

# **IMPROVING SUPERVISORY MECHANISM IN THE BANKING SECTOR OF THE OIC MEMBER COUNTRIES**

## **Global Financial Markets and Banking**

**COMCEC COORDINATION OFFICE**

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for Economic and Commercial Cooperation  
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(COMCEC)

# Banking Sector in the Selected OIC Member Countries: Supervisory and Regulatory Challenges

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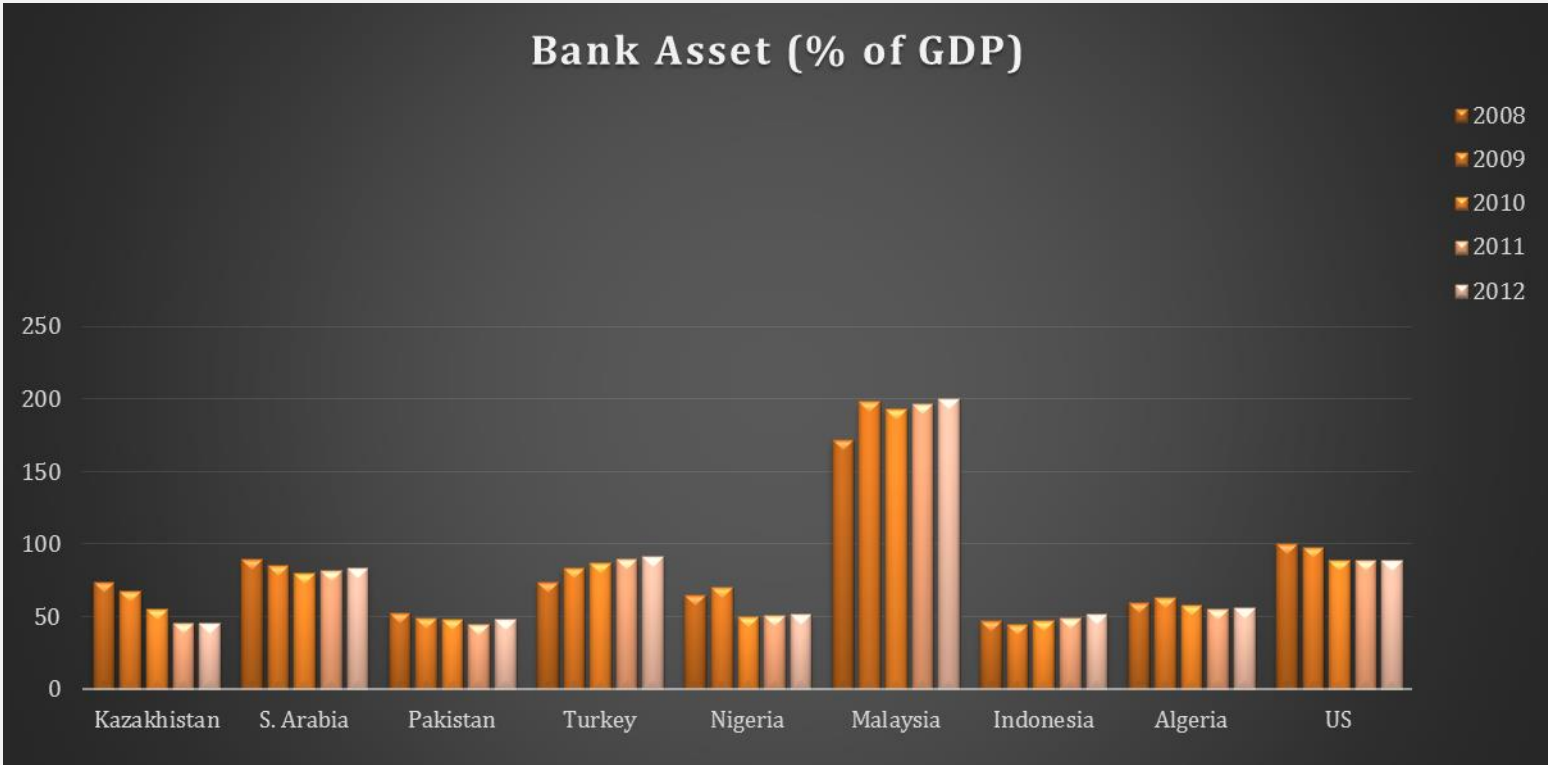
Mert Karanlıktagezer (Riskturk, MA)

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- A Snapshot on the banking in the OIC countries
- Supervisory mechanisms in the OIC member states?
- Regulatory Challenges in the OIC member states
- Islamic banking and its regulatory challenges.
- Policy recommendations

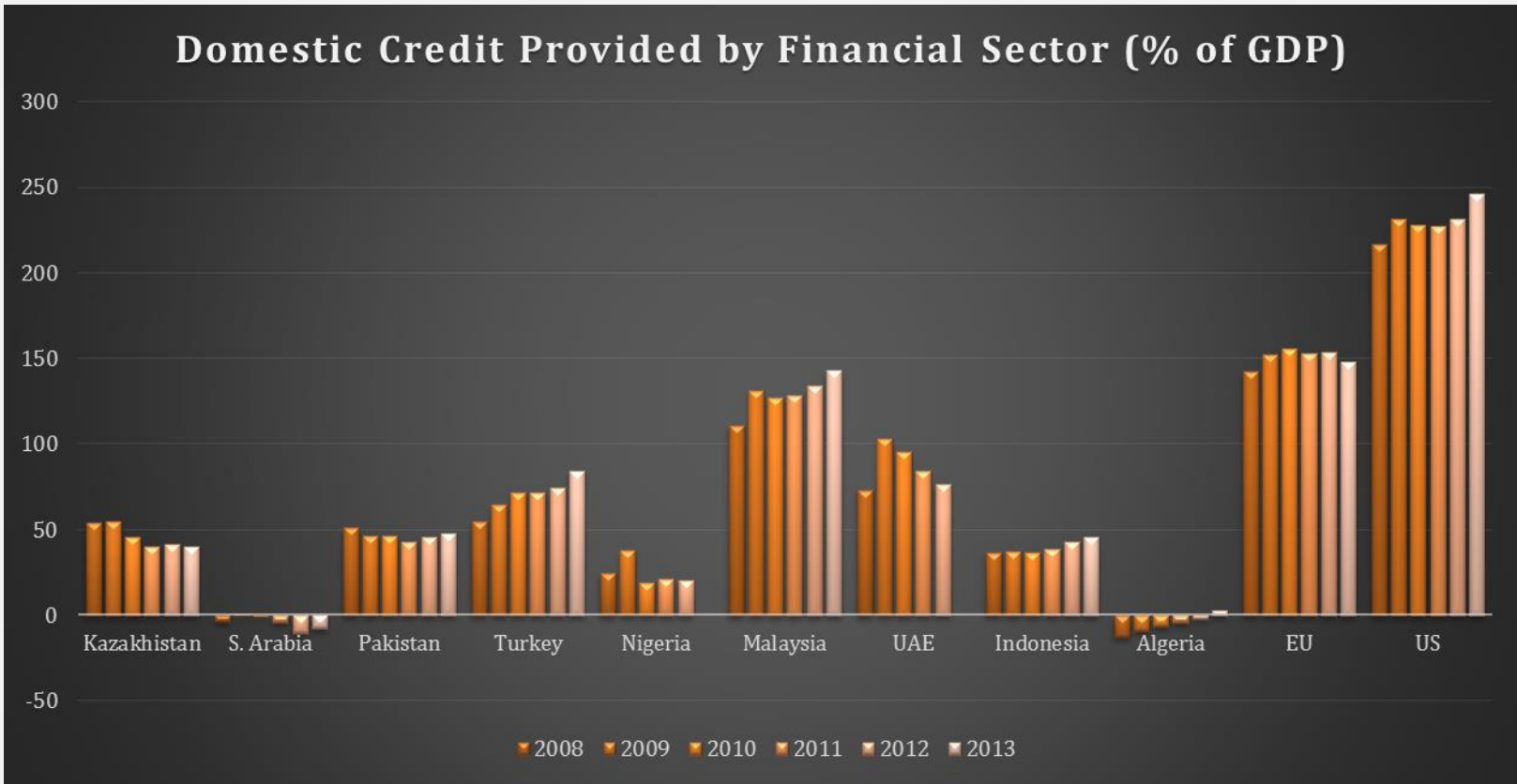
# Bank Assets

Bank Assets/GDP (Source: Bank Scope)



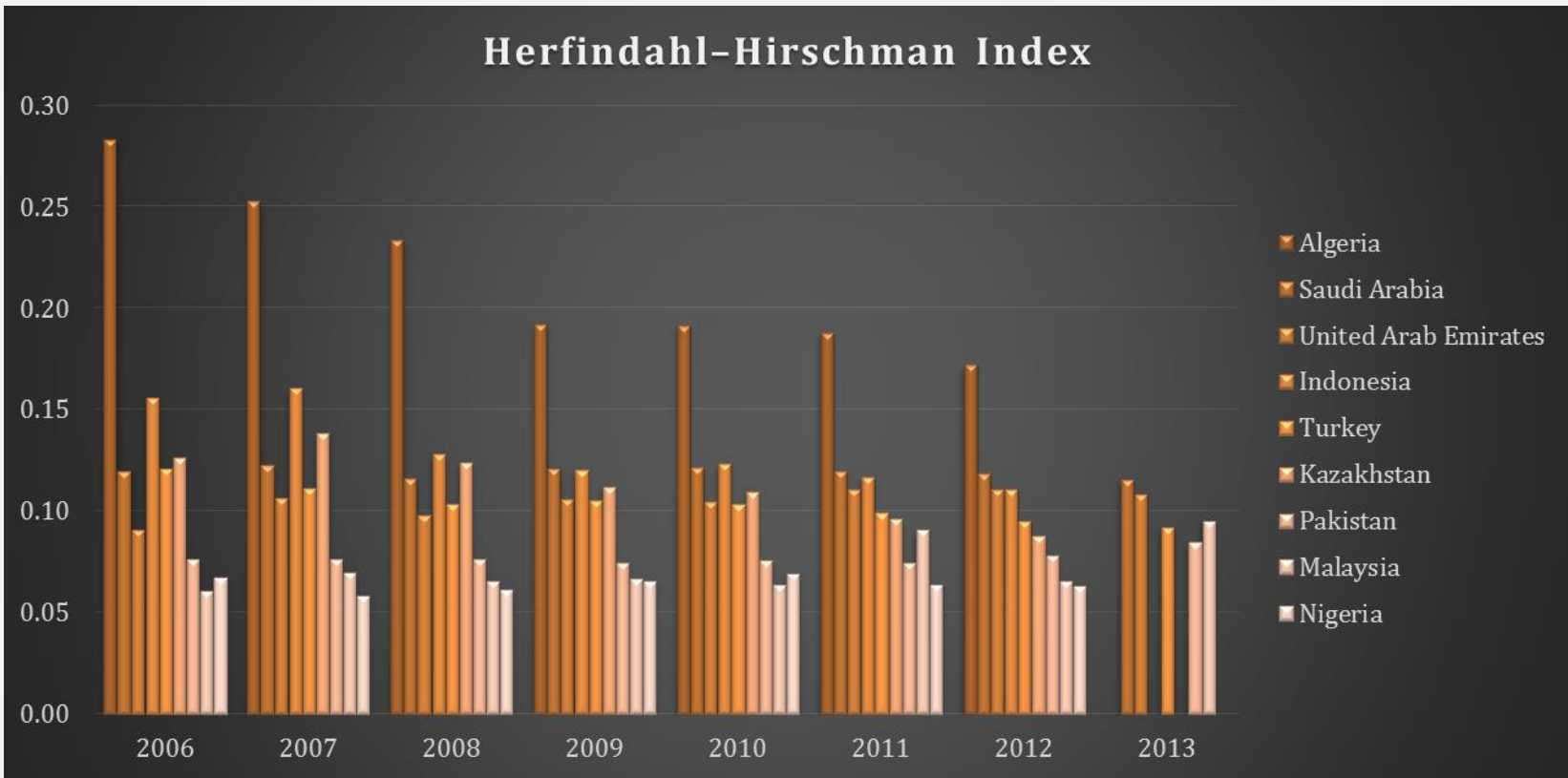
# Domestic Credit Provided by Financial Sector

- Significant credit growth in most member states
- Still the ratio lower than EU area and US.



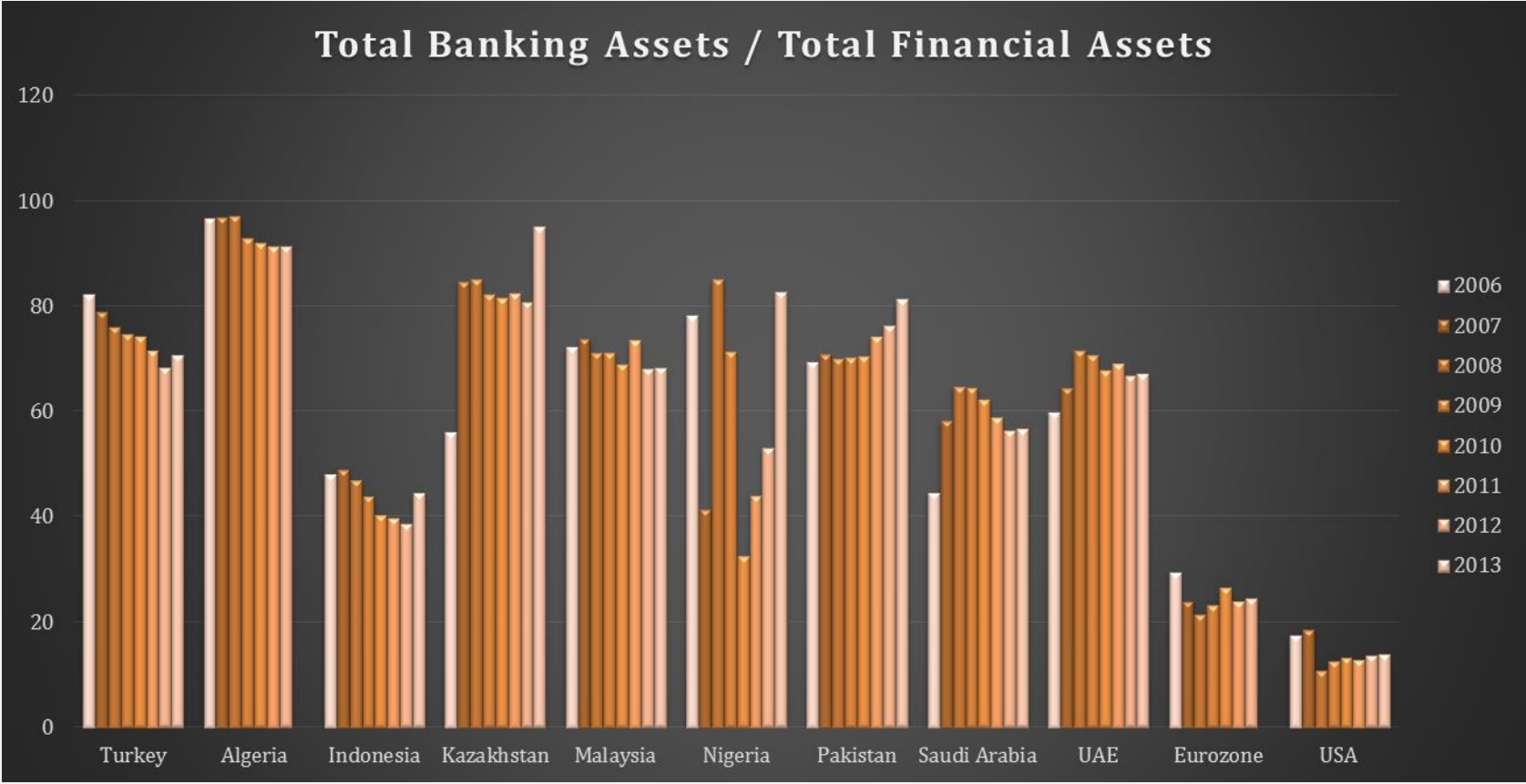
# Banking Sector Asset Concentration

- Asset Concentration among the selected OIC countries evenly distributed
- Hirschman-Herfindahl index values lesser than 25%.



