A new prudential regime for investment firms

- Overview of the requirements, tools, tips and templates

Three-part series at The Broker Club

Dr Mustafa Çavuş

September 2020

montecarloplus.com

About us

- Monte Carlo simulation software (Monte Carlo Plus) for modelling risk scenarios
- Model risk, audit and validation

- List of references and clients >

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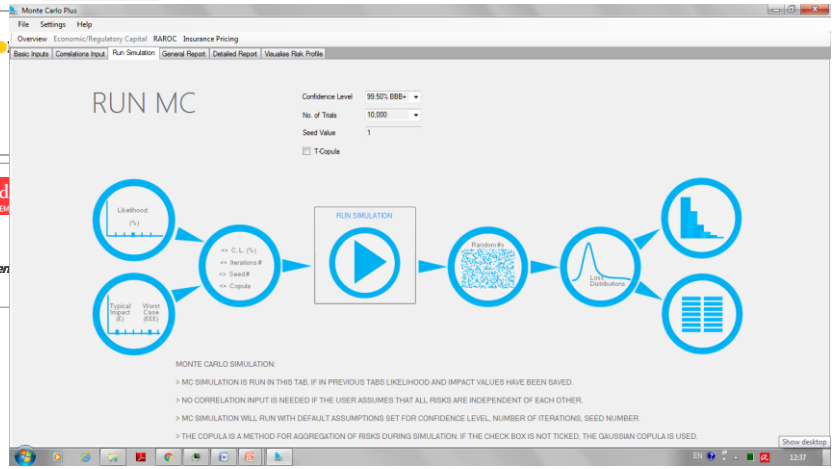
Easy to use software >



Our Senior Team

Here is our most senior personnel in order to ensure highest quality of delivery. Both have consulted with and advised financial firms in the UK and at European level

Mustafa Çavuş PhD
Managing Director, **MC+**

Mustafa is an expert in quantitative finance and risk and is a leading authority on pricing derivatives and options. He holds a PhD in financial mathematics and also has degrees in economics and business from the UK and Germany.

Mustafa is one of the UK's most respected contributors to debates on operational risk. Clients include banks, brokerage firms and asset managers for whom he has advised on operational risk methods and practices and prepared ICAAP submissions. He has held senior roles in buy-side firms and has also advised regulators in the UK and Europe on regulatory and economic methods and requirements in relation to operational risk.

Mustafa is the founder of **MC+**, the easy-to-use Monte Carlo solution for operational risk analysis. He has also written several books on finance focused on enterprise risk and options valuation.

Peter Bonisch
Director, **MC+**

Peter has worked in a wide range of sectors and is one of the UK's leading commentators and advisors on risk and governance. He is a frequent speaker on issues of governance, risk and control. He has completed governance and board reviews of some of the UK's leading firms and has advised on strategy, governance and risk and risk methods in leading financial firms. He is a former National Director in EY and is a former President of the Institute of Internal Auditors in NZ.

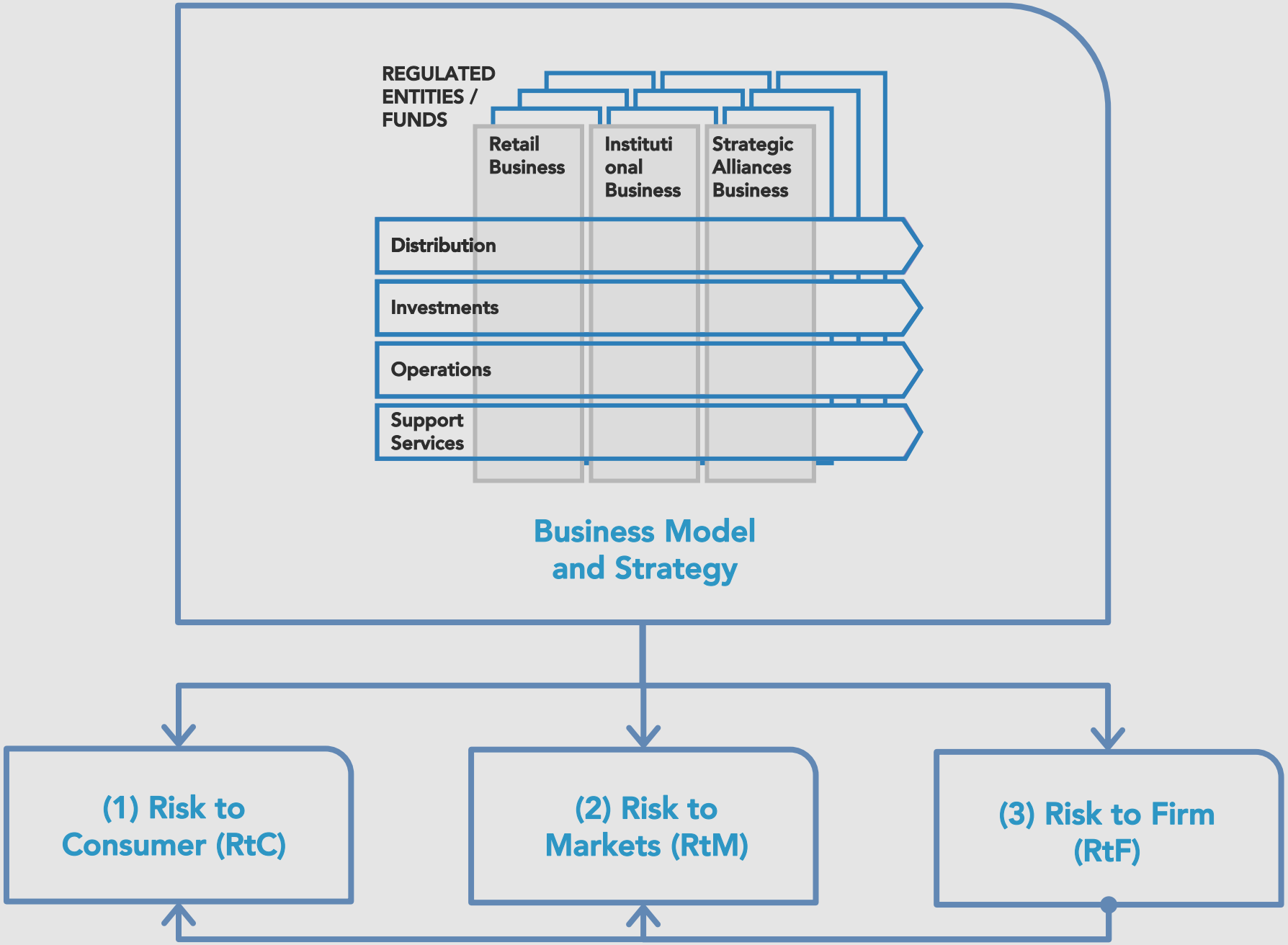
Peter has published studies on the financial crisis and systemic risk as well as the reaction to the financial crisis and organisational behaviour. He has worked actively with HM Treasury and PRA to improve their understanding of these areas. He is a co-opted member of the UK Chief of Defence Staff's Strategy Forum. By training, Peter is a microeconomist with a post-graduate degree in international relations.

