

QUERY EXPANSION

IMPLEMENTATION :

We have first taken the Document Dataset as XML Data.

We have used Data Pre-Processing Techniques like Removing Punctuations , tokenising , Removing Stop Words , Stemming.

Then , We have created an Index for Document Data

Then , We have found TF – IDF for Query and Document and found the Score of TF-IDF. In Accordance to that , we have retrieved the documents and Displayed top-5 results .

As we have set of Relevant Documents , We found out Non Relevant Documents and Vectorized the terms and then We have applied ROCCHIO's ALGORITHM .

We will get an expanded Query.

Based on This Algorithm The whole process above is done again on expanded query to get the documents.

OBSERVATION:

We have observed Some documents Retrieved by Original Query Matches with Some documents Retrieved by Expanded Query .

We can also say that the documents Retrieved by Expanded Query are More relevant than the other.

RESULTS OF QUERIES :

Query – 1

Query: ['European finance']

RESULTS before expansion :

FT 14 MAY 91 / International Company News: Bankers Trust sheds 200 jobs in restructuring move

Document Number: 161

FT 13 MAY 91 / Ministers unworried by idea of two-speed Emu: EC representatives start to

look at the realities of economic and monetary union

Document Number: 358

FT 25 APR 91 / Survey of Greece (7): Ending the nightmare - Investing in the country

Document Number: 3404

FT 24 APR 91 / Cheap loans row taxes Spanish Socialists Document Number: 3672

FT 14 MAY 91 / (CORRECTED) UK Company News: Geavor merger hits rocks over pre-conditions

Document Number: 2

Expanded Query :

['alreadi', 'also', 'announc', 'back', 'bank', 'come', 'could', 'countri', 'econom', 'european', 'even', 'financ', 'go', 'govern', 'left', 'loan', 'moment', 'problem', 'programm', 'set', 'spain', 'still', 'two', 'uk', 'us', 'way']

RESULTS after expansion:

FT 25 APR 91 / Survey of Greece (6): Out go curbs, out go funds? - Banking Document Number:

3406

FT 14 MAY 91 / Uphill fight in the high street / Chart the continuing struggle of Britain's

consumer services sector as it fights to survive recession

Document Number: 55

FT 24 APR 91 / Made in Britain, Japanese-style: Car manufacturing in the UK is still set to expand,

despite the immediate problems of recession Document Number: 3503

FT 25 APR 91 / Survey of Greece (7): Ending the nightmare - Investing in the country

Document Number: 3404

FT 14 MAY 91 / International Company News: Bankers Trust sheds 200 jobs in restructuring move

Document Number: 161

Query – 2:

Abandon Abott Company

Results before Query Expansion :

FT 23 APR 91 / Management (The Growing Business): Lower overheads and productivity: Subcontracting - Charles Batchelor on the benefits	increased of off-site production
Document Number: 3867	-----
FT 23 APR 91 / Survey of The Computer Industry (6): Patient expansion Japanese in Europe, a preference for joint ventures	continues - The Document Number: 3932

FT 14 MAY 91 / Survey of Computers in Manufacturing (1): Japanese still set importance of the human element in the production process	the pace - The permeates Japanese methods. Now
Western companies are beginning to appreciate that there is a limit to what the computer can do to help the manufacturers	
Document Number: 140	-----
FT 24 APR 91 / London Stock Exchange: Confusion on volume in Saatchi 3459	Document Number: 3459

FT 25 APR 91 / Survey of the Electricity Industry (9): Pressures mounting -	The US
Document Number: 3410	-----

Expanded Query :

['abandon', 'account', 'add', 'argu', 'assembl', 'base', 'capit', 'come', 'complet', 'compon', 'construct', 'continuu', 'control', 'cost', 'custom', 'decis', 'develop', 'difficulti', 'equip', 'europ', 'far', 'forc', 'gener', 'get', 'hand', 'help', 'high', 'higher', 'hold', 'import', 'improv', 'includ', 'japan', 'larg', 'last', 'like', 'low', 'make', 'mani']

Documents After Expanded Query :