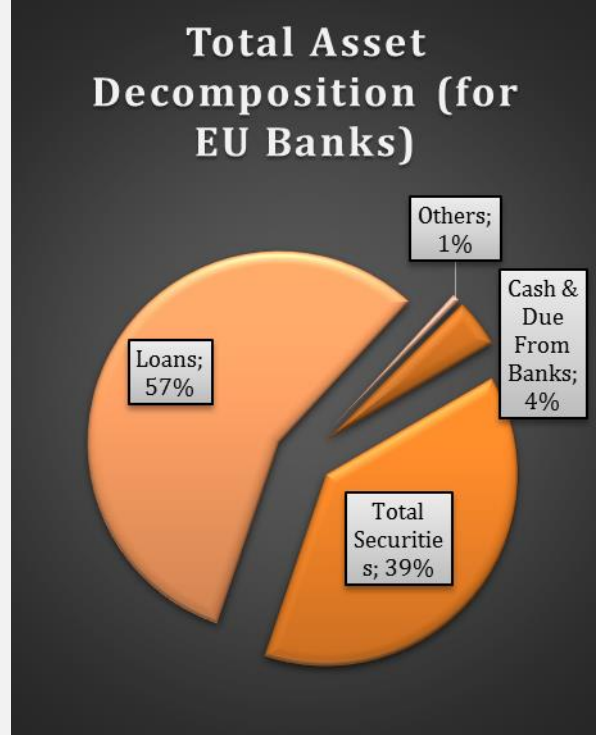
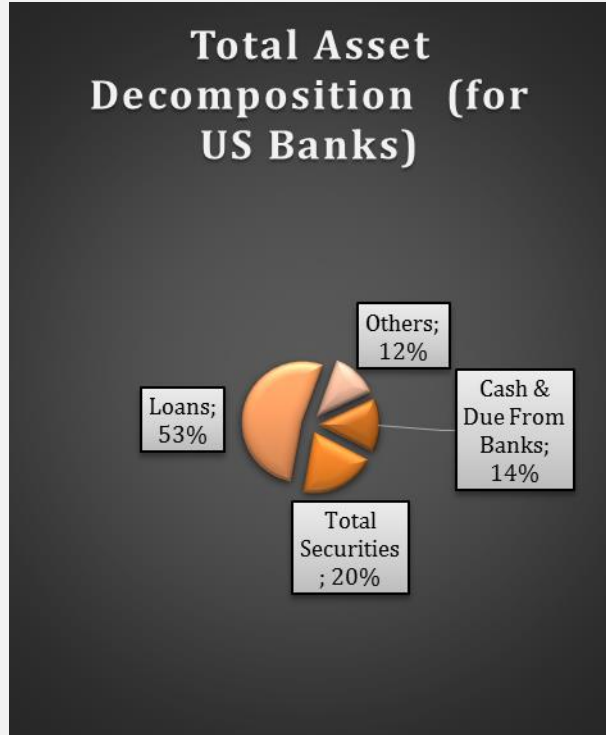
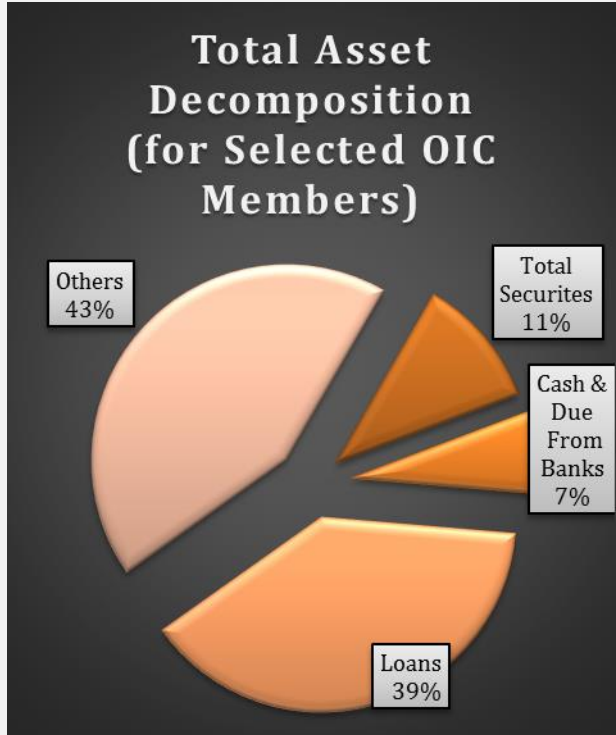
# Nonbanking versus Banking Sectors

Banking sector dominates non-banking financial sector in the selected OIC member states.



# ■ Total Asset Decomposition

The dominant asset class is loans 39%  
This is lower than US and EU.  
Securities US and EU banking system.

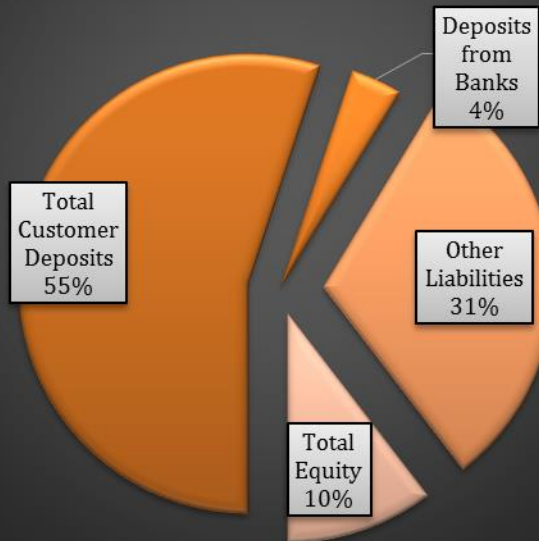




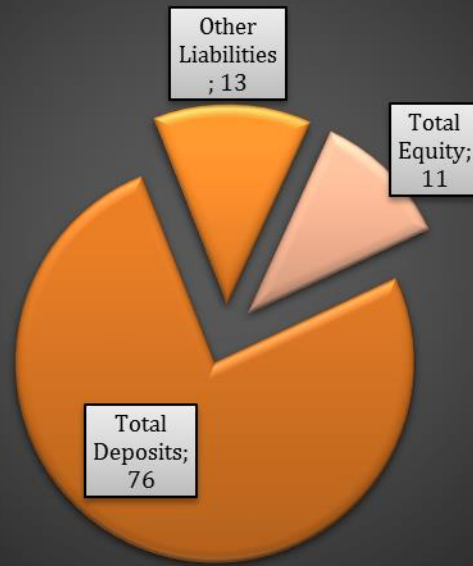
# Total Liability Decomposition

Deposits dominate total liabilities in the selected OIC member states.

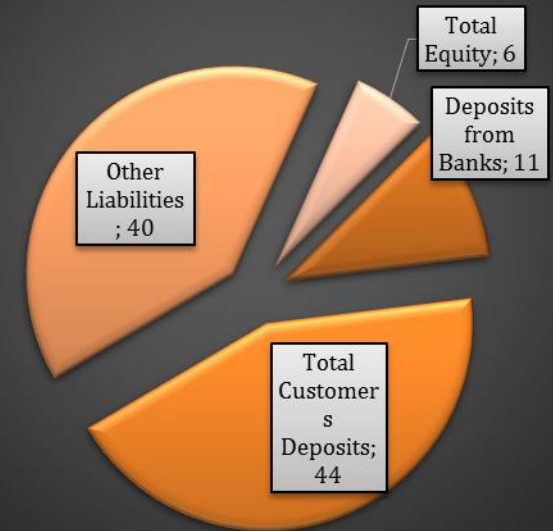
## Liability Decomposition (Selected OIC Members)



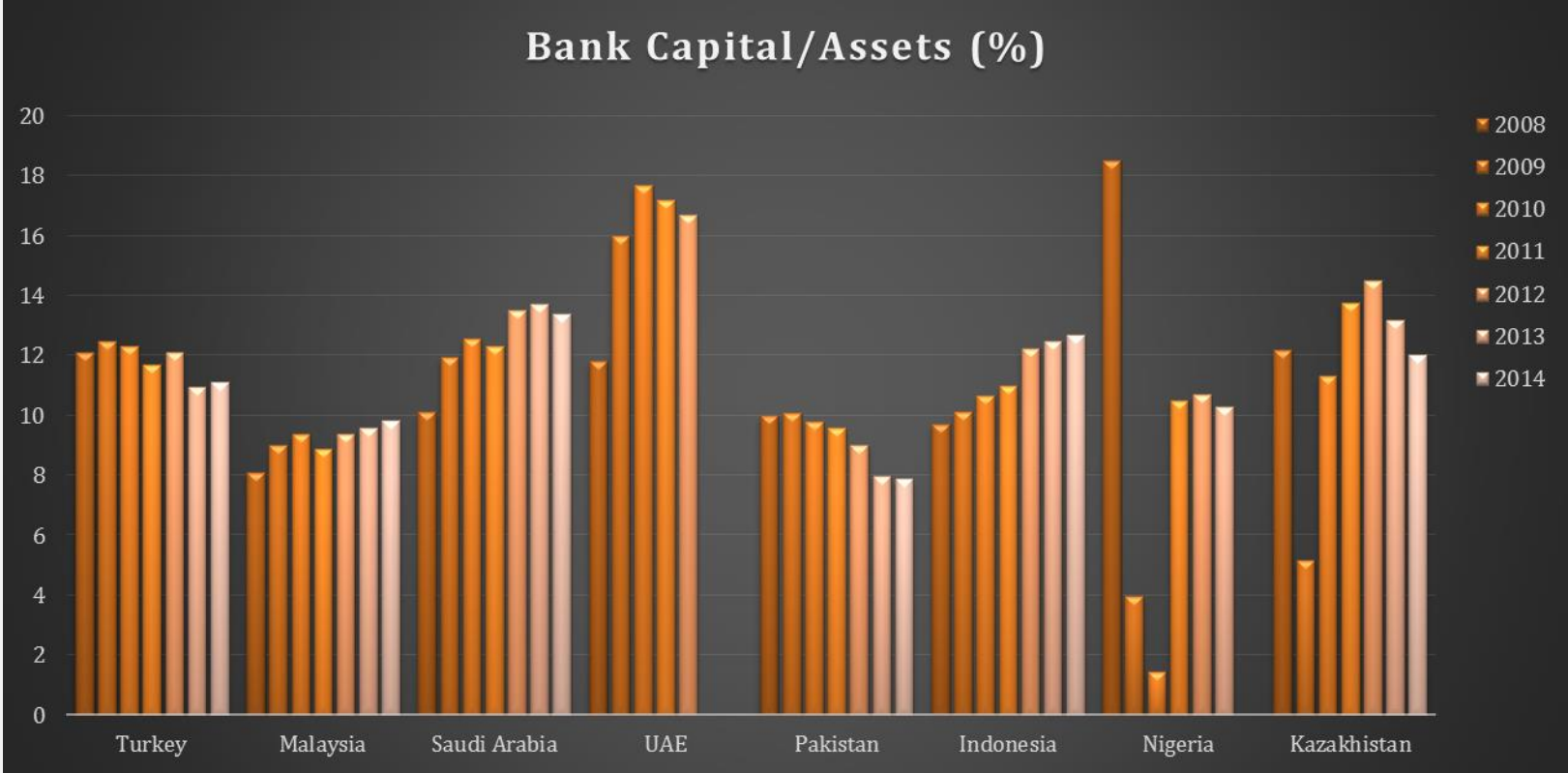
## Liability Decomposition (US Banks)



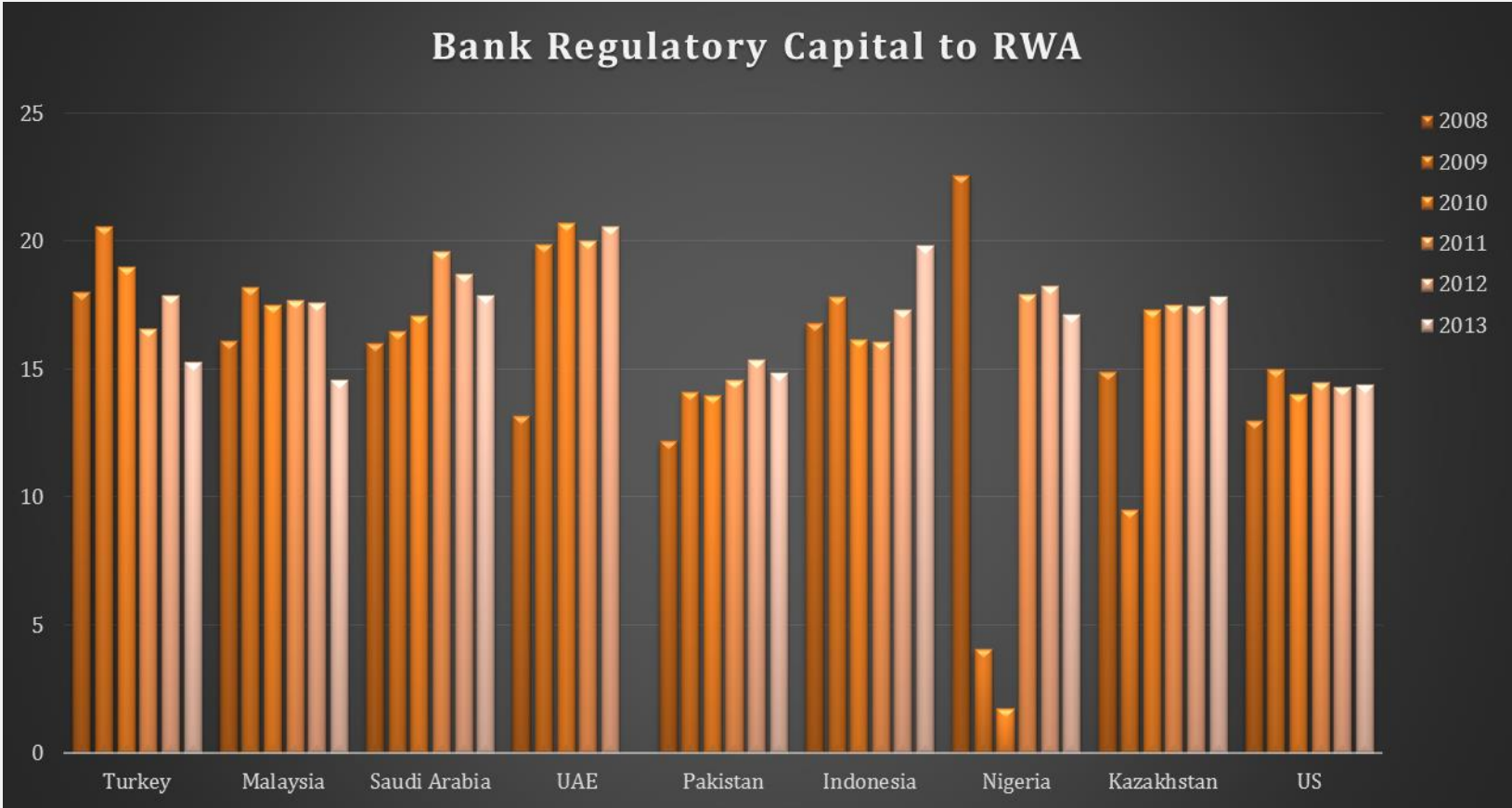
## Liability Decomposition (EU Banks)



