cross-border trades settled through a cash agent account

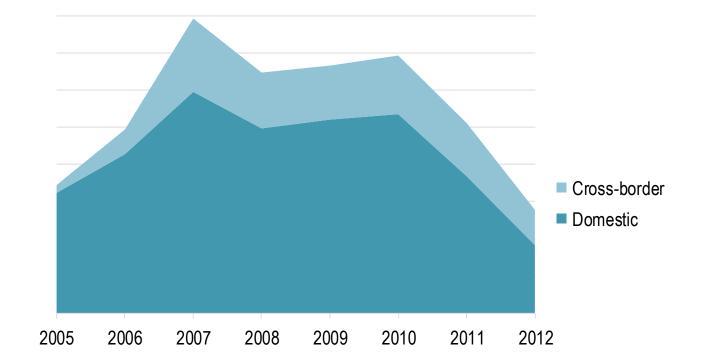


Baltic cross-border link activity – settlement of stock exchange trades

Few dozens of crossborder transactions offered by the custodians before 2004

New cross-border DvP offering launched 2005 served by the CSD links

New significant crossborder liquidity created



Future plans



- Developments planned for 2013
 - ✓ Readiness to join Target2Securities
 - ✓ Bilateral links with foreign CSDs (Polish, Russian, Ukrainian)
 - ✓ Migration to EUR in CSD systems due to Latvia's plans to join Eurozone in 2014
 - ✓ Savings Notes project in Latvia
 - Expansion of services for issuers in Lithuania, based on Estonian and Latvian experience
- Committed roadmap for 2014-2015
 - ✓ Migrating to X-stream CSD
 - ✓ Single Baltic settlement engine

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NASDAQ *OMX*[°] European Central Bank initiative T2S

Structure and timelines

T2S is an expensive initiative aiming to increase the competitiveness of European capital market.

ECB indicated that with the lowered cash market volumes it may be forced to increase the transaction based costs.

Some CSD's increased their pricing to finance the T2S investments and expected increased costs.

ECB is looking for non-European markets to join the initiative.

- All intra-European cross-border cash market transactions to be settled in central engine T2S
- CSD's continue to settle other cross-border trades as is
- Euro-countries first. Asset class eligibility
- Two key models
 - CSD outsources all European settlement to T2S
 - CSD continue keeping mirror accounts
 - Driver to chose between the two is cost. T2S charges for every transaction.
- Migration to T2S in multiple tranches
 - Testing against T2S starts mid 2014
 - First CSD's migrating 2015 (represents bulk of transaction volumes)
 - Other CSD's starting from 2016
- New technology solutions needed
- X-stream CSD fully compliant with T2S and advanced cross-border settlement functionalities

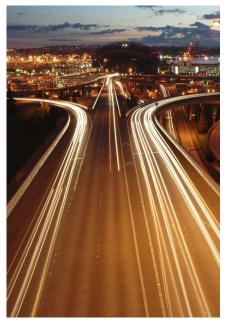
NASDAQ *OMX*[°] Success factors and pitfalls

Success stories and pitfalls

Possible fears for the biggest market should be managed

- Controlled expansion
- Long term strategy

Enabling technology key success factor



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- Alliance structure?
 - Governance structure (including JSC composition)
 - Financial committment
 - Number of parties
 - Avoid competition between the parties
- Full regional value chain?
 - Trading link (including market data)
 - Clearing link
 - Settlement and depository link (inlcuding corporate event management)
- Seamless for the members and investors
 - One membership application, harmonized fees
 - Cross-border DvP settlement using issuer model

- Technology
 - Enabler
 - Standardized (processes, access, GUI's, reporting)
 - Nimble, scalable, supporting full STP



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