FT 14 MAY 91 / London Stock Exchange: FT-SE 2,500 lost in nervous trading 12	Document Number: 12

FT 14 MAY 91 / International Company News: Temporary rescue for French	group
Document Number: 31	-----
FT 14 MAY 91 / Leading Article: A compromise path to Emu	Document Number: 48

FT 14 MAY 91 / UK News (Employment): Harrods to be asked to abandon pay	freeze
Document Number: 74	-----
FT 14 MAY 91 / Survey of Computers in Manufacturing (1): Japanese still set	the pace - The

importance of the human element in the production process
Western companies are beginning to
can do to help the
Document Number: 140

permeates Japanese methods. Now
appreciate that there is a limit to what the computer

Query – 3

Traded Inability Production

Results before Expansion :

FT 14 MAY 91 / Survey of Computers in Manufacturing (10): Useful systems
connected - Manufacturing Software, the complexity of the
ordination
Document Number: 132

for the well-
applications requires careful co-

FT 23 APR 91 / Leading Article: Listening to employees

Document Number: 3727

FT 14 MAY 91 / London Stock Exchange: Equity Futures and Options Trading
13

Document Number:

FT 13 MAY 91 / Green hopes rise in a grey area: A new urgency in Brussels
and coherent European Community environment policy

to build an effective
Document Number: 262

FT 24 APR 91 / UK Company News: British Fittings up at Pounds 6.2m
3618

Document Number:

Expanded Query :

['inabl', 'includ', 'industri', 'larg', 'less', 'line', 'long', 'make', 'mani', 'market', 'price', 'product', 'still', 'trade', 'want']

Results after Expansion :

FT 13 MAY 91 / Green hopes rise in a grey area: A new urgency in Brussels
and coherent European Community environment policy

to build an effective
Document Number: 262

FT 23 APR 91 / Survey of European Finance and Investments - Portugal (4):
problems - Although the economy appears to have performed
discovers . . .

Serious underlying
remarkably well, Patrick Blum

Document Number: 3790

FT 23 APR 91 / Survey of European Finance and Investments - Portugal (1):
As Portugal faces increasing political and economic
financial community is over,
competition from

Tougher days ahead -
change, the time of easy successes for the
reports Patrick Blum. The sector is experiencing stronger
abroad and further restructuring is needed

Document Number: 3793

FT 23 APR 91 / Visionary seeks an equal chance: Lech Walesa, the Polish president, who begins a state visit to Britain today, outlines his hopes for his country's future in an interview with FT writers
Document Number: 3856

FT 14 MAY 91 / Survey of Computers in Manufacturing (9): Breakthrough in the factories - Shop-Floor Systems, demand continues to grow
Document Number: 131

Query – 4:

Financial Community Reports

Results Before Expansion

FT 13 MAY 91 / Gilt securities win Bank's approval
Document Number: 250

FT 23 APR 91 / Survey of European Finance and Investments - Portugal (1): Tougher days ahead -
As Portugal faces increasing political and economic change, the time of easy successes for the financial community is over, reports Patrick Blum. The sector is experiencing stronger competition from abroad and further restructuring is needed
Document Number: 3793

FT 22 APR 91 / Economics Notebook: A challenging descent from heaven
Document Number: 3947

FT 13 MAY 91 / Monday Interview: M'learned friend's tough brief - Michael Howard, UK
employment secretary
Document Number: 241

FT 14 MAY 91 / Management: Self-help takes off from the flat-lands - The application of community bonds in Saskatchewan
Document Number: 198

Expansion Terms:

['co', 'committe', 'common', 'commun', 'compar', 'competit', 'complet', 'could', 'countri', 'deal', 'decis', 'depart', 'detail', 'develop', 'financi', 'foreign', 'fund', 'give', 'good', 'govern', 'hand', 'help', 'report', 'reach', 'real', 'right', 'say', 'sector', 'see', 'sell', 'servic', 'sever', 'share', 'short', 'small', 'south', 'stock', 'sustain', 'take', 'think', 'time', 'total', 'trade', 'train', 'turn', 'vote', 'way', 'work']

Results After Expansion :