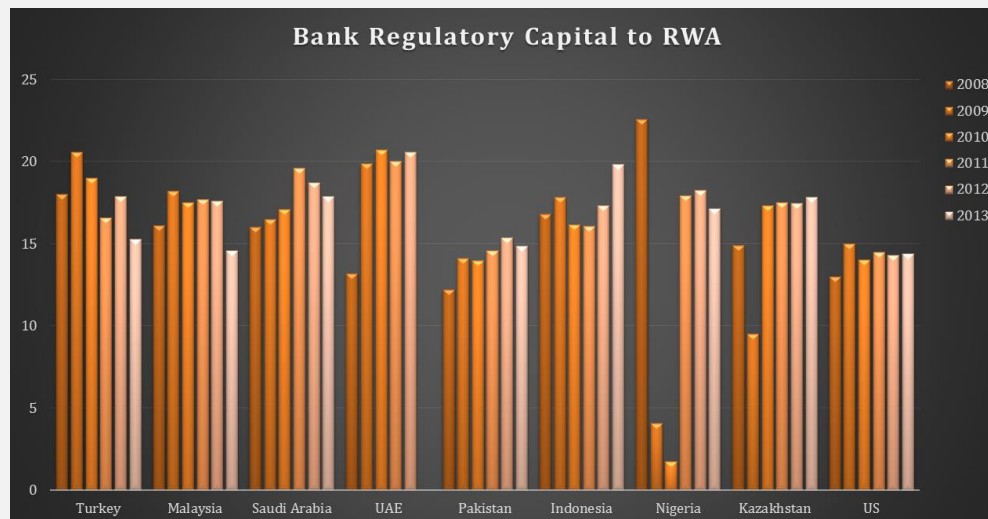
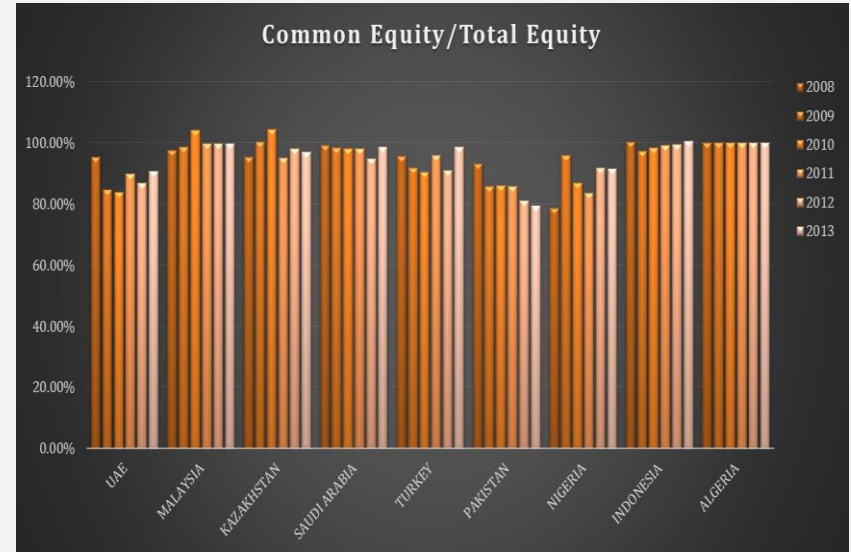
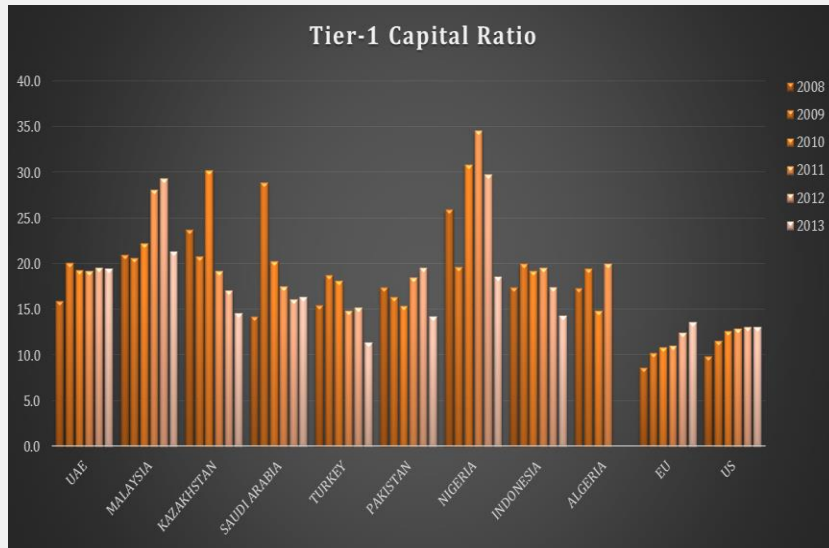
# Bank Capital