New Regime for Investment Firms: Reg'y Background

- FCA: Key priorities outlined in the FCA Business Plan 2019/2020, April 2019
- FCA: Our framework: assessing adequate financial resources, Finalised Guidance, FG 20/1, June 2020
- FCA: A new UK prudential regime for MiFID investment firms, Discussion Paper, DP 20/2, June 2020
  - "Our supervision work aims to minimise harm to consumers or to the integrity of the UK financial system. Disorderly failure can cause harm… Understanding a firm's financial risks, its proximity to failure and how harm is minimised in failure is an important component of our supervisory work …we accept that some firms will fail, but this should be as orderly as possible".
- EBA: Issued a roadmap for the implementation and Consultation Paper which contain draft Regulatory Technical Standards (RTS) on prudential requirements, June 2020.
  - 2. CP will be on reporting requirements and disclosures on the levels of capital, concentration risk, liquidity, the level of activities as well as disclosure of own funds.
  - 3. and 4. CP will be on remuneration requirements.

Priorities

- FCA's strategic objective : to ensure that relevant markets function well, i.e.
  - protect consumers – to secure an appropriate degree of protection for consumers
  - enhance market integrity – to protect and enhance the integrity of the UK financial system
  - promote competition – to promote effective competition in consumers' interests
- Over the shorter term : (*taking rapid action to respond to the shocks to markets and consumers by the Corona crisis with a focus on*):
  - 1. protecting the most vulnerable, 2. functioning markets, and 3. reducing the impact of firm failures
- Over the medium term (1 – 3 years) : transformation of the UK market regulation to achieve the following outcomes:
  - firms design investment products, which are appropriate for consumer needs, deliver good value for money and are marketed appropriately,
  - consumers have access to high-quality advice and to support, particularly in relation to retail investments
  - firms have a strong governance framework and can identify and tackle risks


REGULATED ENTITIES / FUNDS
Retail Business
Institutional Business
Strategic Alliances Business
Distribution
Investments
Operations
Support Services
Business Model and Strategy
(1) Risk to Consumer (RtC)
(2) Risk to Markets (RtM)
(3) Risk to Firm (RtF)

Final Guidance FG 20/1 - FCA expects firms to :

1. Assess their risks regularly and proportionally
   - At least annually: "All firms should assess the risks inherent in their business model, the potential harm that can be caused and explain how to close the business in an orderly way",
   - forward-looking throughout the economic cycle
   - proportionate to the nature, scale and complexity, materiality and amount
2. Understand the business model and strategy
   - exposed to existing and emerging risks and vulnerabilities from changes in operational and economic circumstances → impact on sustainability and viability
3. Prevent harm (i.e. understand the risks in their activities)
4. Put things right when they go wrong (i.e. have adequate financial resources)
   - "..consider risks that may stop them putting things right when they go wrong. This includes assessing the circumstances leading to financial stress and the potential depletion of financial resources, and the inability to convert assets into 'cash' in time to pay for obligations as they fall due".
5. Minimise harm in failure (i.e. orderly wind down)

Chapter 3 FG 20/1 : Our expectations of firms to reduce potential to cause harm

Financial resources (adequate quality and quantity)

- "..firms to have adequate capital to ensure they are able to incur losses and remain solvent *or* fail in an orderly way", e.g.
  - Compensation & redress schemes for misconduct (part voluntary redress scheme)
  - Enforcement and fines (investigations or enforcement actions by the FCA, which might result in fine)
  - Direct and indirect litigation costs – (to compensate consumers or other firms seeking redress through legal action)
- Need for liquid resources as stressed circumstances could result in increased outflows, e.g.
  - payments to protect its franchise and reputation to stay in business
  - direct or indirect costs of litigation, redress or fines
  - increased margin calls & payments regarding off-balance sheet commitments

Chapter 3 FG 20/1 : Our expectations of firms to reduce potential to cause harm

Risk management and controls framework

- "…firms to have …an appropriate risk management and controls framework, where the focus should be on effectiveness…. where:
  - risk is considered in the day-to-day activities, including the development of new products and services, taking on new customers, and changes in the firm's business model
  - the management body understands the firm's activities, how it operates, the risks it faces and the appropriateness of controls
  - there are policies and procedures …consumer interest
  - the risk function is sufficiently independent
  - the impact of the outsourcing on the firm's business and the risk it faces is considered and …. noting that firms cannot contract out their regulatory obligations".

Chapter 3 FG 20/1 : Our expectations of firms to reduce potential to cause harm

Identifying and assessing the risk of harm

- Causes of harm
  - Poor conduct as a result of poor financial management (e.g. result of breach of mandates to enhance performance; portfolio churning to increase fees; hidden fees; or firms engaging in trading strategies that may create market disruption)
  - Disruption of markets' functioning (e.g. market abuse, unreliable performance or disorderly failure)
  - Inability to pay redress or to transfer or return client money and assets (e.g. Poor controls for the client's money and assets)
  - Disruption to continuity of service
- What we expect from firms
  - Identify harm (all significant harms related to activities) examples
  - Assess likelihood and impact of harm

Chapter 3 FG 20/1 : Our expectations of firms to reduce potential to cause harm

Identifying and assessing the risk of harm

- Examples of harm:
  - Mandate breach by portfolio managers
  - System outages by platform and custody firms
  - Unsuitable advice by financial advisors
  - Unsuitable investments by SIPP operators
  - Poor outcomes for investors by advising firms due to insufficient due diligence
  - System outages by exchanges
  - Failure to check costumer's affordability
  - Disruption to continuity of service by payment services firms
  - Market disruption due to rogue algorithms by principal trading firms

Chapter 3 FG 20/1 : Our expectations of firms to reduce potential to cause harm

FCA' expectations for assessing the likelihood and impact of harm

- FCA expects firms to assess "how their actions, the actions of others performing outsourced functions, or the failure of systems and controls, might cause harm to consumers or financial markets."
- consider 'what-if' scenarios for the activities undertaken taking into consideration the likelihood of events, that all events might (not) occur at the same time
- estimate the potential impact on their financial resources based on their knowledge and experience, may be further supported by statistical models if control framework is sophisticated enough
  - we expect firms to understand how appropriate the inputs and outputs of the model are (i.e. the scenarios and assumptions).
- Firms should:
  - consider the risks before controls
  - look at each significant risk and its controls
  - assess how much risk of harm remains
- This assessment should also inform if the risk is within or outside their risk appetite, and help the firm decide if extra controls are needed.