FT 14 MAY 91 / Survey of Computers in Manufacturing (4): A happy band of users is most important - Justifying the investment, hardware mistakes
Document Number: 137
prompt need for greater prudence

FT 13 MAY 91 / Survey of Cardiff (10): A three-way strategy - Professional services

Document Number: 366

FT 14 MAY 91 / Management: Self-help takes off from the flat-lands - The community bonds in Saskatchewan

application of
Document Number: 198

FT 14 MAY 91 / Community and Efta reach broad agreement

Document Number: 116

FT 24 APR 91 / Survey of China (18): Things to do and avoid - Trading in hearted

Document Number: 3433

China is not for the light-

Query – 5:

Query: ['western companies']

Results Before Expansion:

FT 14 MAY 91 / Survey of Computers in Manufacturing (1): Japanese still set importance of the human element in the production process
Western companies are beginning to can do to help the manufacturers

Document Number: 140

the pace - The permeates Japanese methods. Now appreciate that there is a limit to what the computer

FT 23 APR 91 / Survey of The Computer Industry (24): Innovation under technology push to market pull

scrutiny - R & D, from
Document Number: 3915

FT 23 APR 91 / World Trade News: US prepares to repel Chinese software being challenged to prove it can protect foreign

Document Number: 3757

pirates - Peking is intellectual property, writes Lynne Curry

FT 14 MAY 91 / Hungary takes the lead on foreign investment / A look at who down to business after the post-communist euphoria

is really getting
Document Number: 226

FT 23 APR 91 / UK Company News: Ramco rises to Pounds 1.1m and seals Soviet Document Number:

joint venture

Expanded Query :

['chang', 'compar', 'compet', 'comput', 'continu', 'cost', 'custom', 'develop', 'differ', 'earli', 'effect', 'effort', 'equip', 'europ', 'use', 'way', 'west', 'western']

Results After expansion :

FT 25 APR 91 / Survey of the Electricity Industry (8): Investment will cut energy efficiency is focusing on the generators

the bills - Demand for
Document Number: 3411

FT 23 APR 91 / Survey of The Computer Industry (2): Technology advance

On-Line Transaction Processing - The view from the US, changing market strategies and

Document Number: 3936

drives sales growth; Louise Kehoe in San Francisco assesses unveils a palmtop

FT 23 APR 91 / World Trade News: US prepares to repel Chinese software being challenged to prove it can protect foreign

Document Number: 3757

pirates - Peking is intellectual property, writes Lynne Curry

FT 23 APR 91 / Survey of The Computer Industry (27): Some severe image Leasing, collapse sparks an eventful year

problems - Computer
Document Number: 3912

FT 14 MAY 91 / No-boom Midwest survives without bust / A look at why the

downturn has been

less severely felt than in the rest of the US

Document Number: 101

Query – 6 :

Changing Market

Results After Expansion:

FT 23 APR 91 / Into the air with a hold full of hopes: Martin Dickson on the outlook for the US aircraft maker McDonnell Douglas as it tries to recover from a succession of blows

Document Number: 3726

FT 13 MAY 91 / Gilt securities win Bank's approval

Document Number: 250

FT 23 APR 91 / Survey of The Computer Industry (30): Systems that shed fresh light on information - Geographic Information, 'the biggest step forward since the map'

Document Number: 3909

FT 23 APR 91 / Survey of The Computer Industry (27): Some severe image problems - Computer Leasing, collapse sparks an eventful year

Document Number: 3912

FT 23 APR 91 / Survey of The Computer Industry (5): New generation
challenges leaders - The view from the US, Louise Kehoe in San Francisco
assesses changing market strategies and unveils a palmtop
Document Number: 3933

Query – 7:

Query: ['biggest threat']

Results before Expansion:

FT 23 APR 91 / Survey of The Computer Industry (21): Computer virus is the companies - Security, or confidentiality, integrity and	availability	biggest threat to
Document Number: 3918	-----	

FT 24 APR 91 / International Company News: Spanish utilities propose merger	Document Number: 3602	Dollars 5bn power