# Bank Regulatory Capital

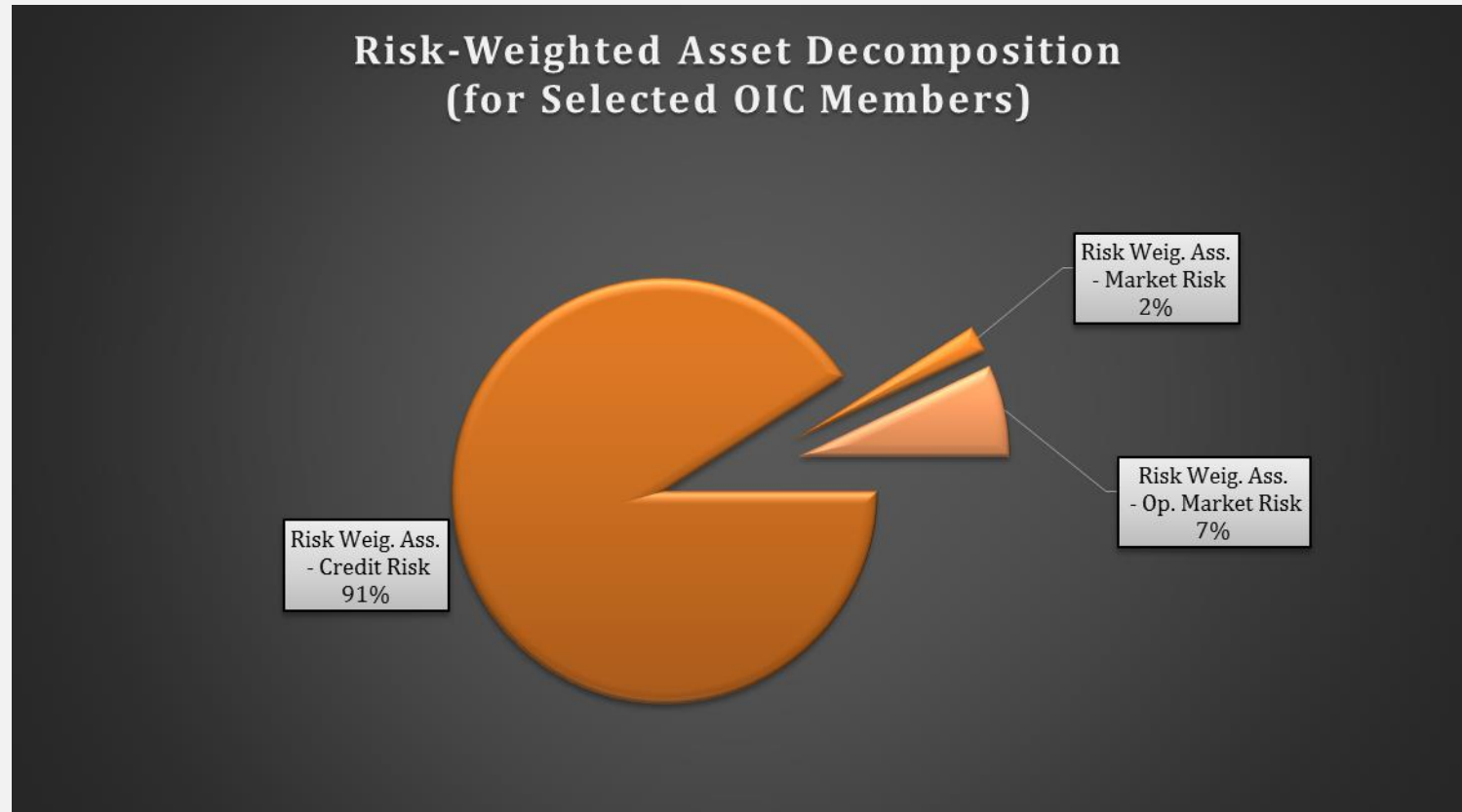


# Tier-1 Capital Ratio, Common Equity

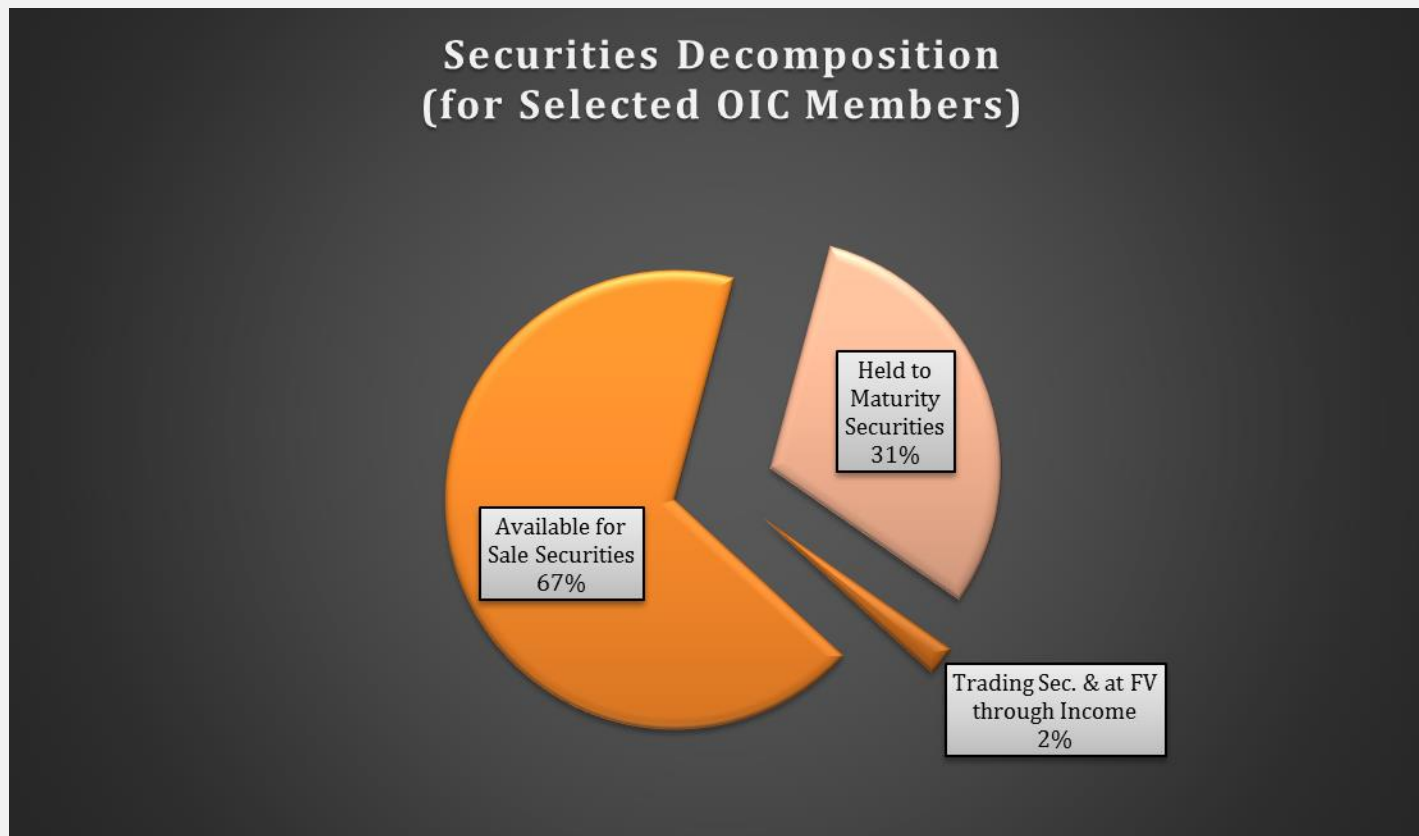


# Risk-Weighted Asset Decomposition

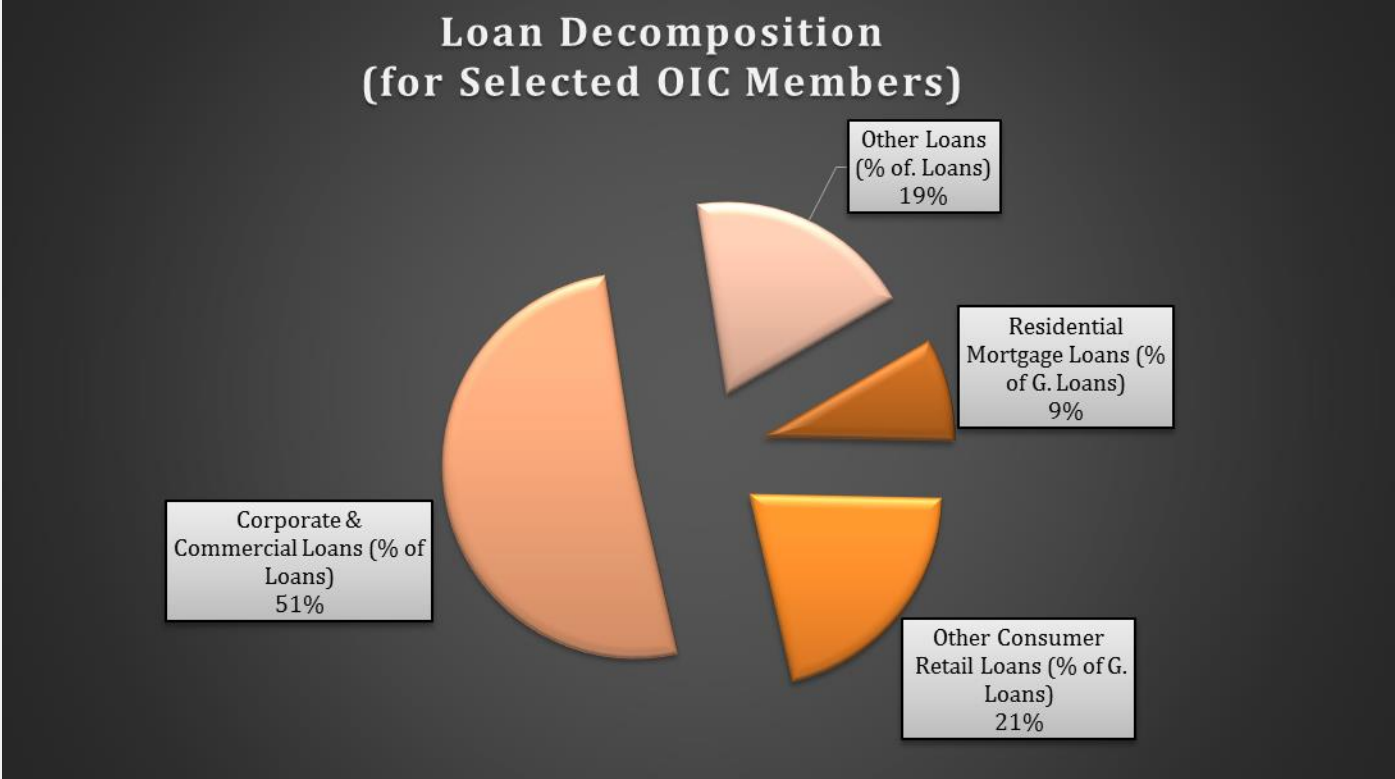
- Major Risk is Credit Risk



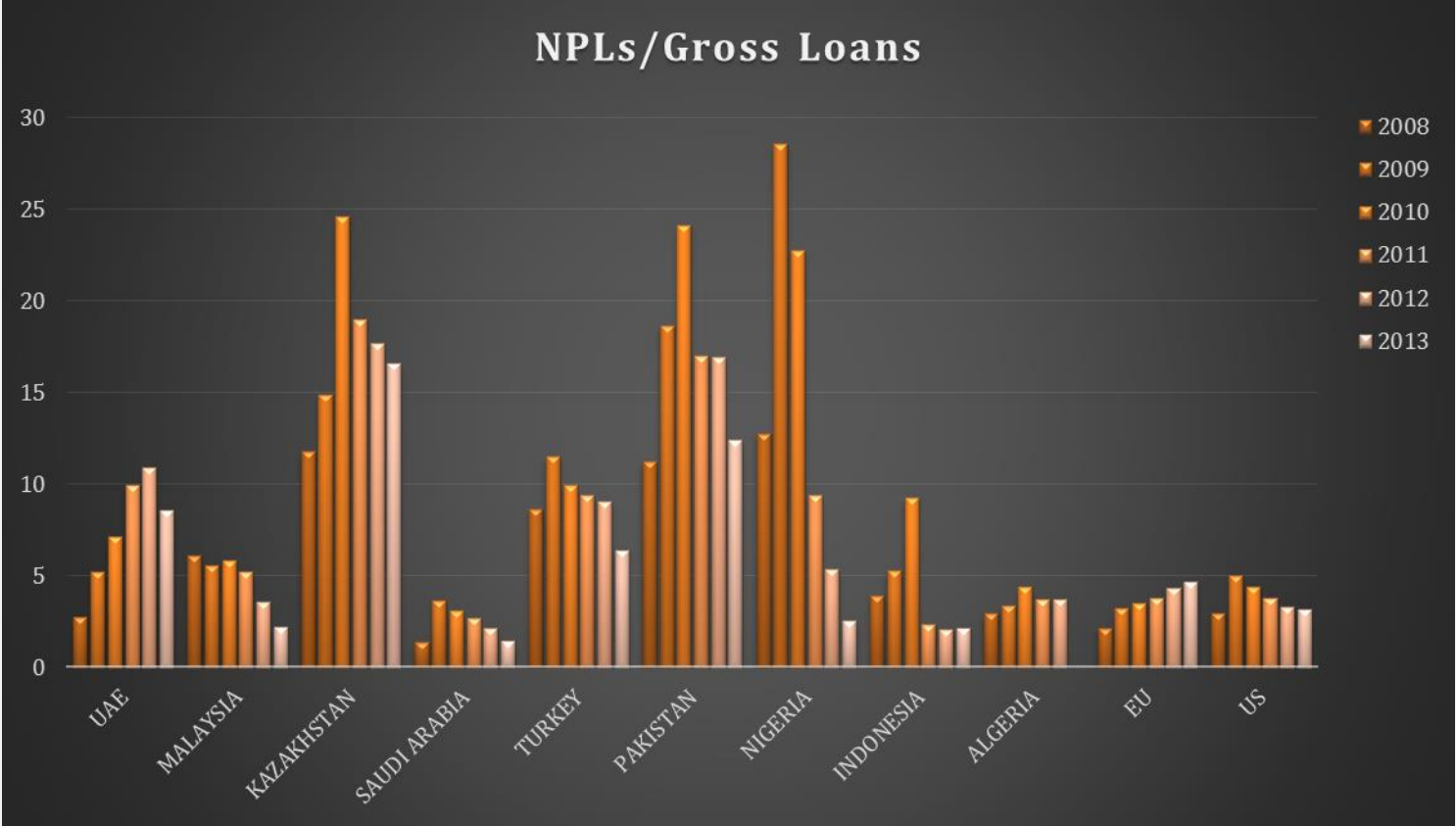
# Securities Decomposition



# Loan Decomposition

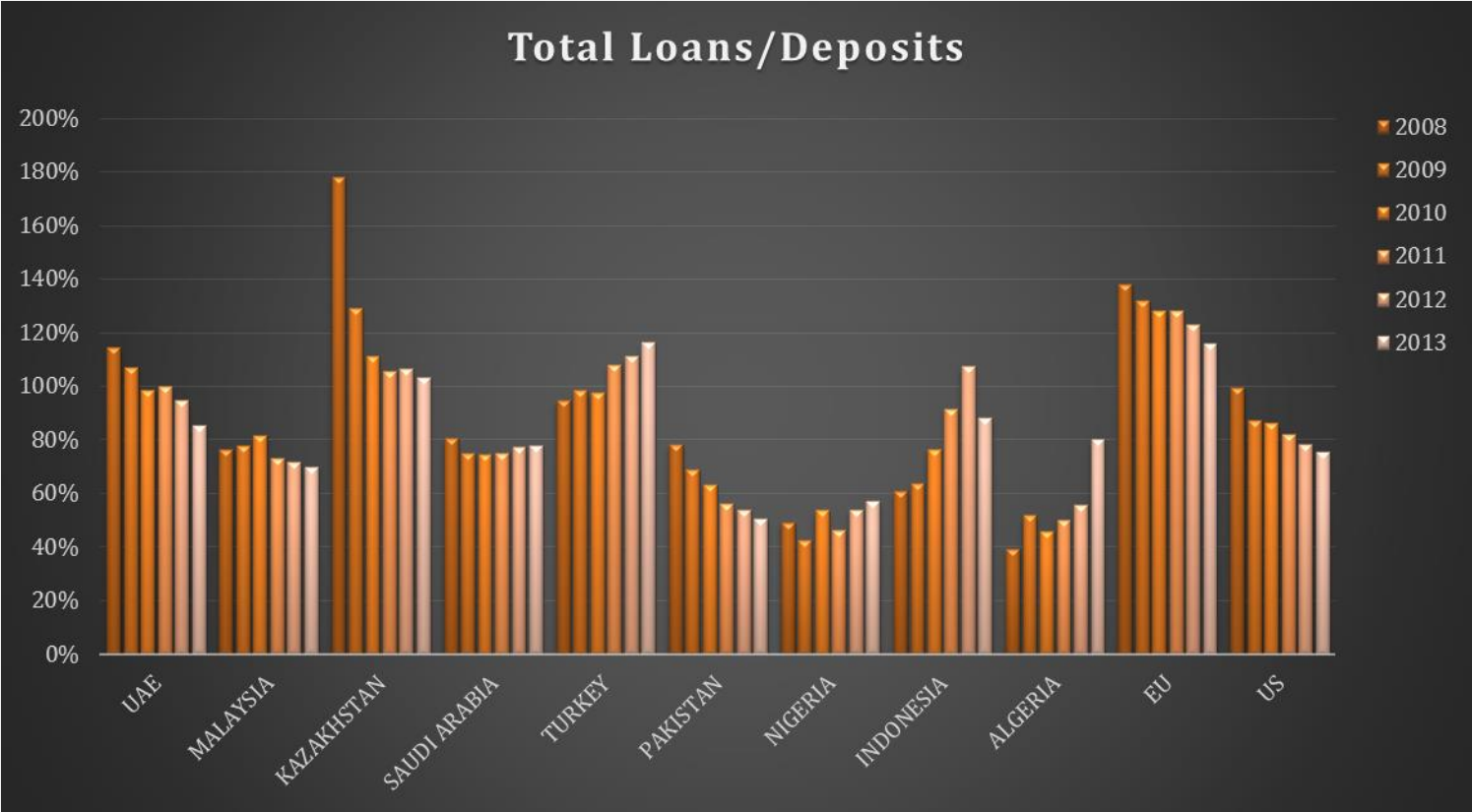


# Non-Performing Loans

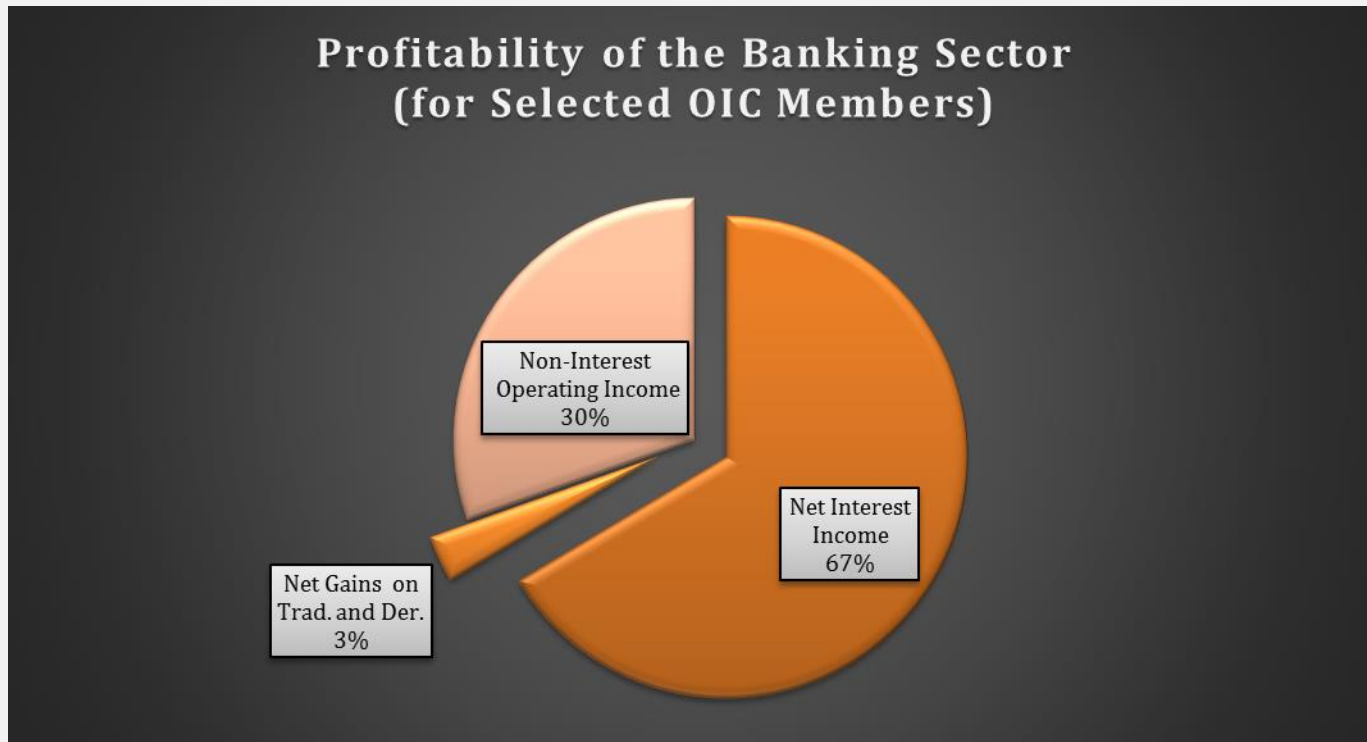




# Loan Deposit Ratio



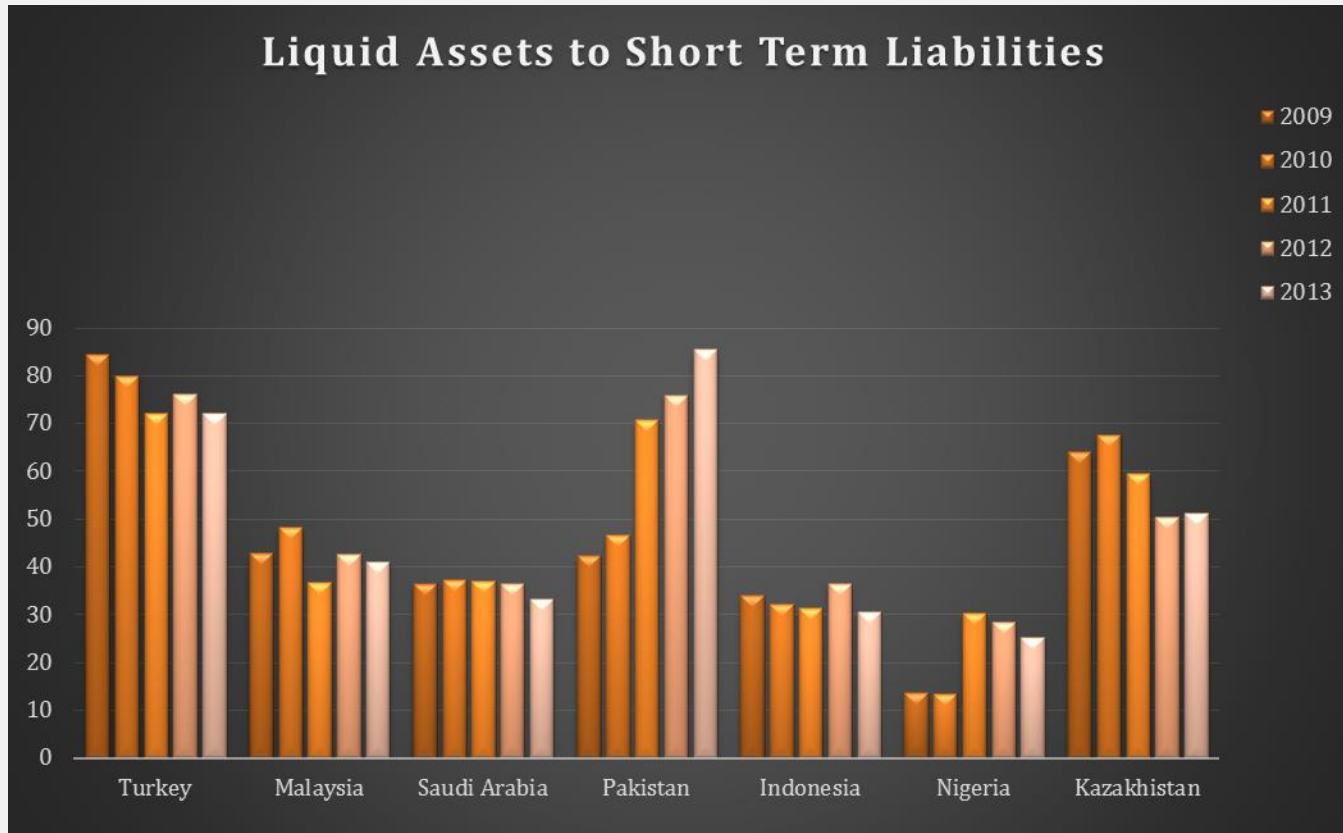
# Sources of Banking Profitability



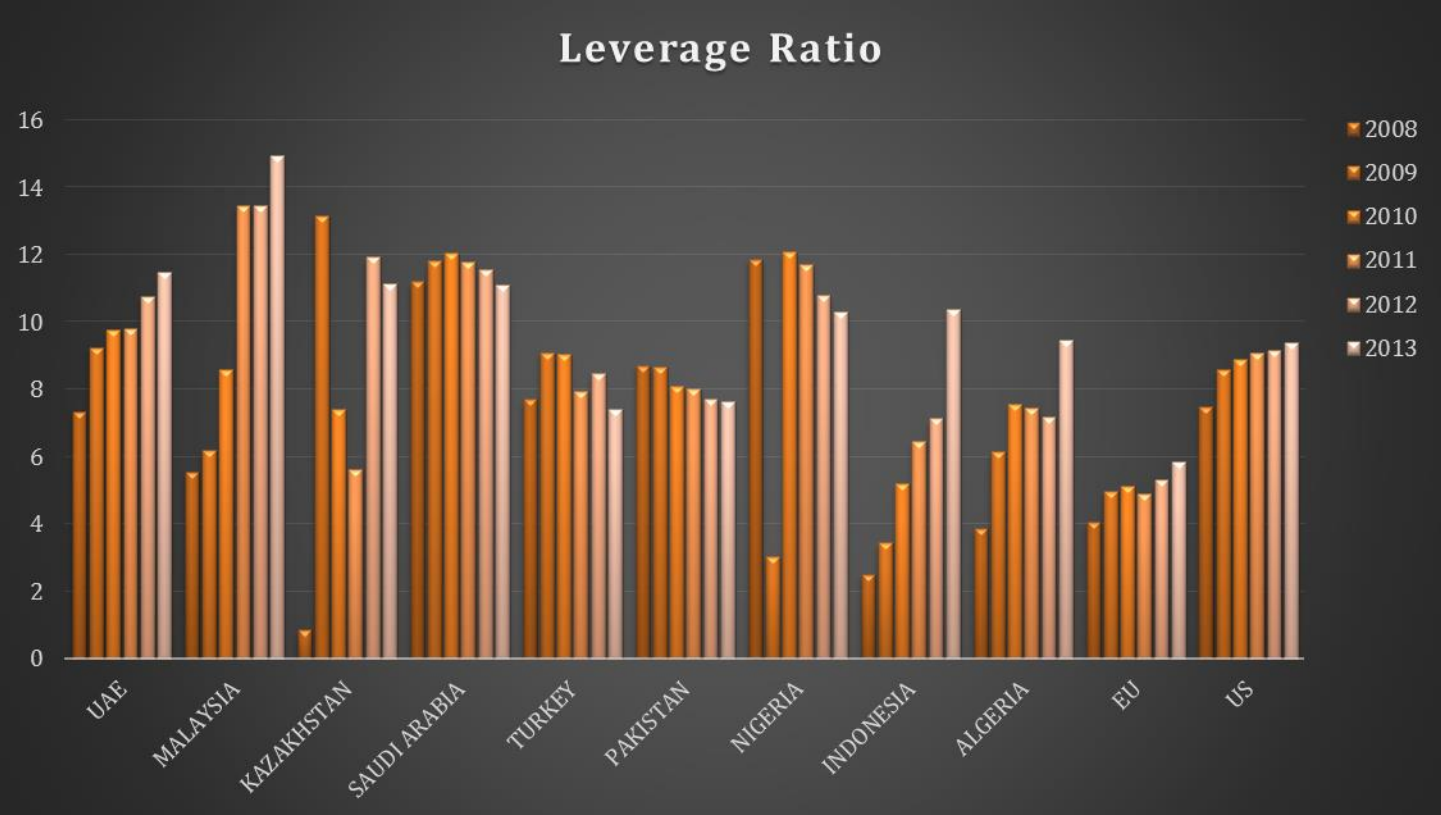
# Return on Equity



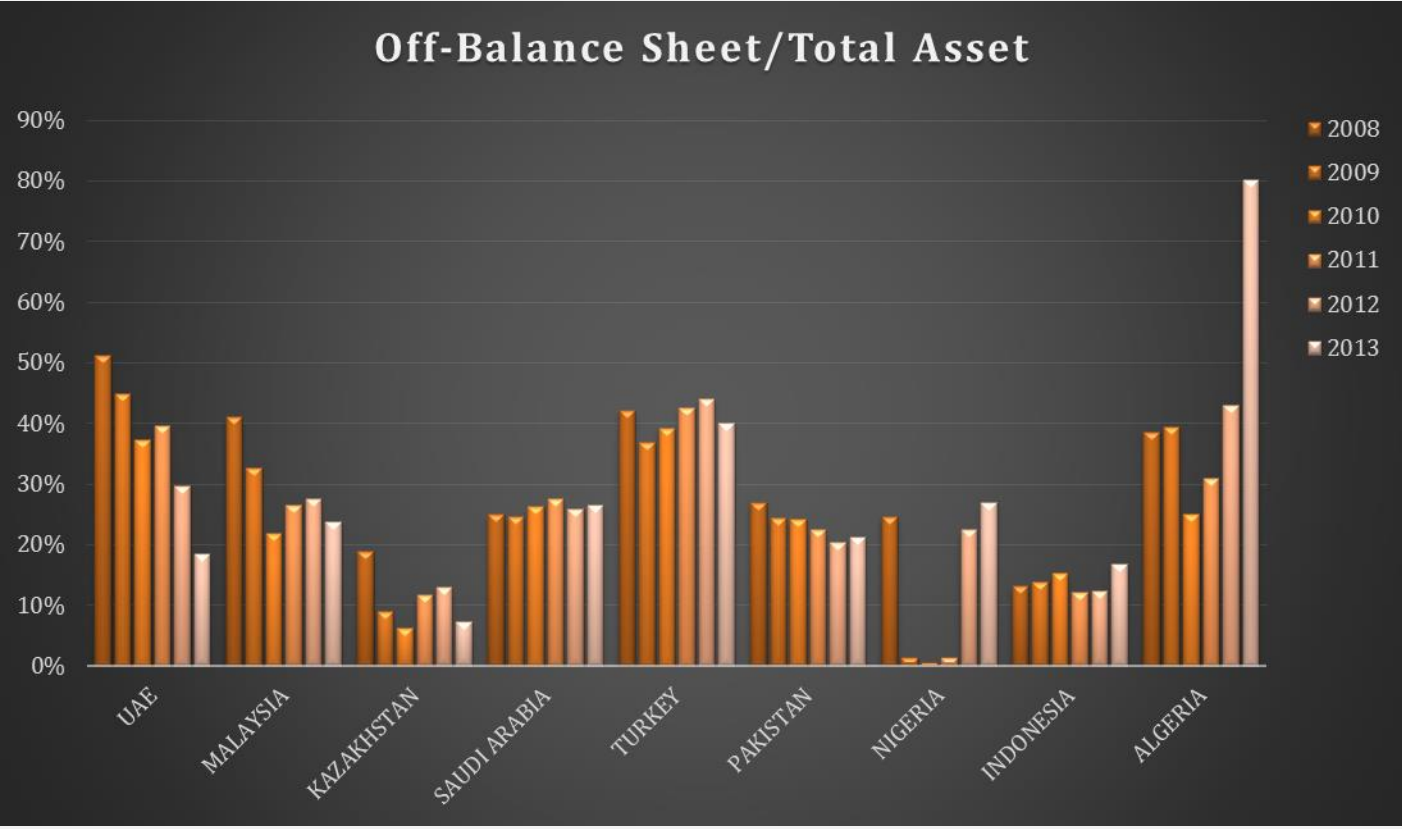
# Liquidity



# Leverage Ratio



# Off- Balance Sheet Assets



# Snapshot of the selected OIC Member states

- Credit growth is generally very strong
- Credit risk is the major financial risk in banking
- Backward looking credit risk measures (NPL, RWA) may understate the actual risks (forward looking measures should be used)
- Capital level in banking on average sufficient (mainly tier 1)
- Banking sector in general have ample liquidity.
- Size of “Off balance” assets is relatively small
- Interest rate incomes are the main source of banking profits.
- ROE's up to 2014 were better than EU and US banking

# **Banking Supervision in the Selected OIC Member States**



# Banking Supervision – A Comparative Analysis

- World Bank Regulation and Supervision Surveys covering 180 countries.  
(Indexing methodology used see Barth, Caprio, Levine (2013))
- **categories:**
  - ✓ Scope of Bank Activities and Financial Conglomerate Variables
  - ✓ Capital Regulations
  - ✓ Official Supervisory Power
  - ✓ Private Monitoring and External Governance
  - ✓ Deposit Insurance Schemes
  - ✓ Restrictions on Entry into Banking Sector

# Bank Activity Regulations

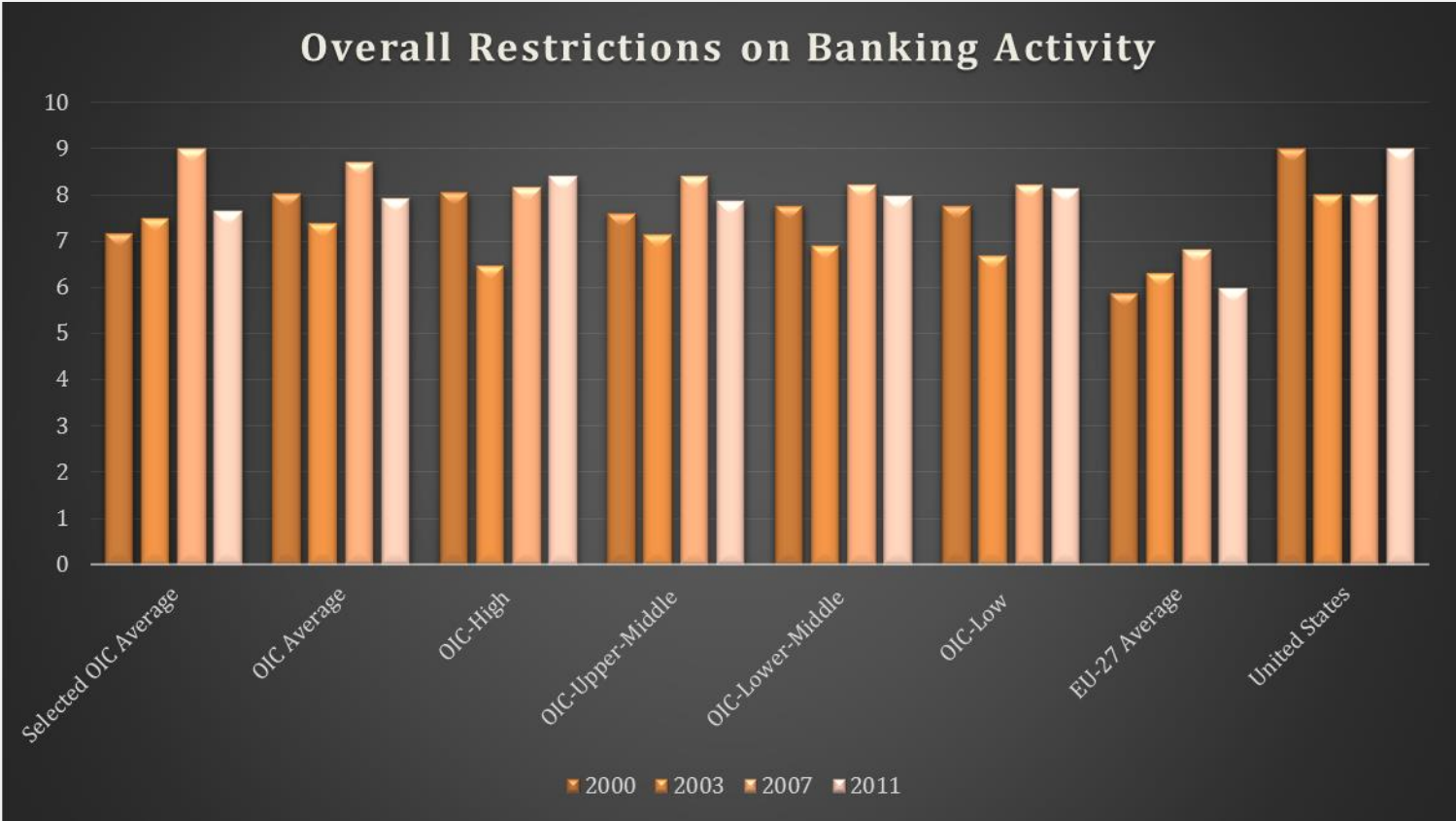
1. Security Activities (index value 1-4)
  2. Insurance Activities (index value 1-4)
  3. Real Estate Activities (index value 1-4)
  4. Overall Restrictions on Banking Activity (composition of 1-3, index value 3-12)
- Higher values indicate more stringent regulation

# Bank Activity Regulations – OIC and EU-27

- OIC member impose relatively more stringent regulations on the scope of banking activities.