Risk Appetite

Business Model

Forward looking scenarios reflecting potential harm to C/M/F

Likelihood and Impact from material risks

Systems, controls & actions

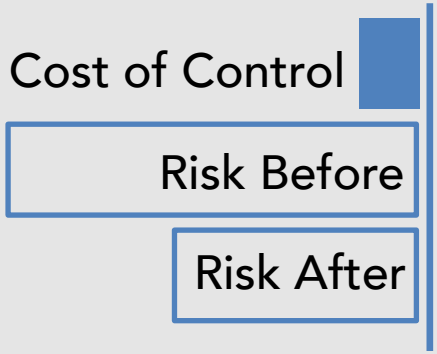
.Remediate Ctrl

.Add new Ctrl

.Enhance Ctrl

.Remove Ctrl

'Use-test' - day to day risk-based decisions:



Amount of Risk

Required Capital & Liquidity

The FCA expectation on assessment of harm:

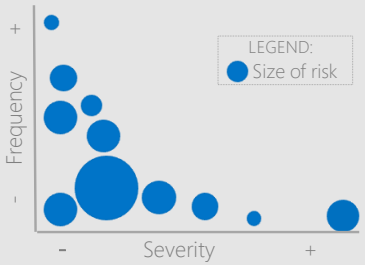
- ☐ What-if scenarios for the activities undertaken & the harms that can be caused
- ☐ Likelihood of events, that all events might occur at the same time
- ☐ Potential impact on their financial resources
- ☐ Supported by statistical models

FCA Checklist:

- ☐ have a risk management framework which includes a clear risk appetite?
- ☐ adequately identify and quantify the material risks?
- ☐ have adequate systems and controls in place?
- ☐ use adequate stress testing?
- ☐ meet the 'use test' i.e. day-to-day decision making?
- ☐ have adequate financial resources based on the risk profile?

Decision making using risk and return – e.g. RaRoC

A new proposed product/project has a number of potential harms to C, M and F

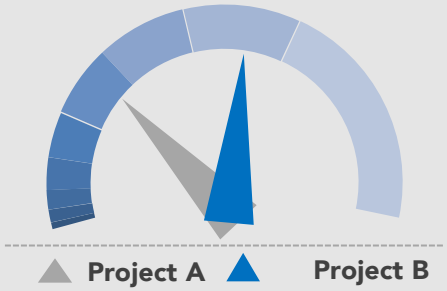


Estimate amount of risk using internal knowledge & experience and well generally accepted statistical models

Risk adjusted Return on Risk Capital (RaRoC) = Income / amount of risk

$$\text{RaRoC} = \frac{\text{Expected Income}}{\text{Risk to C, M and F}}$$

RaRoC then becomes objective measure of return between different projects



Chapter 4 FG 20/1 : Risks that can lead to harm or impair the ability to compensate for harm

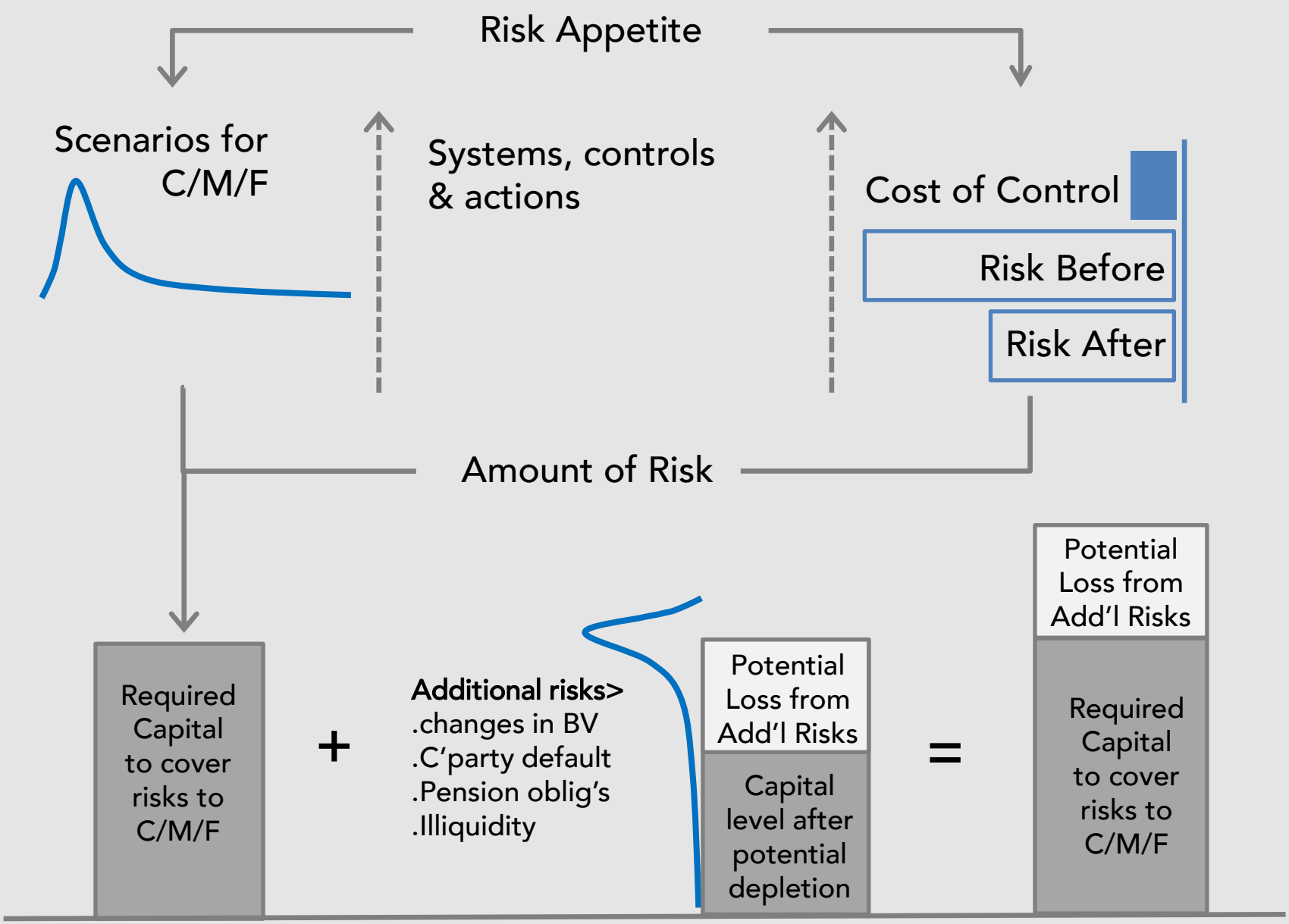
- Additional risks that may deplete the level of their financial resources
- FCA expects firms to assess "the potential depletion of financial resources or inability to convert assets into 'cash' in a timely manner, under adverse circumstances".
- Firms should consider losses:
  - Losses due to changes in the book value of assets, e.g.
    - Selling below book value
    - Impairments due to revaluations & write-downs due to non-recoverability
    - internal or external 'operational' events not related to harms
  - Losses to the firm due to failure of counterparties to settle transactions in e.g. underlying as well as derivatives or securities lending/borrowings (risk is due to replace failed transactions)