FT 24 APR 91 / Commodities and Agriculture: Botswana tries to loosen De diamond cartel faces strong calls for change	Document Number: 3463	Beers' grip - The world

FT 14 MAY 91 / Survey of Computers in Manufacturing (5): Group offers a - Profile of Case Communications	Document Number: 136	lesson to its suppliers

FT 25 APR 91 / Survey of the Electricity Industry (6): Energy policy between nuclear commitment and green issues	Document Number: 3412	divided - Japan is torn

Expanded Query Terms :

['big', 'biggest', 'bring', 'case', 'chang', 'claim', 'close', 'govern', 'help', 'high', 'increas', 'organis', 'part', 'person', 'price', 'produc', 'product', 'receiv', 'singl', 'specif', 'start', 'strong', 'survey', 'take', 'threat', 'three', 'time', 'togeth', 'total', 'tri', 'use', 'want', 'without']

Results after Expansion :

FT 14 MAY 91 / Survey of Computers in Manufacturing (4): A happy band of important - Justifying the investment, hardware mistakes		users is most prompt need for greater prudence
Document Number: 137	-----	

FT 13 MAY 91 / Survey of Cardiff (10): A three-way strategy - Professional		services
Document Number: 366	-----	

FT 23 APR 91 / Survey of The Computer Industry (21): Computer virus is the companies - Security, or confidentiality, integrity and	availability	biggest threat to
Document Number: 3918	-----	

FT 14 MAY 91 / Community and Efta reach broad agreement		Document Number: 116

FT 24 APR 91 / Survey of China (18): Things to do and avoid - Trading in		China is not for the light-
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Query – 8 :**Query: ['stronger competition']****RESULTS before expansion:**

FT 13 MAY 91 / Green hopes rise in a grey area: A new urgency in Brussels to build an effective
and coherent European Community environment policy Document Number: 262

FT 23 APR 91 / Survey of European Finance and Investments - Portugal (1): Tougher days ahead -
As Portugal faces increasing political and economic change, the time of easy successes for the
financial community is over, reports Patrick Blum. The sector is experiencing stronger
competition from abroad and further restructuring is needed
Document Number: 3793

FT 23 APR 91 / Into the air with a hold full of hopes: Martin Dickson on the outlook for the US
aircraft maker McDonnell Douglas as it tries to recover from a succession of blows
Document Number: 3726

FT 25 APR 91 / Survey of Greece (6): Out go curbs, out go funds? - Banking Document Number:
3406

FT 24 APR 91 / Jobs: Consultant discovers surprising differences between candidates either side
of 40 - Fresh light on the age-barrier paradox Document Number: 3643

Query After Expansion

['accord',
'accus', 'across', 'activ', 'advanc', 'aim', 'alreadi', 'also', 'among', 'approach', 'apr', 'area', 'averag', 'balanc', 'becom', 'benefit',
'bring', 'capit', 'challeng', 'chang', 'choic', 'cite', 'co', 'come', 'commit', 'committe', 'decis', 'delay', 'develop', 'differ', 'difficult',
'ec', 'econom', 'effect', 'effici', 'emerg', 'emphasi', 'encourag', 'equip', 'exempl', 'experi', 'extens', 'face', 'factor', 'far', 'final',
'financi', 'find', 'five', 'fund', 'futur', 'gener', 'give', 'govern', 'greater', 'hand', 'handl', 'help', 'high', 'import', 'improv', 'includ',
'individu', 'industri', 'institut', 'job', 'offici', 'one', 'parliament', 'part', 'rise', 'say', 'second', 'sector', 'secur', 'see', 'seem',
'senior', 'seriou', 'servic', 'sever', 'small', 'stage', 'standard', 'start', 'statist', 'still', 'stock', 'stronger', 'success', 'survey', 'take',
'technolog', 'third', 'though', 'throughout', 'time', 'togeth', 'total', 'transfer', 'union', 'use', 'want', 'way', 'whether', 'wide',
'work', 'yet']

RESULTS After Expansion :