Bank Activity Regulations	Survey	OIC Average	OIC-High Income Average	OIC-Upper-Middle Income Average	OIC-Lower-Middle Income Average	OIC-Low Income Average	EU-27 Average
<b>Security Activities Range 1-4</b>	2000	1,6	1,88	1,91	1,84	1,72	1,4
	2003	1,8	1,63	1,84	1,71	1,62	1,5
	2007	1,9	1,62	1,84	1,76	1,66	1,4
	2011	2,0	1,71	1,82	1,84	1,70	1,1
<b>Insurance Activities Range 1-4</b>	2000	3,2	2,37	2,36	2,44	2,44	2,4
	2003	3,1	2,63	2,74	2,70	2,73	2,5
	2007	3,4	3,43	3,30	3,41	3,41	2,9
	2011	2,7	3,10	2,81	2,82	3,02	2,5
<b>Real Estate Activities Range 1-4</b>	2000	3,3	3,00	2,88	2,81	2,81	2,2
	2003	2,5	2,21	2,55	2,51	2,32	2,3
	2007	3,3	2,89	3,05	2,92	2,92	2,6
	2011	3,2	3,64	3,46	3,42	3,51	2,4
<b>Overall Restrictions on Banking Activity Range-3-12</b>	2000	8,0	8,05	7,61	7,77	7,77	5,9
	2003	7,4	6,48	7,14	6,92	6,68	6,3
	2007	8,7	8,18	8,41	8,22	8,22	6,8
	2011	7,9	8,40	7,88	7,97	8,14	6,0

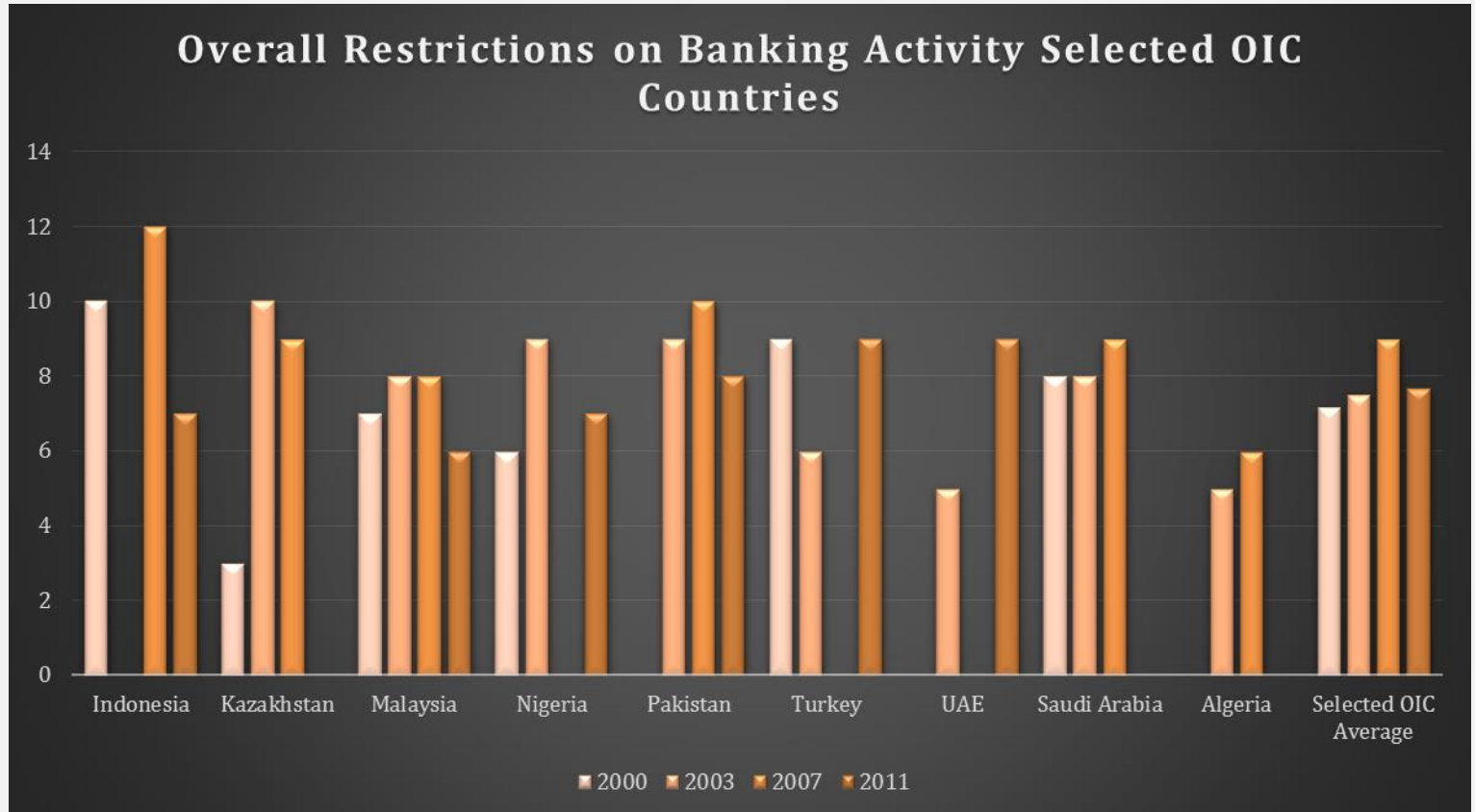
# Overall Restrictions on Banking Activity– OIC ,EU-27 and US



# Bank Activity Regulations – Selected OIC Members

Bank Activity Regulations	Survey	Indonesia	Kazakhstan	Malaysia	Nigeria	Pakistan	Turkey	UAE	Saudi Arabia	Algeria	Selected OIC Average
<b>Security Activities Range 1-4</b>	2000	2	1	2	2	N/A.	3	1	2	N/A.	1,9
	2003	N/A.	3	2	3	2	2	1	1	2	2,0
	2007	4	2	2	N/A.	3	N/A.	1	2	1	2,1
	2011	2	N/A.	2	2	2	2	1	N/A.	N/A.	1,8
<b>Insurance Activities Range 1-4</b>	2000	4	1	2	2	3	2	N/A.	2	N/A.	2,3
	2003	N/A.	3	3	3	3	2	3	3	2	2,8
	2007	4	3	3	N/A.	3	N/A.	N/A.	3	4	3,3
	2011	2	N/A.	2	2	3	3	4	N/A.	N/A.	2,7
<b>Real Estate Activities Range 1-4</b>	2000	4	1	3	2	N/A.	4	N/A.	4	1	2,7
	2003	N/A.	4	3	3	4	2	1	4	1	2,8
	2007	4	4	3	3	4	N/A.	N/A.	4	1	3,3
	2011	3	N/A.	N/A.	3	3	4	4	N/A.	N/A.	3,4
<b>Overall Restrictions on Banking Activity Range-3-12</b>	2000	10	3	7	6	N/A.	9	N/A.	8	N/A.	7,2
	2003	N/A.	10	8	9	9	6	5	8	5	7,5
	2007	12	9	8	N/A.	10	N/A.	N/A.	9	6	9,0
	2011	7	N/A.	6	7	8	9	9	N/A.	N/A.	7,7

# Overall Restrictions on Banking Activity– Selected OIC Members



# Capital Regulations

1. Overall Capital Stringency (index value 0-7)
  2. Initial capital Stringency (index value 0-3)
  3. Capital Regulatory Index ranges between 0-10 and composed of 1 and 2
- Higher values indicate more stringent regulation

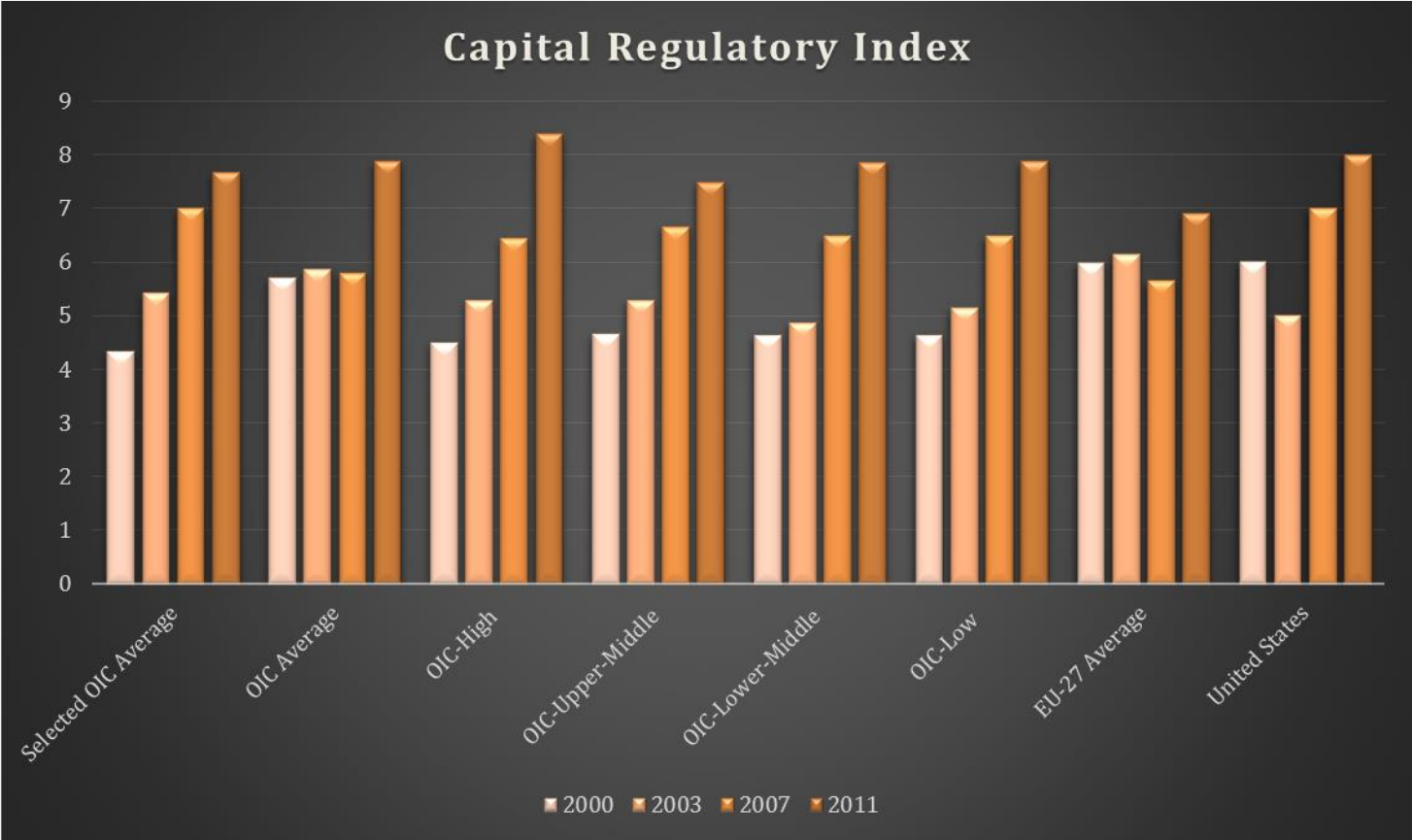
# Capital Regulations – OIC, EU-27 and US

- On average, capital regulations in OIC states are stricter than EU-27 and equally strict as US. There is upward trend in stringency of regulations.