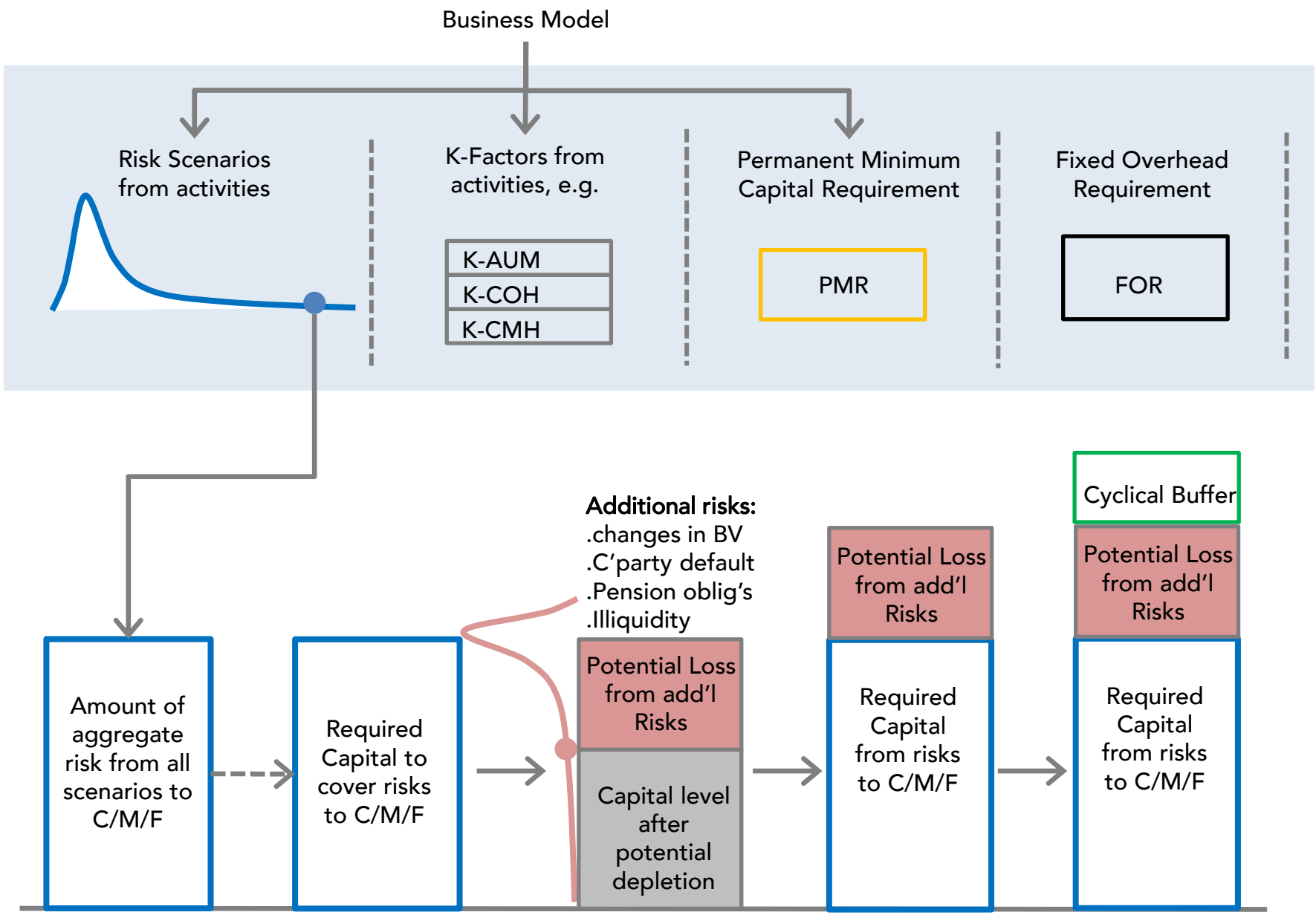
Chapter 4 FG 20/1 : Risks that can lead to harm or impair the ability to compensate for harm