FT 25 APR 91 / Survey of the Electricity Industry (8): Investment will cut the bills - Demand for

energy efficiency is focusing on the generators

Document Number: 3411

FT 23 APR 91 / Survey of The Computer Industry (2): Technology advance
On-Line Transaction Processing - The view from the US,
changing market strategies and unveils a palmtop
Document Number: 3936

drives sales growth;
Louise Kehoe in San Francisco assesses

FT 23 APR 91 / World Trade News: US prepares to repel Chinese software
being challenged to prove it can protect foreign
Document Number: 3757

pirates - Peking is
intellectual property, writes Lynne Curry

FT 23 APR 91 / Survey of The Computer Industry (27): Some severe image
Leasing, collapse sparks an eventful year

problems - Computer
Document Number: 3912

FT 14 MAY 91 / No-boom Midwest survives without bust / A look at why the
less severely felt than in the rest of the US

downturn has been
Document Number: 101

Query – 9:

Query: ['advance drives']

RESULTS before Expansion:

FT 23 APR 91 / Survey of The Computer Industry (3): Lightweights that buck
Computers - The view from the US, Louise Kehoe in San
strategies and unveils a palmtop

the trend; Mobile
Francisco assesses changing market
Document Number: 3935

FT 23 APR 91 / Survey of The Computer Industry (7): Advancing on many
build on its supremacy in laptop sector

fronts - Japan, plans to
Document Number: 3931

FT 23 APR 91 / Survey of The Computer Industry (18): Software takes the
Range Systems, hardware architectures under review

driving seat - Mid-
Document Number: 3921

FT 14 MAY 91 / Survey of Computers in Manufacturing (10): Useful systems
connected - Manufacturing Software, the complexity of the
ordination

for the well-
applications requires careful co-
Document Number: 132

FT 23 APR 91 / Survey of The Computer Industry (2): Technology advance
On-Line Transaction Processing - The view from the US,
changing market strategies and unveils a palmtop
Document Number: 3936

drives sales growth;
Louise Kehoe in San Francisco assesses

Expanded Query:

['accord', 'account', 'advanc', 'also', 'among', 'analyst', 'applic', 'apr', 'area', 'autom', 'develop', 'digit', 'disk', 'domin', 'drive',
'earli', 'effect', 'electron', 'equip', 'establish', 'estim', 'even', 'exempl', 'exist', 'expand', 'found', 'futur', 'gener', 'growth',
'ibm', 'import', 'includ', 'power', 'price', 'process', 'produc', 'product', 'proprietary', 'provid', 'rather', 'reduc', 'research',

'second', 'servic', 'share', 'show', 'signific', 'size', 'small', 'softwar', 'standard', 'still', 'storag', 'strateg', 'strategi', 'suppli', 'supplier', 'survey', 'take', 'technolog', 'togeth', 'trend', 'work']

RESULTS After Expansion:

FT 25 APR 91 / Survey of the Electricity Industry (8): Investment will cut the bills - Demand for energy efficiency is focusing on the generators Document Number: 3411

FT 23 APR 91 / Survey of The Computer Industry (2): Technology advance drives sales growth; On-Line Transaction Processing - The view from the US, Louise Kehoe in San Francisco assesses changing market strategies and unveils a palmtop Document Number: 3936

FT 23 APR 91 / World Trade News: US prepares to repel Chinese software pirates - Peking is being challenged to prove it can protect foreign intellectual property, writes Lynne Curry Document Number: 3757

FT 23 APR 91 / Survey of The Computer Industry (27): Some severe image problems - Computer Leasing, collapse sparks an eventful year Document Number: 3912

FT 14 MAY 91 / No-boom Midwest survives without bust / A look at why the downturn has been less severely felt than in the rest of the US Document Number: 101

Query – 10:

Query: ['environment policy']

RESULTS before Expansion:

FT 13 MAY 91 / Green hopes rise in a grey area: A new urgency in Brussels to build an effective and coherent European Community environment policy Document Number: 262

FT 14 MAY 91 / Green profits Document Number: 46

FT 24 APR 91 / Management: The struggle to breach the Whitehall Wall - Government and industry must both play their part Document Number: 3645