Capital Regulations	Survey	Selected OIC Average	OIC Average	OIC-High Income Average	OIC-Upper-Middle Income Average	OIC-Lower-Middle Income Average	OIC-Low Income Average	EU-27 Average	United States
<b>Overall Capital Range 0-7</b>	2000	2,2	3,1	2,57	2,55	2,48	2,48	4,0	4
	2003	3,2	3,5	3,18	3,13	3,07	3,18	4,1	3
	2007	4,3	3,6	3,90	4,05	3,98	3,98	3,6	5
	2011	5,0	5,2	5,55	4,85	5,15	5,13	5,0	7
<b>Initial Capital Stringency Range 0-3</b>	2000	2,3	2,4	2,15	2,23	2,22	2,33	2,0	2
	2003	2,3	2,4	2,12	2,18	1,84	1,98	2,1	2
	2007	2,6	2,3	2,58	2,61	2,52	2,58	2,0	2
	2011	2,7	2,7	2,83	2,65	2,70	2,75	1,9	1
<b>Capital Regulatory Index Range 0-10</b>	2000	4,3	5,7	4,51	4,65	4,64	4,64	6,0	6
	2003	5,4	5,9	5,28	5,30	4,88	5,14	6,1	5
	2007	7,0	5,8	6,45	6,66	6,48	6,48	5,7	7
	2011	7,7	7,9	8,39	7,49	7,86	7,88	6,9	8



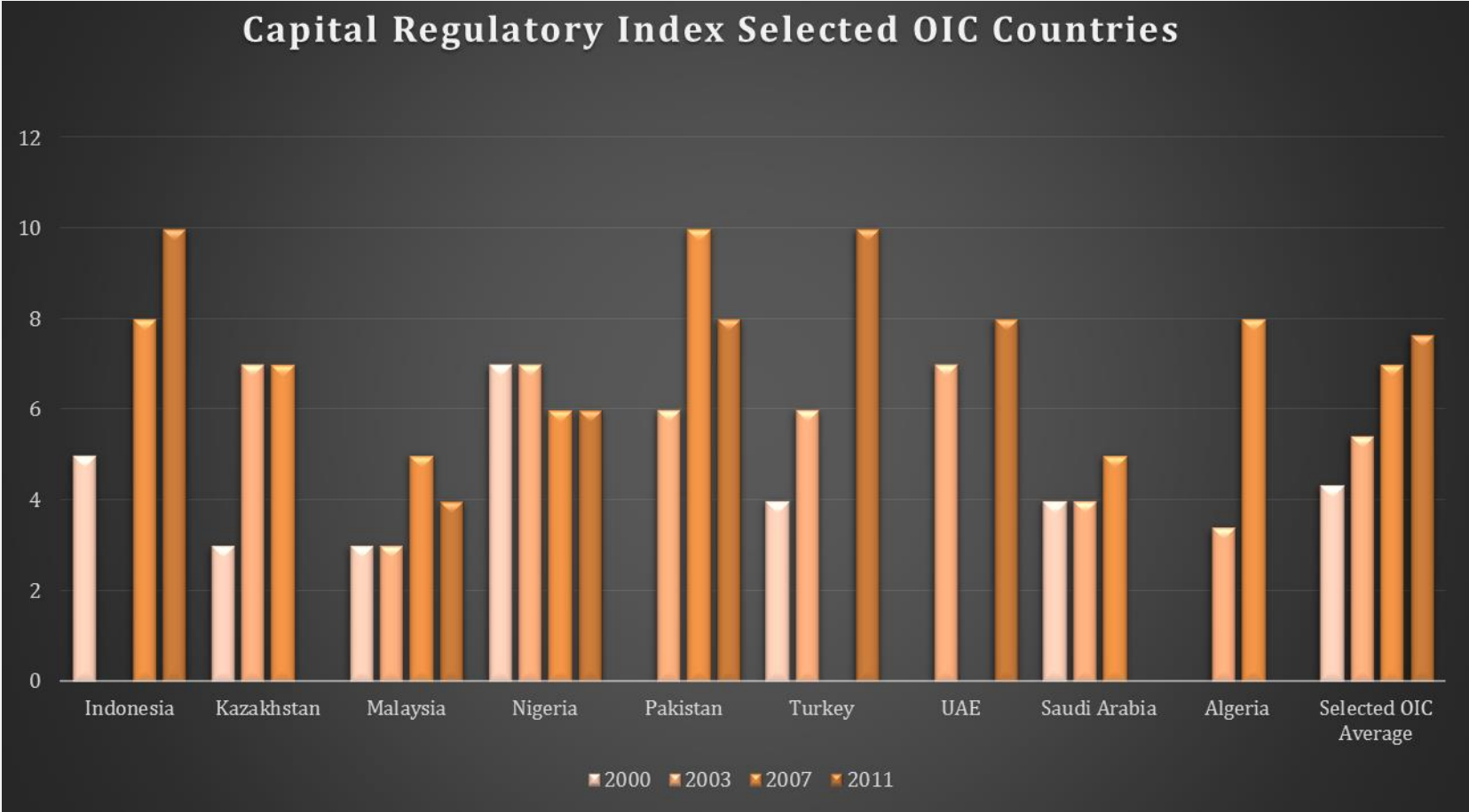
# Capital Regulations – OIC, EU-27 and US



# Capital Regulations – Selected OIC Members

Capital Regulations	Survey	Indonesia	Kazakhstan	Malaysia	Nigeria	Pakistan	Turkey	UAE	Saudi Arabia	Algeria	Selected OIC Average
<b>Overall Capital Stringency Range 0-7</b>	2000	2	1	1	4	N/A.	3	N/A.	2	N/A.	2,2
	2003	N/A.	4	1	4	4	3	4	3	2,4	3,2
	2007	5	5	3	3	7	3,6	N/A.	3	5	4,3
	2011	7	N/A.	2	3	6	7	5	N/A.	N/A.	5,0
<b>Initial Capital Stringency Range 0-3</b>	2000	3	2	2	3	N/A	1	3	2	N/A	2,3
	2003	3	3	2	3	2	3	3	1	1	2,3
	2007	3	2	2	3	3	N/A	3	2	3	2,6
	2011	3	N/A	2	3	2	3	3	N/A	N/A	2,7
<b>Capital Regulatory Range 0-10</b>	2000	5	3	3	7	N/A.	4	N/A.	4	N/A.	4,3
	2003	N/A.	7	3	7	6	6	7	4	3,4	5,4
	2007	8	7	5	6	10	N/A.	N/A.	5	8	7,0
	2011	10	N/A.	4	6	8	10	8	N/A.	N/A.	7,7

# Capital Regulations – Selected OIC Members



# Official Supervisory Power

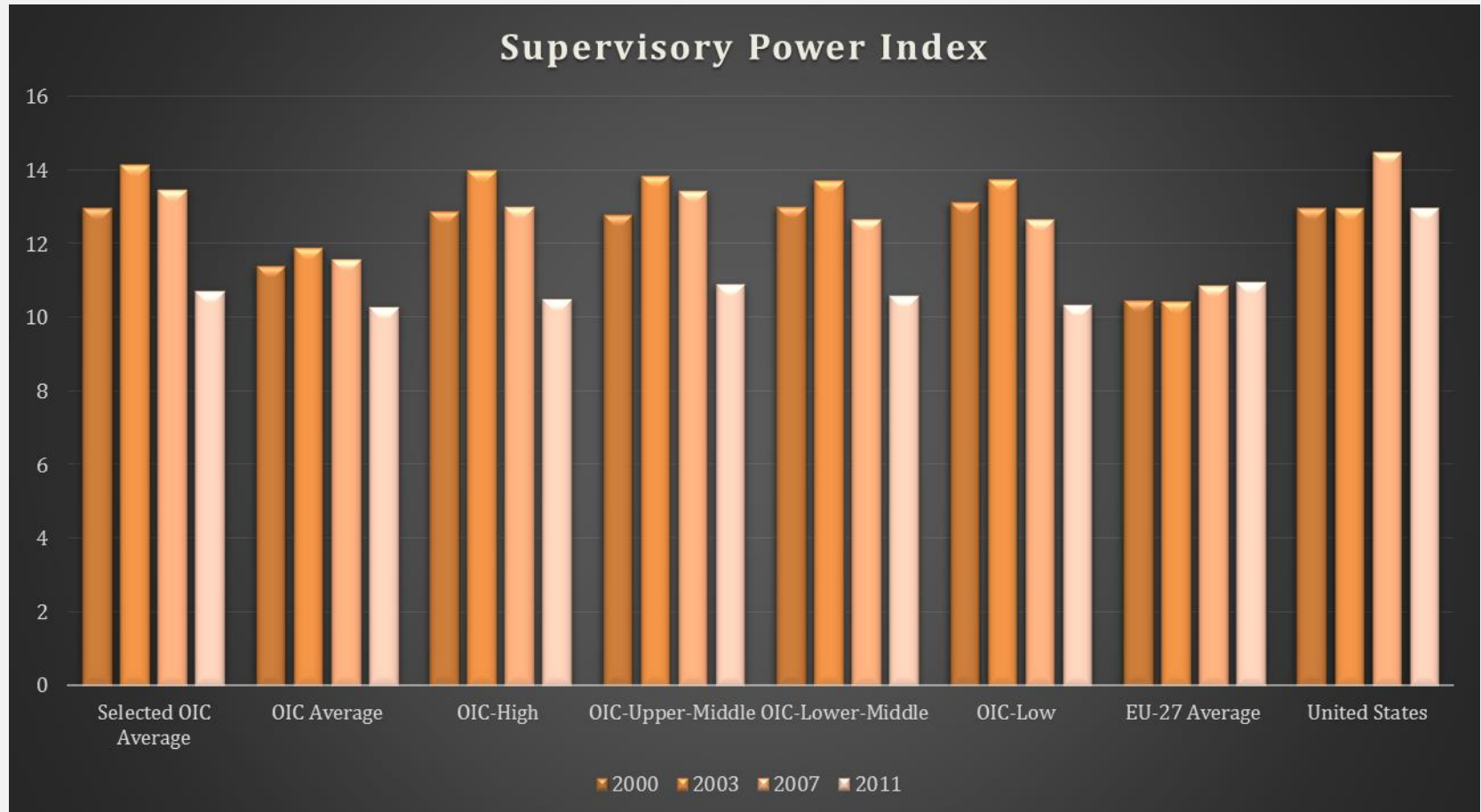
- Supervisory power of the regulatory authority is measured as the ability to gather information from banks and the ability to induce banks to pursue certain actions.
- Index values ranges between 0 and 14 where higher values indicate greater power of the supervisory authority.

# Official Supervisory Power- OIC, EU-27 and US

- On average, OIC members' supervisory authorities are equally powerful as EU-27 and slightly less powerful than US.

Supervisory Power Index	Survey	Selected OIC Average	OIC Average	OIC-High Income Average	OIC-Upper-Middle Income Average	OIC-Lower-Middle Income Average	OIC-Low Income Average	EU-27 Average	United States
	2000	12,99	11,43	12,90	12,82	13,02	13,15	10,49	13,00
	2003	14,17	11,91	14,01	13,86	13,74	13,77	10,45	13,00
	2007	13,50	11,61	13,02	13,46	12,68	12,68	10,88	14,50
	2011	10,75	10,32	10,52	10,92	10,63	10,35	11,00	13,00

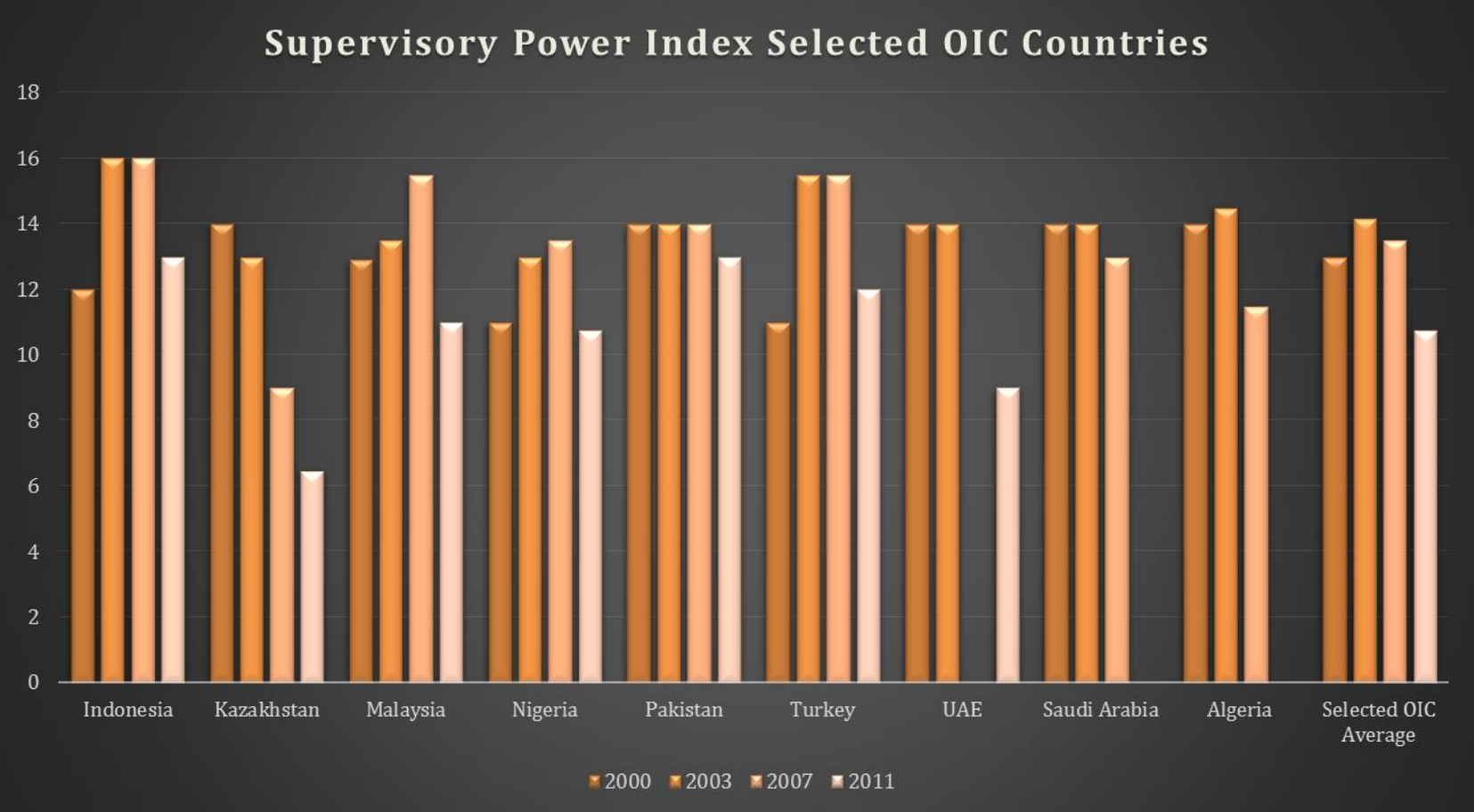
# Official Supervisory Power- OIC, EU-27 and US