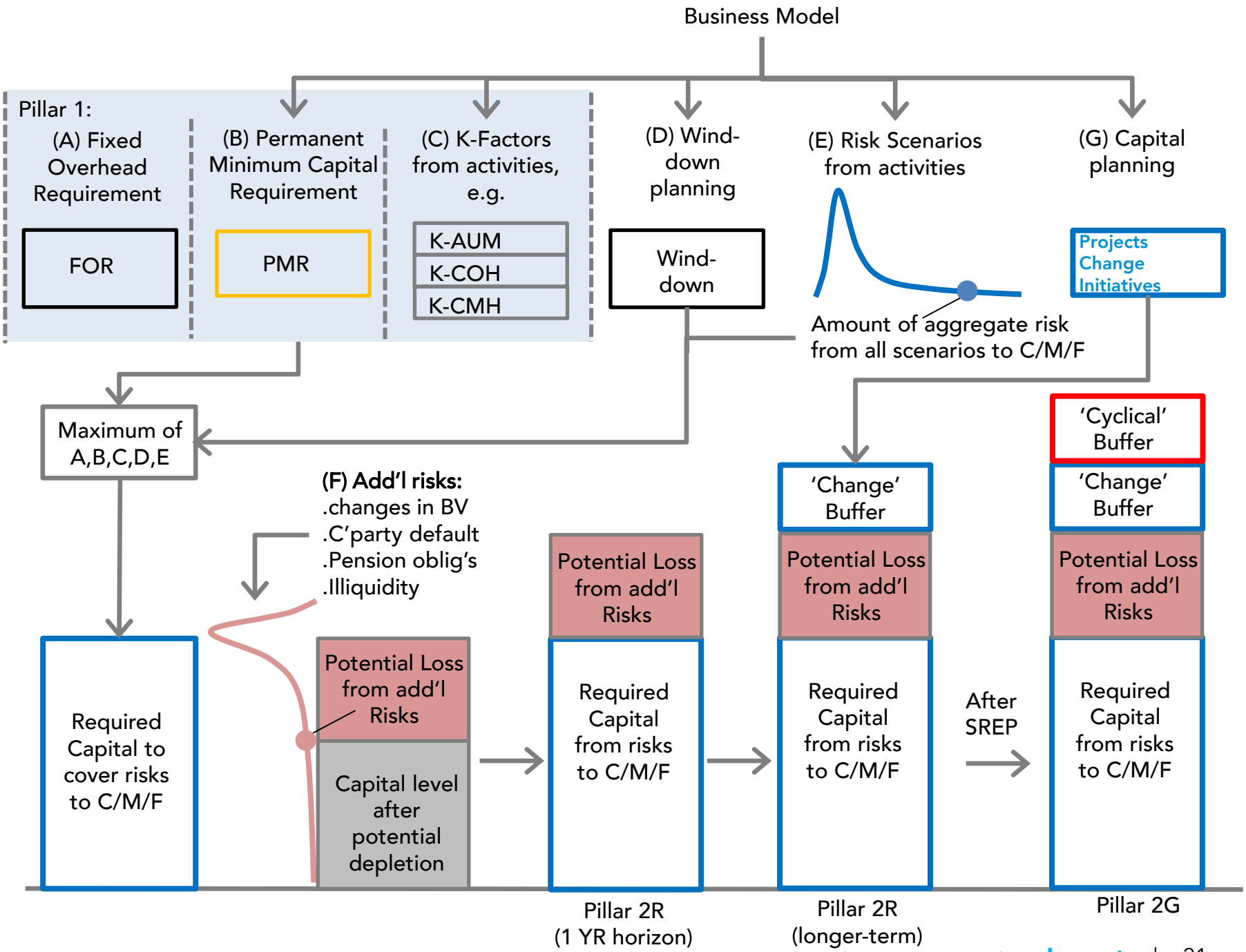
- Change in value of positions - Movements in market prices or other events, including operational failures, may result in losses in financial instruments (held or traded to support a firm's activities and generate returns), e.g. proprietary positions from client servicing, market making, arbitrage, including losses from positions in foreign currencies or commodities.
  - Potential losses depend on the portfolio composition and trading strategies and may affect firms not only at a point in time (PIT) but throughout the economic cycle (TTC). Therefore, the stress testing assessments should include:
    - relevant types of stress tests and level of shocks that reflect the firm's portfolios, the trading strategies applied and the time it could take to hedge out or manage risks (i.e. duration) under severe market conditions
    - clearly set out assumptions for the assessment including reconciliation, reflecting the valuation adjustments in the book value
  - Factors that may increase the risk of potential losses:
    - distressed or illiquid positions
    - positions in highly volatile markets
    - exotic or non-linear derivative portfolios
    - intraday trading
    - events and jump-to-default of concentrated portfolios
    - significant shifts in correlation

Chapter 4 FG 20/1 : Risks that can lead to harm or impair the ability to compensate for harm

- Pension obligations - impact of adverse circumstances in the funding status of the pension plan, due to change in value of its assets and liabilities.
- Lack of liquid resources to meet obligations
  - Payments to maintain its franchise and reputation to avoid damage to its viability
  - Unexpected obligations due to cost of litigation, redress or fines
  - Funding mismatches and concentration in funding sources
  - Margin calls
  - Liquidity support for off-balance sheet activities


Risk Appetite
Scenarios for C/M/F
Systems, controls & actions
Cost of Control
Risk Before
Risk After
Amount of Risk
Required Capital to cover risks to C/M/F
+
Additional risks>
.changes in BV
.C'party default
.Pension oblig's
.Illiquidity
Potential Loss from Add'l Risks
Capital level after potential depletion
=
Potential Loss from Add'l Risks
Required Capital to cover risks to C/M/F


Business Model
Risk Scenarios from activities
K-Factors from activities, e.g.
K-AUM
K-COH
K-CMH
Permanent Minimum Capital Requirement
PMR
Fixed Overhead Requirement
FOR
Amount of aggregate risk from all scenarios to C/M/F
Required Capital to cover risks to C/M/F
Additional risks:
.changes in BV
.C'party default
.Pension oblig's
.Illiquidity
Potential Loss from add'l Risks
Capital level after potential depletion
Potential Loss from add'l Risks
Required Capital from risks to C/M/F
Cyclical Buffer
Potential Loss from add'l Risks
Required Capital from risks to C/M/F


Business Model
Pillar 1:
(A) Fixed Overhead Requirement
FOR
(B) Permanent Minimum Capital Requirement
PMR
(C) K-Factors from activities, e.g.
K-AUM
K-COH
K-CMH
(D) Wind-down planning
Wind-down
(E) Risk Scenarios from activities
Amount of aggregate risk from all scenarios to C/M/F
(G) Capital planning
Projects Change Initiatives
Maximum of A,B,C,D,E
(F) Add'l risks:
.changes in BV
.C'party default
.Pension oblig's
.Illiquidity
'Cyclical' Buffer
'Change' Buffer
'Change' Buffer
Potential Loss from add'l Risks
Potential Loss from add'l Risks
Potential Loss from add'l Risks
Potential Loss from add'l Risks
Capital level after potential depletion
Required Capital to cover risks to C/M/F
Required Capital from risks to C/M/F
Required Capital from risks to C/M/F
After SREP
Required Capital from risks to C/M/F
Pillar 2R (1 YR horizon)
Pillar 2R (longer-term)
Pillar 2G