FT 13 MAY 91 / The Week Ahead Document Number: 351

FT 23 APR 91 / Survey of European Finance and Investments - Portugal (7): Independence strengthened - Patrick Blum discusses the central bank's changing role Document Number: 3787

Expanded Query :

['accus', 'act', 'action', 'also', 'approach', 'approv', 'could', 'countri', 'de', 'depart', 'develop', 'direct', 'draft', 'ec', 'econom', 'economy', 'effect', 'energi', 'ensur', 'environ', 'even', 'exempl', 'part', 'particular', 'polici', 'polit', 'practic', 'press', 'privat', 'product', 'programm', 'provid', 'public', 'receiv', 'regul', 'respons', 'right', 'say', 'second']

RESULTS After Expansion:

FT 13 MAY 91 / The Week Ahead Document Number: 351

Query – 11

Query: ['challenged to prove']

RESULTS before expansion:

FT 14 MAY 91 / Survey of Computers in Manufacturing (2): Confusion over integration and flexibility - Intelligent Machine Tools, a	the levels of different approach
Document Number: 139	-----
FT 23 APR 91 / Survey of The Computer Industry (26): Saboteurs are on the the art of knowing a Lan from a Wan	loose - Networking, Document Number: 3913

FT 23 APR 91 / Survey of The Computer Industry (12): The high price of top Supercomputers, a faster rate of change	performance - Document Number: 3927

FT 13 MAY 91 / Green hopes rise in a grey area: A new urgency in Brussels and coherent European Community environment policy	to build an effective Document Number: 262

FT 23 APR 91 / Survey of European Finance and Investments - Portugal (1): As Portugal faces increasing political and economic financial community is over, competition from	Tougher days ahead - change, the time of easy successes for the reports Patrick Blum. The sector is experiencing stronger abroad and further restructuring is needed
Document Number: 3793	

Expanded Query :

['accept', 'accord', 'achiev', 'advantag', , 'area', 'becom', 'best', 'bring', 'busi', 'challeng', 'chang', 'close', 'co', 'common',

'commun', 'compar', 'competit', 'comput', 'consider', 'much', 'need', 'offer', 'one', 'open', 'part', 'past', 'polit', 'possibl', 'power', 'price', 'process', 'product', 'programm', 'progress', 'prove', 'provid', 'quickli', 'right', 'rise', 'say', 'scale', 'secur', 'see', 'sell', 'senior', 'servic', 'sever', 'sign', 'site', 'small', 'softwar', 'speed', 'suar', 'stage', 'standard', 'start', 'still', 'structur', 'success', 'survey', 'take', 'technolog', 'tend', 'think', 'three', 'throughout', 'time', 'togeth', 'tougher', 'turn', 'use', 'way', 'whether', 'wide', 'work']

RESULTS AFTER EXPANSION:

FT 14 MAY 91 / Leading Article: A compromise path to Emu	Document Number: 48
FT 24 APR 91 / UK Company News: Coats extends offer after only 0.69%	acceptance
Document Number: 3609	
FT 14 MAY 91 / Parliament and Politics: Delors overture fails to unite Union	Conservatives - European Document Number: 60
FT 24 APR 91 / E German land claim quashed by court	Document Number: 3666
FT 23 APR 91 / Iraq accused of holding Kuwaitis	Document Number: 3719

QUERY – 12 :

Query: ['grey area']

RESULTS BEFORE EXPANSION:

FT 13 MAY 91 / Green hopes rise in a grey area: A new urgency in Brussels and coherent European Community environment policy	to build an effective Document Number: 262
FT 24 APR 91 / Survey of China (18): Things to do and avoid - Trading in hearted	China is not for the light- Document Number: 3433
FT 23 APR 91 / Survey of The Computer Industry (28): Advanced technology publishing systems - DTP, new software products for a maturing	lifts desktop market Document Number: 3911
FT 14 MAY 91 / Arts: Machinery of war / Review of exhibitions in London	Document Number: 56
FT 14 MAY 91 / Winnie Mandela found guilty of kidnapping	Document Number: 127

EXPANDED QUERY:

['across', 'also', 'area', 'base', 'big', 'civil', 'come', 'control', 'could', 'countri', 'devic', 'europ', 'found', 'gener', 'give', 'grey', 'hand', 'home', 'import', 'includ', 'lack', 'larg', 'life', 'like', 'long', 'make', 'mani', 'market', 'materi', 'move', 'must', 'nation', 'never', 'non', 'one', 'place', 'polit', 'press', 'product', 'public', 'relat', 'round', 'say', 'see', 'seem', 'south', 'speak', 'suar', 'take', 'time', 'toward', 'use', 'way', 'whether', 'wide', 'word']

RESULTS AFTER EXPANSION:

FT 25 APR 91 / Hiccups over monetary growth	Document Number: 3356
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FT 13 MAY 91 / Arts: Off-Met opera, New York

Document Number: 264

FT 25 APR 91 / Survey of Greece (16): Manos tackles the car fumes - Athens
Document Number: 3397

Pollution

FT 24 APR 91 / Survey of China (14): Where the papers come three days late
natural crossroads, but is cut off by poor communications

-Wuhan is China's
Document Number: 3434

FT 23 APR 91 / Arts: Snowy wastes focus the mind - William Packer on the
the Barbican

Document Number: 3728

Canadian exhibition at

Query – 13

Query: ['rate of change']

RESULTS before expansion:

FT 13 MAY 91 / International Economic Indicators: How to compare relative
National accounts

economic wealth -
Document Number: 287

FT 14 MAY 91 / Uphill fight in the high street / Chart the continuing
consumer services sector as it fights to survive
Document Number: 55

struggle of Britain's
recession

FT 25 APR 91 / Economic Viewpoint: A country with a fix-price culture
3354

Document Number:

FT 23 APR 91 / Survey of European Finance and Investments - Portugal (4):
problems - Although the economy appears to have performed
discovers . . .

Serious underlying
remarkably well, Patrick Blum

Document Number: 3790

FT 13 MAY 91 / International Bonds: Dealers slow to appreciate benefits of
Document Number: 311

rechristening

Expanded Query:

['almost', 'also', 'altern', 'although', 'annual', 'appear', 'averag', 'base', 'becom', 'better', 'busi', 'capit', 'case', 'chang', 'come',
'compar', 'competit', 'consequ', 'continu', 'correspond', 'cost', 'could', 'countri', 'demand', 'develop', 'difficulti', 'ec',
'econom', 'economy', 'employ', 'even', 'exchang', 'fall', 'far', 'figur', 'fix', 'gener', 'germani', 'good', 'growth', 'high', 'higher',
'hope', 'import', 'improv', 'includ', 'increas', 'inflat', 'interest', 'larg', 'last', 'later', 'less', 'level', 'like', 'line', 'long', 'low',
'lower', 'make', 'mani', 'manufactur', 'market', 'mean', 'mid', 'move', 'much', 'nearli', 'non', 'offici', 'one', 'part', 'percentag',
'practic', 'price', 'product', 'real', 'reduc', 'relat', 'repres', 'rest', 'right', 'rise', 'say', 'sector', 'see', 'show', 'still', 'suffici',
'suggest', 'time', 'toward', 'trade', 'tradit', 'unemploy', 'unlik', 'use', 'wage', 'way', 'week', 'without', 'yet']

Result After Expansion:

FT 25 APR 91 / Survey of Greece (1): Awkward, but essential - After a year
government is still trying to restructure the
challenge it faces is to keep
consensus

in office, the Mitsotakis
economy and modernise public institutions. The
up the pace of reform without endangering the prevailing political
Document Number: 3409

FT 14 MAY 91 / Government Bonds: Gilts follow Treasuries' fall in auction

aftermath

Document Number: 21

FT 14 MAY 91 / Survey of Computers in Manufacturing (6): Fuzzy logic and technological advantage - Japan, modifying production to the human workforce

robots spell philosophies as emphasis shifts back

Document Number: 135

FT 13 MAY 91 / Pirelli treads a careful path on Continental: The latest twist in the saga

Document Number: 327

FT 25 APR 91 / UK Company News: Increased interest payments reduce CWS to Pounds 19.1m

Document Number: 3333