# Official Supervisory Power- Selected OIC Members

Supervisory Power Index	Survey	Indonesia	Kazakhstan	Malaysia	Nigeria	Pakistan	Turkey	UAE	Saudi Arabia	Algeria	Selected OIC Average
	2000	12,00	14,00	12,92	11,00	14,00	11,00	14,00	14,00	14,00	12,99
	2003	16,00	13,00	13,50	13,00	14,00	15,50	14,00	14,00	14,50	14,17
	2007	16,00	9,00	15,50	13,50	14,00	15,50	N/A.	13,00	11,50	13,50
	2011	13,00	6,46	11,00	10,77	13,00	12,00	9,00	N/A	N/A	10,75

# Official Supervisory Power- Selected OIC Members

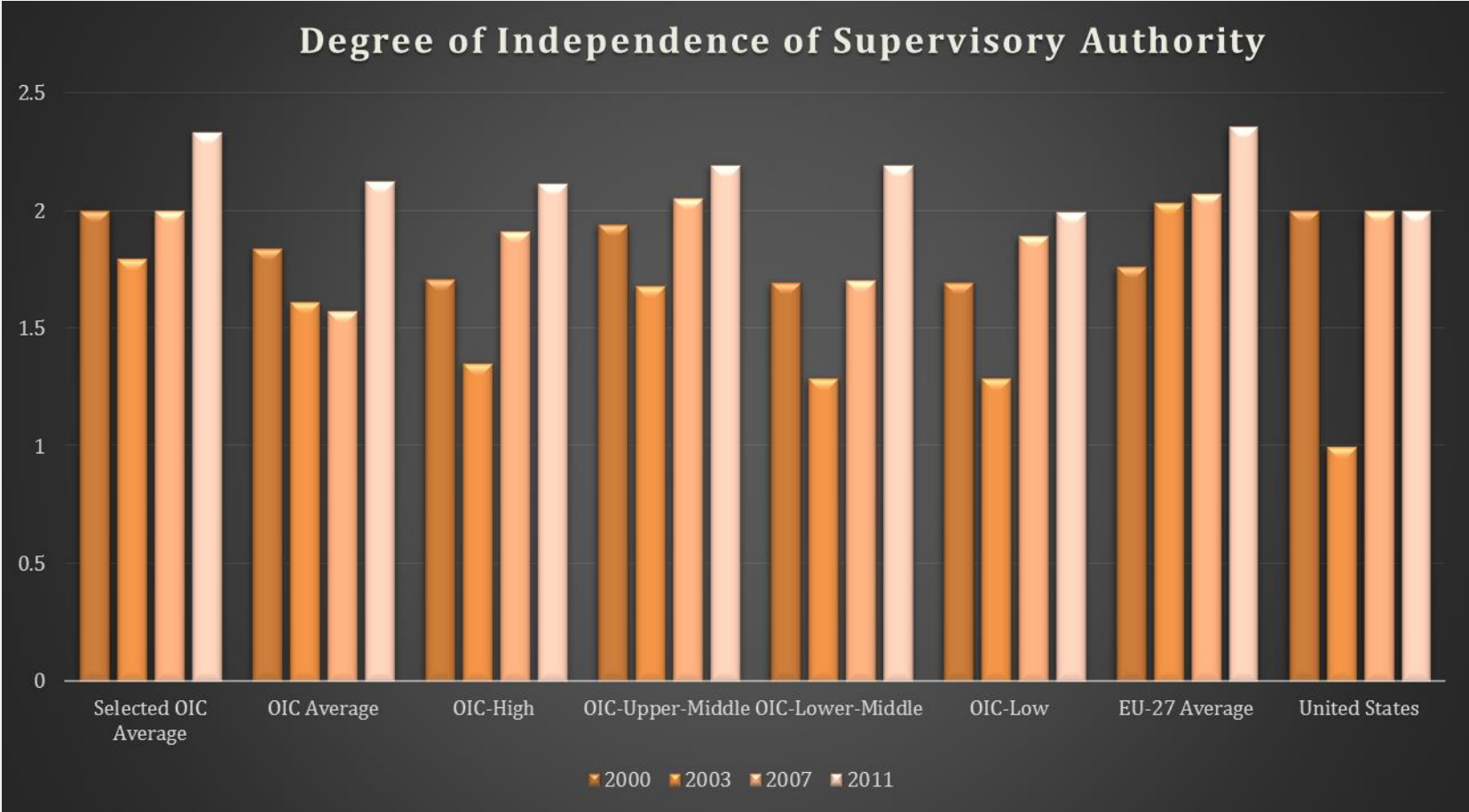




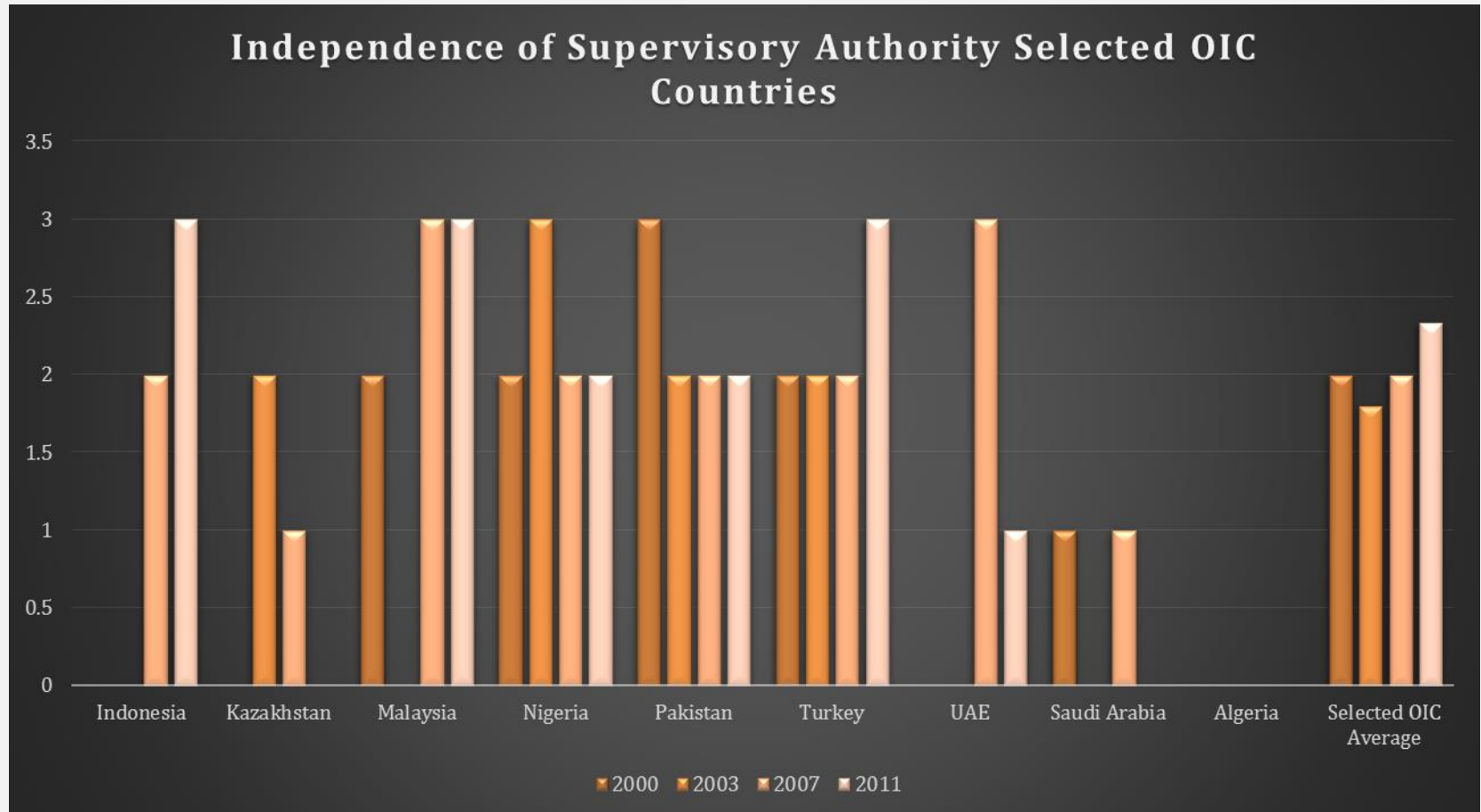
# Independence of Supervisory Authority

- The survey evaluates the general independence of the supervisory authority and obtains an index value ranging between 0-3.
- Higher values indicates ore independence.
- Combines three measures ranging between 0-1
  1. Independence of supervisory authority from banks
  2. Independence of supervisory authority from political
  3. Independence of supervisory authority from fixed term

# Independence of Supervisory Authority – OIC, EU-27 and US



# Independence of Supervisory Authority – Selected OIC Members

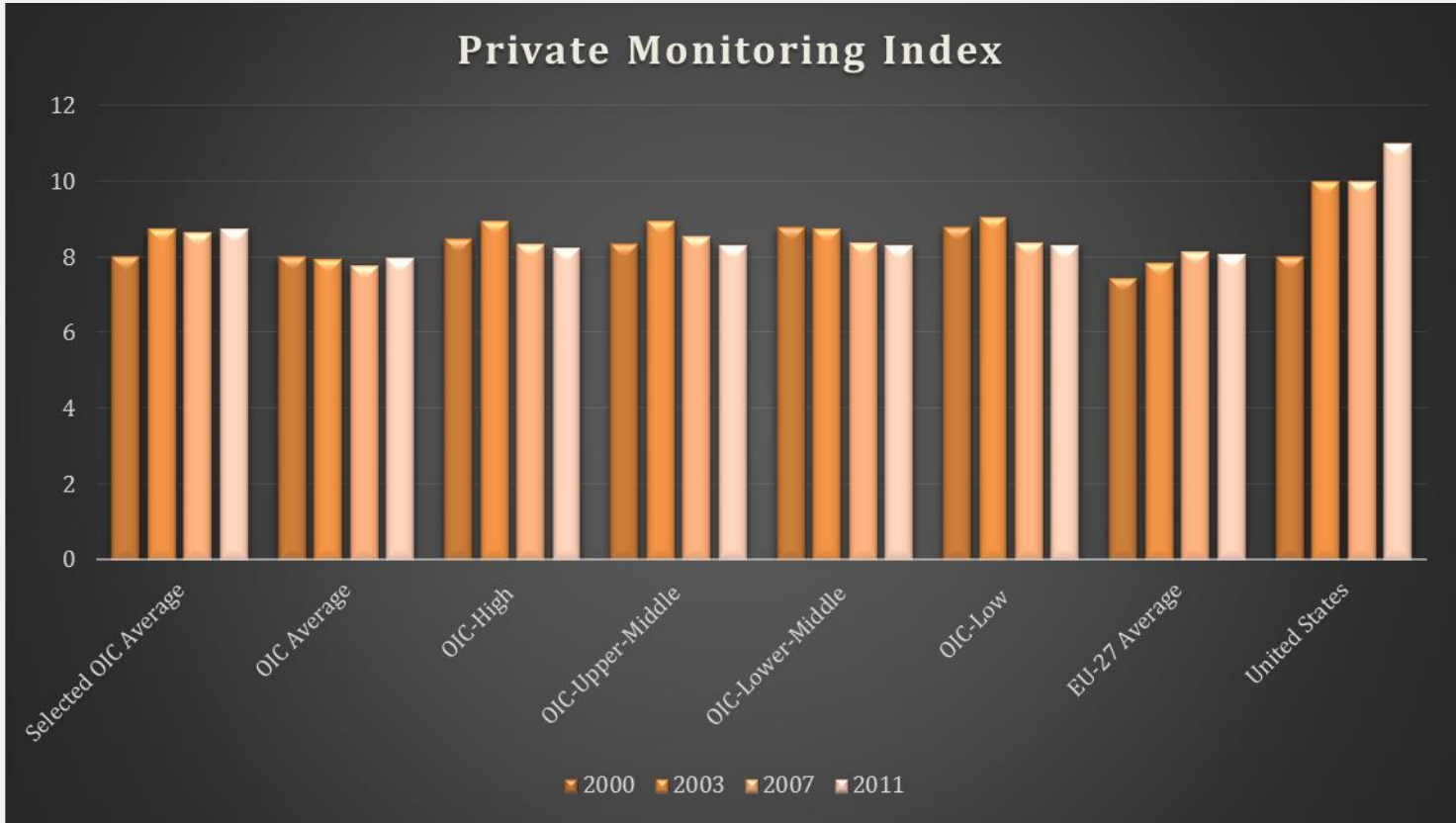


# Private Monitoring

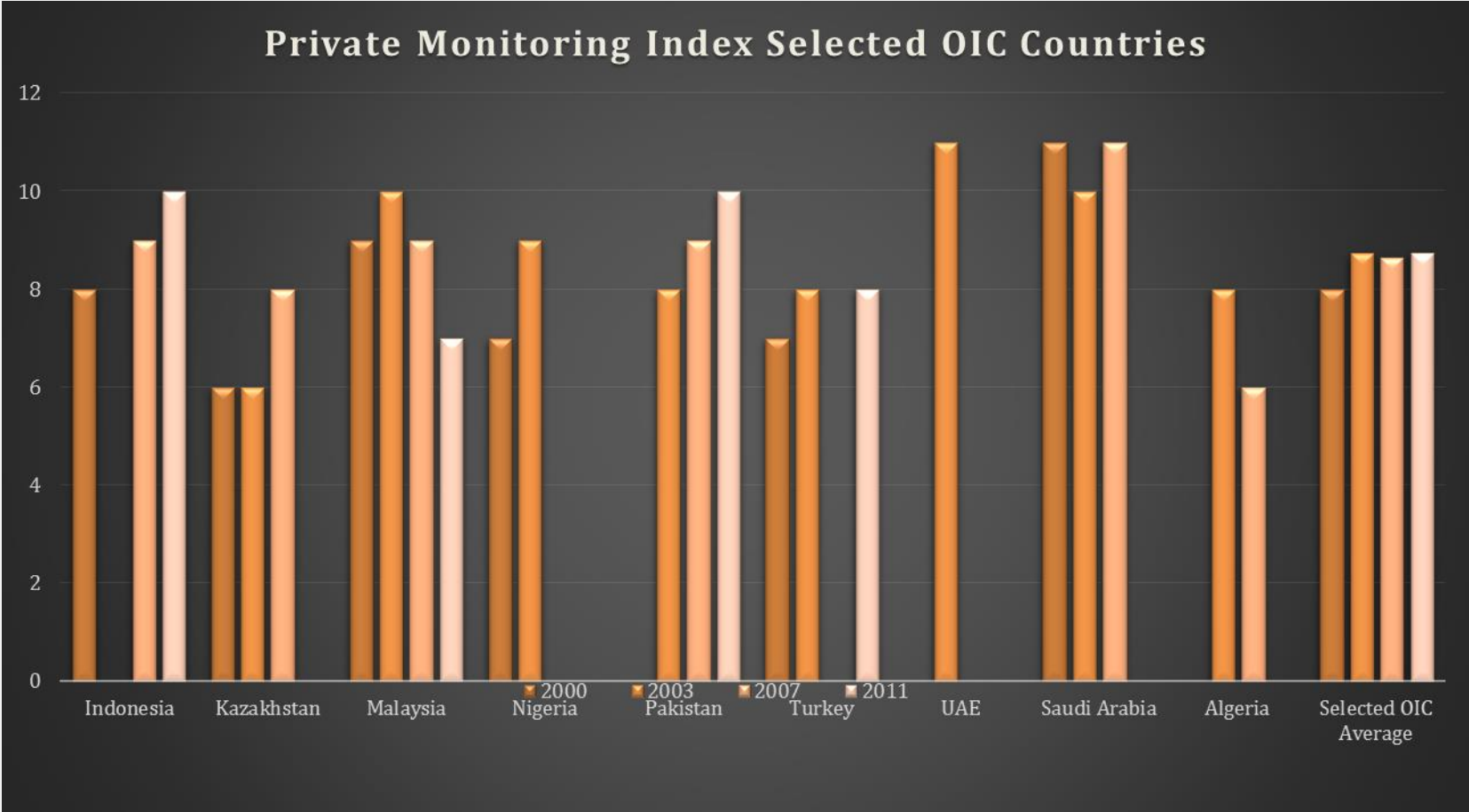
- The index variable “private monitoring” measures the degree to which supervisory agencies require banks to obtain certified audits and/or ratings from international-rating agencies.
- Index values ranges between 0-12 where larger values indicate greater regulatory empowerment of the monitoring of banks by private investors.