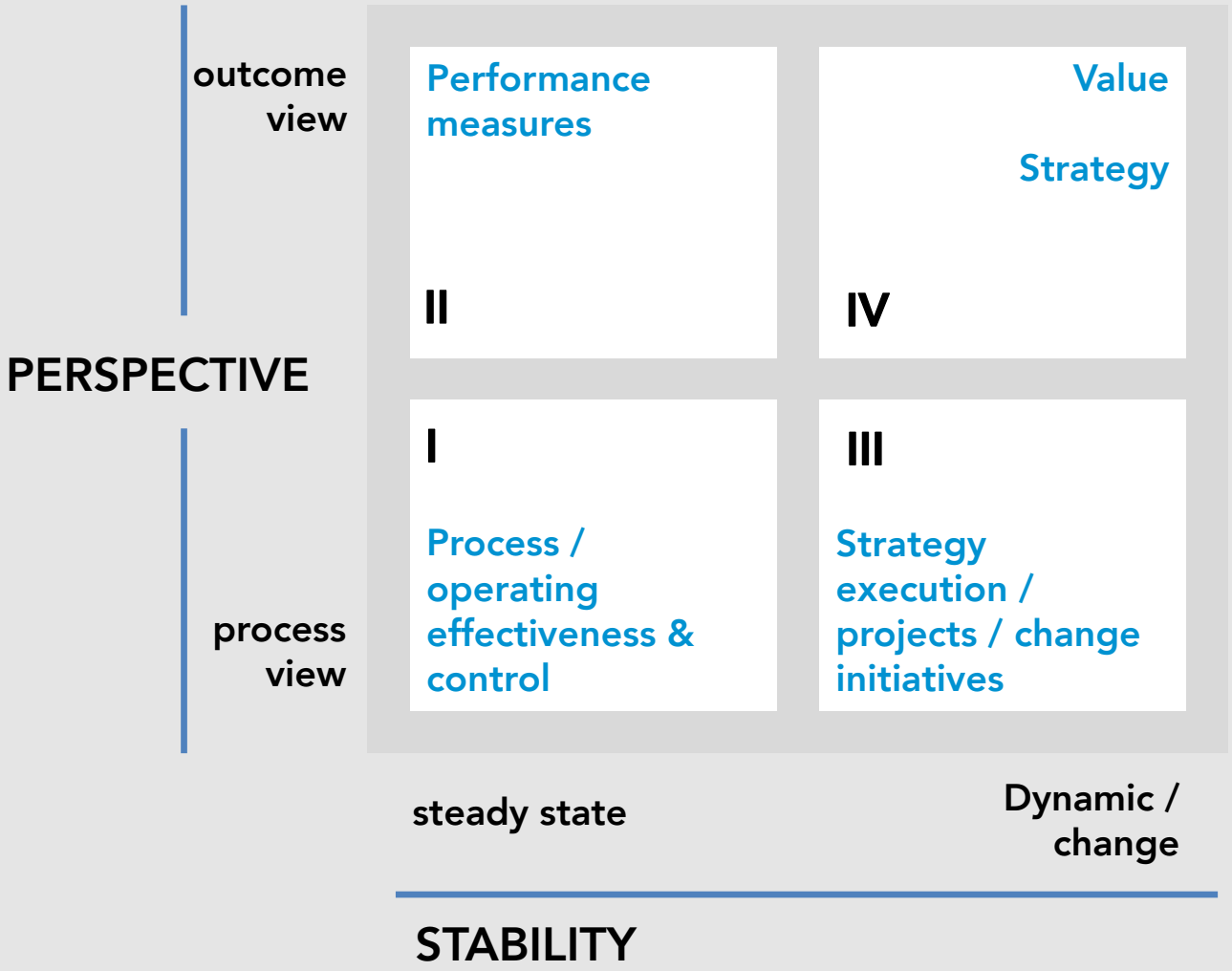
Chapter 5 FG 20/1 : Viability and sustainability of the business model and strategy

- "business model and strategy analysis"
  - to understand how a firm generates returns and the vulnerabilities that may affect its ability to generate acceptable and sustainable profits, and
  - to ensure the viability and sustainability of its business model and strategy, including the impact on a firm's financial resources and access capital markets to generate resources
- Identifying and understanding vulnerabilities
  - business model and strategy exposed to existing or new vulnerabilities.
    - how vulnerabilities can affect a firm's ability to generate acceptable returns
    - a clear risk appetite stating which stress scenarios a firm chooses to survive
    - develop a reverse stress test that tests the point of non-viability of business model
- Analysing business models and strategies
  - details of business lines and activities and their contribution to profits
  - details of external factors impacting business model and strategy
    - the role of macro variables and market environment incl. regulation
    - The role of firm's franchise and reputation with consumers and other stakeholders
    - Competitive advantage factors over its peers

Chapter 5 FG 20/1 : Viability and sustainability of the business model and strategy

- FCA expects firms to consider forward-looking financial projections and strategic plans (>= 3yrs), under both BAU and severe but plausible stresses
  - → risks to viability of business model and the sustainability of its strategy
  - → misalignment profit incentive vs consumers' interest
  - → firm's likelihood of failure matches its risk appetite for survival
- assumptions in areas such as macro-economic metrics, market dynamics, volume and margin growth in key products and services, segments and geographies, etc.
- What 'good looks like':
  - stress scenarios must be severe but plausible and relevant to the circumstances of a firm, including events that cause reputational damage to the firm
  - based on forward-looking hypothetical events, performed on individual business lines and portfolios, if relevant, as well as at a firm-wide level, including sensitivity analysis
  - contain clear assumptions, when compared to business-as-usual projections, which are consistent with the macro-economic metrics, market dynamics, volume and margin growth in key products and services, segments and geographies, etc.
  - cover all material risks and vulnerabilities identified and analyse the impact of events of a varying nature, severity and duration on both financial resources and requirements.
  - Estimate before and after taking account of realistic management actions.
- Reverse stress testing

Linking viability of business model and strategy to Risk Management



Chapter 6 FG 20/1 : Wind-down

- Credible plans with realistic timescales and assessments of how financial and non-financial resources are maintained while the firm exits the market
- Qualitative assessment (e.g. operational tasks and time scales, continuity of service and impact to customers)
- Quantitative assessment
  - Estimated period – in most cases > 9 months (depends on a firm's activities).
  - Capital – estimate of the winding-down costs and additional losses:
    - extra closure costs – (e.g. termination penalties, redundancy costs, legal and administrative costs, and leases, and potential impact of pension deficits)
    - potential litigation costs (e.g. 'what if' scenarios where costs are incurred for past misdeeds)
    - residual revenue – realistic revenue stream during wind-down
    - realisable value of assets – potentially much lower than the book value especially in the case of shorter wind-down periods
  - Liquidity: capital <> liquidity

Discussion Paper, DP 20/2, June 2020

FCA: A new UK prudential regime for MiFID investment firms, Discussion Paper, DP 20/2, June 2020

Discussion Paper → Consultation Paper → Final Guidance

DP: New Regime

- EU: CRD4 was created for banks, but applies to IFs. Therefore, the EU introduced a new regime - the IFs Regulation and Directive (IFR/IFD).
- UK: IFs Prudential Regime (IFPR) – the same intended outcomes but tailored to the UK, apply to all FCA-regulated IMs except the systemic ones.
  - Re-orient the focus of from risks the firm faces, to also consider the potential harm to clients and the market.
  - Introduction of liquidity requirements
  - Updated initial capital requirements (PMR)
  - New methodology for calculating capital requirements, the K-factor
  - New remuneration and disclosure requirements

DP: New Regime Overview

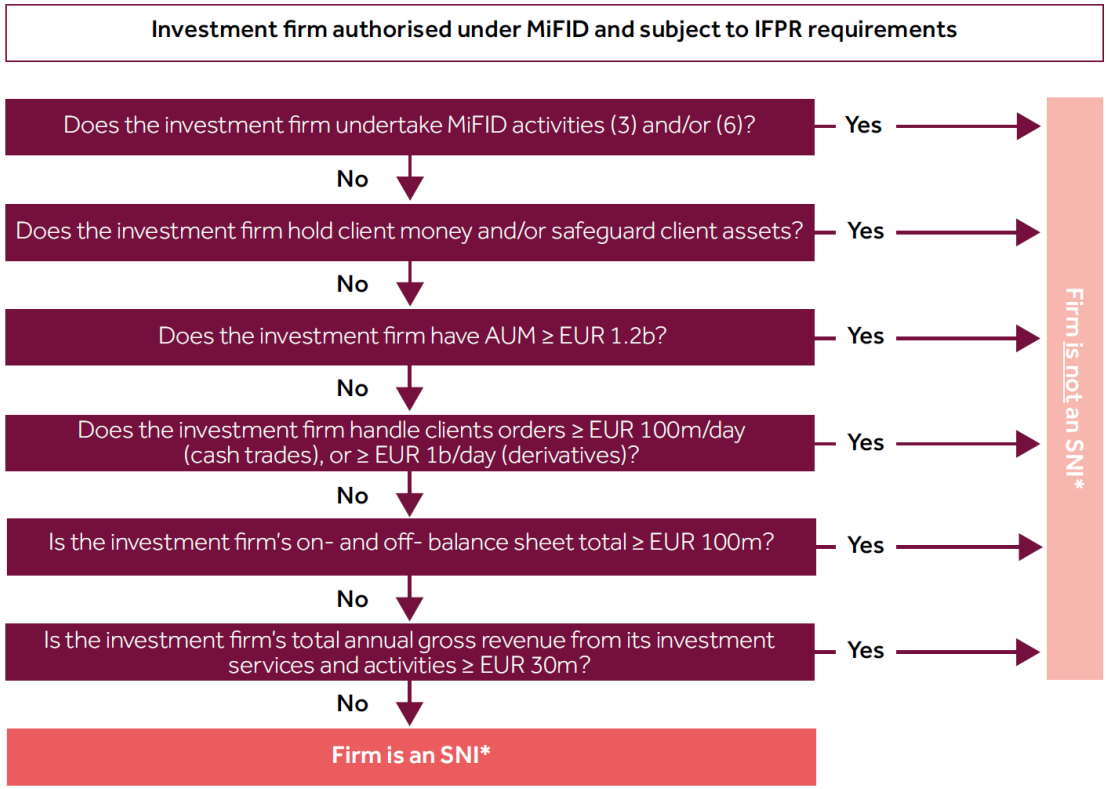
- Own fund requirements
  - Permanent minimum requirement (PMR): initial capital required for authorisation (i.e. EUR 75k, EUR 150k, and EUR 750k depending on the activities).
  - All IFs are now required to calculate a fixed overhead requirement (FOR), some will also have to calculate K-factor, capital requirement (KFR).
  - The minimum capital requirement will be the higher of PMR, FOR and KFR.
- Liquidity - All IFs are required
  - To hold liquid assets equivalent >= FOR/3
- Definition of capital
  - The definitions of Common Equity Tier 1 capital (CET1), Additional Tier 1 capital (AT1), and Tier 2 capital (T2) are from Capital Requirements Regulation (CRR) with differences in deductions that apply.
  - CET1/Own Funds Requirement >= 56%
  - (CET1 + AT1) / Own Funds Requirement => 75%
  - (CET1 + AT1 + T2) / Own Funds Requirement => 100%
- Group risk
  - Prudentially consolidated of IF groups similar to process under the CRR

DP: New Regime Overview Cont'd

- Concentration risk – All IFs are required (though basic req'ts for SNI)
  - to monitor and control their concentration risk. Only non-SNIs to report.
  - to calculate the exposure from concentrations in a trading book to a client, or a group of connected clients.
  - New concept: Risks arising from concentration in the location of assets safeguarded, earnings from clients, and where the firm's own cash is deposited.
- Individual requirements
  - After SREP possible requirements for additional capital and reporting requirement, limit in variable remuneration, or a specific liquidity requirement
- Regulatory reporting requirements (limited reporting for SNI)
  - Own funds, capital, B/S, revenue and remuneration.
  - requirements to those data points relevant to the business model of IFs
- Remuneration
  - Requirement for clearly documented remuneration policy, structure and ratio of variable remuneration for IFS certain size
- Public disclosure - All IFs are required to disclose information on
  - risk management framework, own funds, remuneration, investment policy, and
  - environmental, social and governance (ESG) risks

DP: Small and Non-Interconnected (SNI) investment firm

Figure 3.3 Flow chart to assess classification as an SNI



* Small and non-interconnected investment firm as defined in Article 12(1) IFR.

All other IFs (those that are not subject to the CRD/CRR or are not SNIs under the IFD/IFR) will be subject to the full prudential requirements set out in the IFD and IFR.

Activities

(3) – dealing on own account

(6) – underwriting/placing of financial instruments on a firm commitment basis

New categorisation into three classes of firms

The existing categorization from 11 classes of firms is going to be simplified to three classes.

CLASS 1 firms

Systematically relevant firms

Typically subsidiaries of US, Swiss or Japanese banking groups/broker-dealers. They incur and underwrite risks on a significant scale. Their activities expose them to credit risk, mainly in the form of counterparty credit risk, as well as market risk for positions they take on own account. Therefore, they represent higher risk to financial stability, given their size and interconnectedness.

→ They remain subject to CRR/CRDIV

CLASS 2 firms/Non NSI

Majority of the firms

These deal on own account and incur market and counterparty credit risk, safeguard and administer client asset, or hold client money or are above the *thresholds*:

> EUR 1.2bn AUM and non-discretionary arrangement;

> EUR 100mn/day client orders handled and /or

> EUR 1bn/day for derivatives;

> EUR 100mn total BS

> EUR 30 gross revenue

→ Higher of FOR, Σ K-Factors, PMR

CLASS 3 firms/SNI

Majority of the firms

Don't conduct the activities or are below the thresholds of CLASS 2 /non NSI firms

→ Higher of FOR or PMR

However, they are still required to calculate and monitor the K-Factors

DP: Own Funds Requirement

KFR

- New way of calculating the potential harm of IFs to its clients, the markets, and itself.
- Based on the type and scale IF's activities
- K-factor is calculated for each activity
- Σ K-factors → KFR
- FCA can adjust K-factors if there material change in IF's business activities
- No KFR for SNIs. *However*, SNIs are "*still advised to consider* the relevant metrics…for monitoring their compliance with the thresholds for remaining an SNI and as part of their internal assessment ….. identifying and capturing risks more generally in their…risk management, governance and assessment process. Even where the K-factor would not bite, due to the PMR or FOR requirement being higher, non-SNI firms would *still be required to calculate it*. We consider it ought to form part of the *basis for internal and supervisory discussions* for sources of harm the investment firm faces and poses." P. 33 DP 20-2.