# Private Monitoring Index – OIC, EU-27 and US

- OIC average is in line with the average of EU-27 and slightly lower than US.

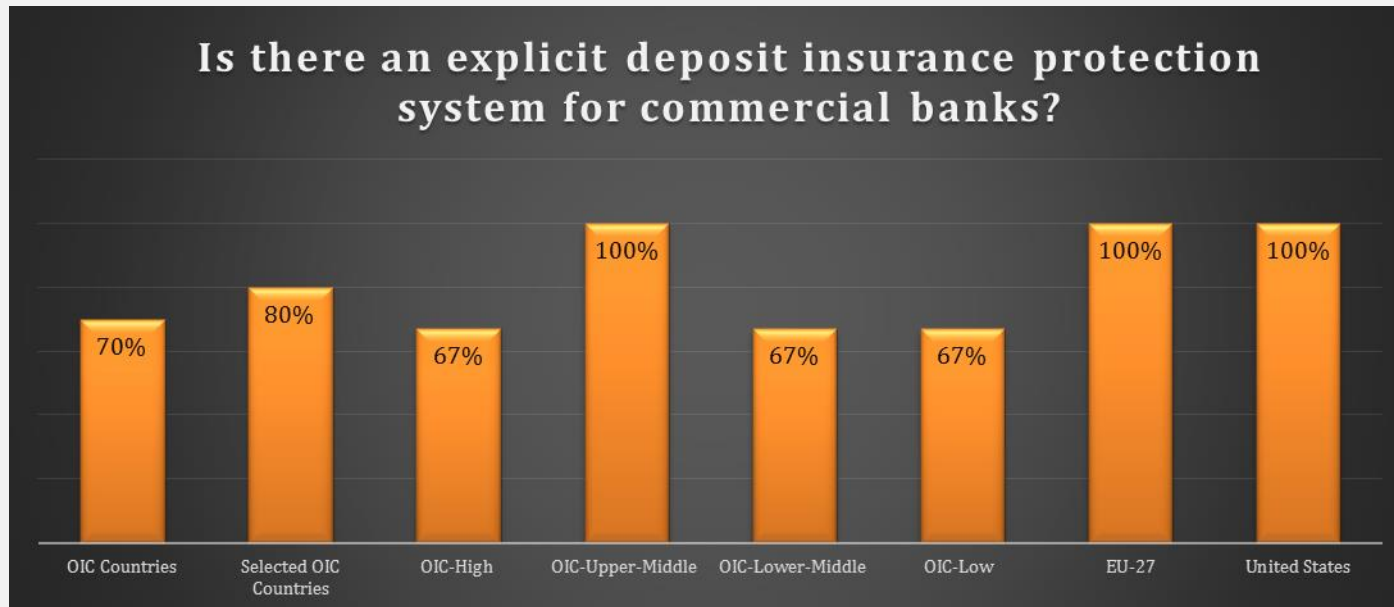


# Private Monitoring Index – Selected OIC Members



# Deposit Insurance

- All EU-27 countries and US provide an explicit deposit insurance scheme some OIC countries do not have deposit insurance.



# Summary of Supervisory review in OIC member states



# Banking Supervision – A Comparative Analysis Summary of Results

- **Scope of Bank Activity Regulations**

*--- Overall, OIC countries impose stringent regulations on banking activities as restrictive as EU-27 and US*

- **Official Supervisory Power**

*--- Overall, supervisory power in OIC countries is equal to the average of EU-27 and slightly lower than US.*

# Banking Supervision: Comparative Analysis Summary

- **Capital Regulations**

*--- Overall, capital regulations in OIC countries are stricter than EU-27 and as strict as in US*

# Banking Supervision – A Comparative Analysis Summary

- **Independence of Supervisory Authority**

*--- Overall, OIC countries achieve supervisory independence in line with EU-27 and US*

# Banking Supervision – A Comparative Analysis Summary of Results

- **Private Monitoring**

*--- Overall, OIC countries rely on private monitoring in an equivalent scale to EU-27 and slightly below US.*

# Banking Supervision – A Comparative Analysis

## Summary of Results

- **Deposit Insurance Scheme**

*--- Despite the importance of deposit insurance schemes, the fraction of countries with an explicit deposit insurance is 70%, given the corresponding ratios of 100% in EU-27 countries.*

# Policy Recommendations

- OIC countries possess supervisory schemes for the banking sector in line with the international standards
- **Improving Measures for Credit Risk and internal ratings**
- **Developing an Effective Deposit Insurance Scheme for the Banking Sector**
- Note that both EU and banking supervisory mechanisms have been progressing since 2012

# Summary Swot Analysis: Supervisory Mechanisms in OIC

Strengths, Weaknesses and Threats Analysis			
Supervision Criteria	Strengths	Weaknesses	Threats
Scope of Banking Activities	Strong restrictions on permissible activities.	No major weaknesses	Financial deepening may change the current structure.
Ownership Restrictions	Strong restrictions on ownership structure for banks.	No major weaknesses	
Capital Regulations	Strong capital regulations beyond the levels of EU-27 and US.	Limited coverage of capital requirements on market and operational risk.	Changes in BASEL III.
Supervisory Power	Most OIC countries have autonomous supervisory authority for banking regulation.	In most OIC countries supervisory authority also regulates financial sector. Supervisory power decline in the aftermath of the 2008 crisis.	
Structure of Supervision	Supervisory experience is equal to EU-27 level slightly lower than US. Independence index equal to EU-27 and US. International standards	In most OIC countries supervisory authority also regulates financial sector.	
Private Monitoring	Stronger than EU-27 and US. Most OIC supervision authorities use certified external auditors.	No major weaknesses	
External Governance	Equally strong to EU-27 and US.	No major weaknesses	
Restrictions on Entry into Banking Sector	Strong entry restrictions and licencing criteria.	No major weaknesses	
Deposit Insurance		Fraction of OIC countries with explicit deposit insurance schemes is still low.	

# BASEL III and OIC Countries: Regulatory Aspects

- Need for Improvement
  - Macro prudential regulation practice
  - Future uncertainties oil price and FED hiking episodes
  - Credit risk
- Advantages:
  - Capital formation
  - Less Derivative usage
  - Relatively satisfactory liquidity level



# Key Risk Factors in OIC Member States

	Current level	Remarks	What can supervisors do to measure the true risk?
Credit Risk	Relatively high	There is high capital buffer	<ul style="list-style-type: none"> <li>• Standard measures can understate the actual risks</li> <li>• Credit Rating methodology is necessary.</li> <li>• Informality and lack of good quality data is a challenge.</li> </ul>
Market Risk	Relatively less	Accounting treatment of securities is critical.  Trading book is very small. So MR can be underestimated.	<ul style="list-style-type: none"> <li>• Risk sensitive measures such as VaR, ES should be accompanied with standard risk measures.</li> <li>• Stress VaR needs to be estimated</li> </ul>
Operational Risk	Higher than market risk	As banking sectors are growing Op. Risk could grow	Op.Risk Data should be collected for advanced measurement
Interest Rate Risk	Potentially high but data on maturity of assets and liabilities is hard to find.	As balance sheets are growing it should be watched	Asset and liability durations of each banks can be calculated

# Key risk factors in the OIC member states

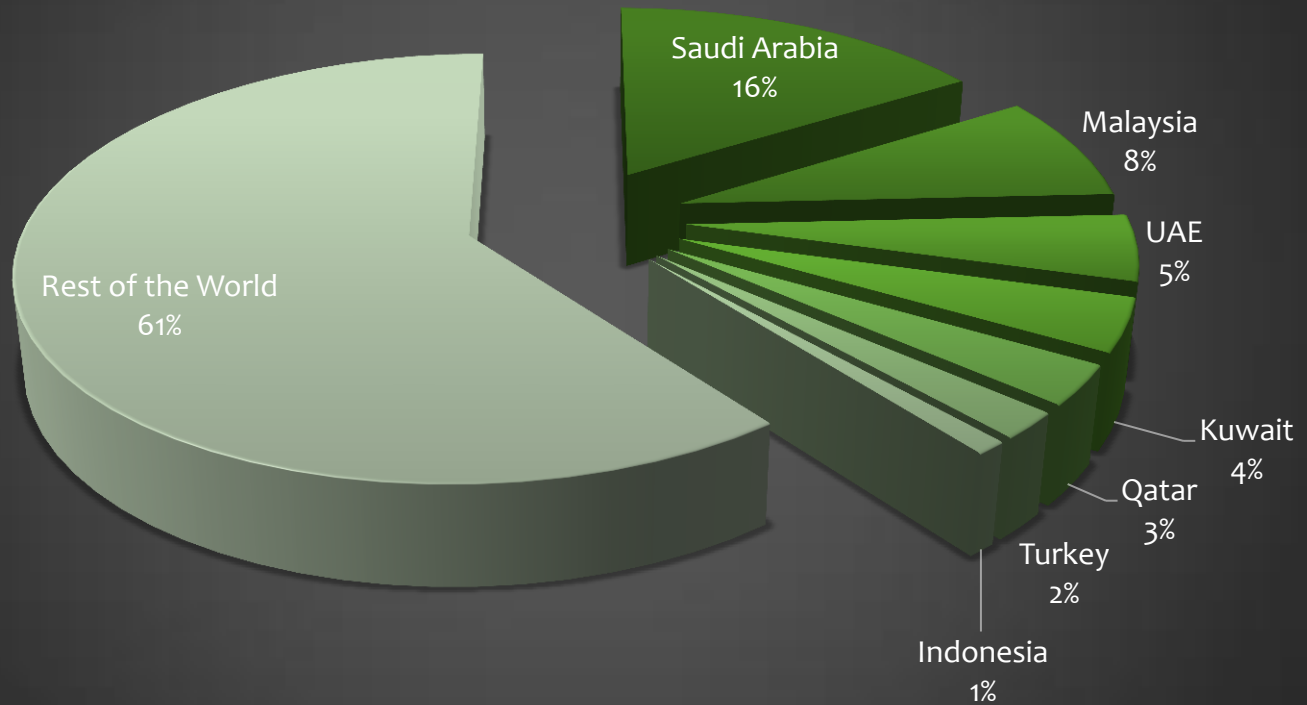
Liquidity Risk	Relatively better than EU and US banking	Could be important as a supplementary tool for stress testing	Useful to make a QIS on LCR and NFSR
Systemic Risk and Macroeconomic Stability	It needs to be watched because of high loan growth	Useful to assess D-SIB's.	A metric is necessary to assess systemic risk
Longer Term Risk and Capital Planning	Needs to be assessed	BASEL III has a static nature. How much capital is needed for the next 3 years?	<b>The Internal Capital Adequacy Assessment Process (ICAAP)</b> is a must for better supervision.  Growth, PD and FX scenarios should be prepared for stress testing
Deposit Insurance: Bank run and deposit withdrawal risk	A generally important risk factor	To avoid bank run it is useful	FDIC rates can vary among based.  Risk based FDIC rates can be implemented
Macro Prudential Regulations	A common stress testing for OIC member will be useful	There are some attempts	A common stress testing method under common shocks on Islamic financial Products could be useful.

# Improving regulatory and supervisory mechanisms in the OIC member states

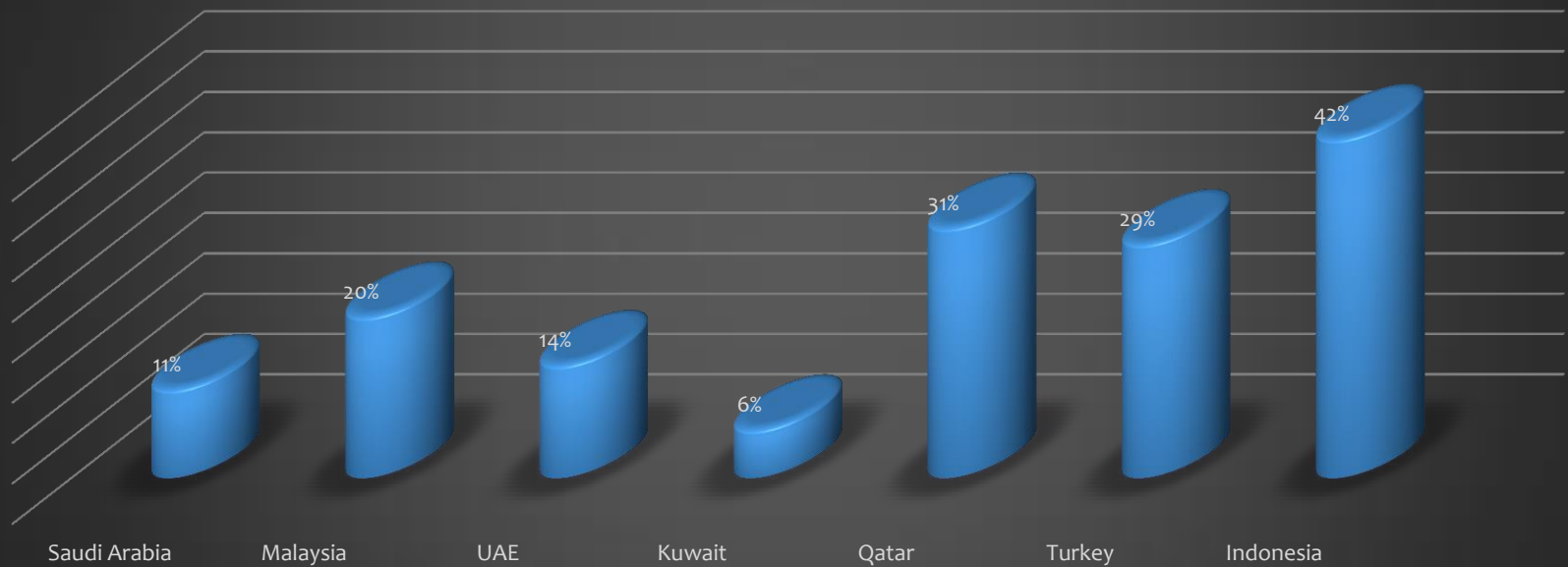
- Deposit insurance mechanisms may be improved
- Forward looking Credit Risk measurements must be used:  
    Macroeconomic linkages should be added.
- Macroprudential coordination for the OIC members can be useful.
- Better training and expertise on hedge accounting and derivatives
- A stress testing framework across the OIC countries can be useful.

# Regulatory Challenges in Islamic Banking

## Distribution of Islamic Banking Assets (2013)



## Growth Rate of Islamic Banking (2013)



# Is Islamic Banking Ready for the Challenges in BASEL III

- Advantages: an alternative to conventional banking
  - Better capitalized
  - Speculative positions and leverage is at the minimum
  - Sufficient ROE and ROA
  - Liquidity may pose a problem later

# LCR: Strong HQLA1 ratio (IFSB, 2014)

Classification of Assets	Overall (%)	Classification of Assets	Overall (%)
<b>Level 1 Assets</b>	<b>96.83</b>	<b>Cash Outflow</b>	
Coins and banknotes	9.01	Total retail deposits run-off	46.42
Total central bank reserves	30.73	Total unsecured wholesale funding run-off	38.78
Securities with a 0% risk weight	21.45	Total secured wholesale funding run-off	0.00
For non-0% risk-weighted sovereigns	35.64	Total Additional Requirements and Other Contingent Funding Obligations	14.79
<b>Level 2A Assets</b>	<b>2.97</b>	<b>Cash Inflow</b>	
Guaranteed by sovereigns	0.39	Total inflows on reverse repo and securities borrowing transactions	0.00
Non-financial corporate bonds, rated AA- or better	2.58	Total of other inflows by counterparty	80.84
Covered bonds, not self-issued, rated AA- or better	0.00	Total of other cash inflows	19.16
<b>Level 2B Assets</b>	<b>0.19</b>		
Total stock of Level 2B RMBS assets	0.06		
Total stock of Level 2B non-RMBS assets	0.13		



# Regulatory Challenges in Islamic banking

- Counterparty risk can be problematic if the products can not be diversified (geographically and credit rating wise)
- Liquidity can be an issue related to counteparty
- A common stress testing framework could be useful.
- Rating on Islamic banking products could be useful.

# Conclusion

- Recent global financial regulation structure create a challenging environment for banking.
- OIC member states generally had less of a problem during US and Euro crises.
- Deposit insurance mechanism needs to be better developed
- Credit risk is the main source of risk so its measurement should be improved.
- Common macro shocks should be studied.
- Systemic risk should be studied in the context of macro pru regulations.