DP: Risk to Customers (RtC)

RtC > actions, operations and services that could negatively impact clients. For IFs, the failure to correctly carry out is the most important risk they need to manage as the potential impact on clients could be significant.

K-AUM

(a new requirement relating to Assets Under Management)

Rationale: The risk of harm to clients from incorrect discretionary management of customer portfolios or poor execution, providing customer reassurance in terms of the continuity of service of ongoing portfolio management and advice.

K-Factor = 0.02% of AUM

K-CMH

(a new requirement relating to Client Money Held)

Rationale: The risk of harm where an investment firm holds the money of its customers, regardless of whether they are on its own balance sheet or segregated in other accounts.

K-Factor = 0.45% of CMH

K-ASA

(a new requirement relating to Assets Safeguarded and Administered)

Rationale: The risk of safeguarding and administering customer assets, and ensures that investment firms hold capital in proportion to such balances, regardless of whether they are on its own balance sheet or segregated in other accounts

K-Factor = 0.04% of ASA

K-COH

(a new requirement relating to Customer Orders Handled)

Rationale: The risk to clients of a firm which executes their orders in the name of the client, and not in the name of the firm itself, e.g. as part of 'execution-only' services and in the reception and transmission of orders

K-Factor = 0.1% of COH for cash

K-Factor = 0.01% of COH for Derivatives

DP: Risk to Market (RtM)

RtM > Potential impact of an IF on the markets in which it operates, and its counterparties in those markets. A disorderly exit of an IF from, e.g. trading venue or OTC could potentially negatively effect that market and its participants. RtM seeks to limit the likelihood and impact of such risk events.

K-PNR

(existing CRR requirement to Net Position Risk)

Rationale: The risk of trading exposures in financial instruments, FX and commodities based on the CRR.

K-Factor as per CRR simplified or standardised approach.

K-CMG

(a new requirement relating to Clearing Member Guarantee)

Rationale: The margin posted with a clearing member against trading risks.

K -Factor based on 3rd highest total daily margin requirement over last 3 months.

DP: Risk to Firm (RtF)

RtF > Risks to an IF's solvency from its trading activity and market participation. While the primary impact of crystallised risk is on the investment firm itself, its shareholders and its counterparties and creditors, a deterioration in an investment firm's financial standing can lead to increased risks to its clients and/or the wider market. Such risks are particularly acute for IFs trading in their own name. So RtF only applies to an investment firm authorised to deal on its own account – either for its own purposes or on behalf of a client – and/or underwriting of financial instruments.

K-TCD

(an existing CRR requirement relating to Trading Counterparty Default)

Rationale: Trading counterparty default The risk to an investment firm of counterparties failing to fulfil their obligations, multiplying exposures by risk factors based on the CRR, into account the mitigating effects of effective netting and the exchange of collateral.

K-Factor =

Σ1.2 x exposure value x risk factor x CVA)

K-CON

(an existing CRR requirement relating to Concentration)

Rationale: Concentration risk in relation to individual or highly connected private sector counterparties with whom firms have exposures above 25% of their capital and resulting in capital add-ons in line with the CRR.

K -Factor =

Σ [exposure capital requirement/exposure value] x exposure value excess

K-DTF

(a new requirement relating to Daily Trading Flow)

Rationale: The operational risks in large volumes of intra-day trades based on the gross value of settled cash trades and notional value of derivatives.

K-Factor = 0.1% (cash trades)

K factor = 0.01% (derivs trades)

K-TCD = α • EV • RF • CVA

Constant Multiplier = 1.2

Risk Factors:
Gov's and CBs – 1.6%
CIs and IFs – 1.6%
Other C'parties – 8.0%

Credit Valuation Adjustment = 1.5

Exposure value = Max (0 ; RC + PFE – C)

Replacement Cost

Potential Future Exposure (for deriv's only)

=

EN (effective notional) • SF (supervisory factor)

Interest rates – .5%
Credit – 1%
Forex – 4%
Commodities – 18%
Eq. (index) – 20%
Eq. (single name) – 32%
Other – 32%

Collateral (see next page)

Collateral classes and volatility adjustments for K-TCD

Asset class		Volatility adjustment repurchase transactions	Volatility adjustment other transactions
Debt securities issued by central governments or central banks	≤ 1 year	0,707 %	1 %
	> 1 year ≤ 5 years	2,121 %	3 %
	> 5 years	4,243 %	6 %
Debt securities issued by other enti-ties	≤ 1 year	1,414 %	2 %
	> 1 year ≤ 5 years	4,243 %	6 %
	> 5 years	8,485 %	12 %
Securitisation positions	≤ 1 year	2,828 %	4 %
	> 1 year ≤ 5 years	8,485 %	12 %
	> 5 years	16,970 %	24 %
Listed equities and convertibles		14,143 %	20 %
Other securities and commodities		17,678 %	25 %
Gold		10,607 %	15 %
Cash		0 %	0 %

DP: The FCA review and feedback

- The FCA may request a firm to submit its own assessment of adequate financial resources for review.
  - Does the risk management framework with a clear risk appetite?
  - Are risks appropriately and adequately identified?
  - How material is each risk?
  - How adequate are systems and controls in place?
  - has adequate use been made of stress testing in the risk assessment?
  - does it meet the 'use test' i.e. is it used day-to-day and for decision making?
  - does the firm have adequate financial resources based on its risks?
- Peer analysis is an important component of FCA's review as it provides a 'sense check' of our judgements and conclusions. This includes comparison of
  - business models, strength of governance and controls and levels of financial resources
  - judgements and decisions being made throughout the assessment

DP: ICARA Process to demonstrate

- ICARA = Internal Capital Adequacy and Risk Assessment
- that IF has robust strategies, policies, processes and systems for the identification, measurement management and monitoring of
  - the material risks to Clients, Markets, the Firm including liquidity, and
  - impact on funds available.
- how it is meeting its obligations in relation to appropriate resources – meaning both financial and non-financial resources. FCA expects ICARA to:
  - reflect the risks to which the firm is exposed and the amount of risk it poses to clients and to markets,
  - apply a forward-looking approach to consider how these risks could evolve throughout the economic cycle,
  - determine the appropriate level of financial resources required to cover these risks beyond what is covered under 'Pillar 1',
  - consider business model viability and the strategy's sustainability, including through reverse stress testing, to determine vulnerabilities in the business model, and
  - consider necessary financial resources and planning to allow for a credible wind down of the firm if it closes.

DP: ICARA vs ICAAP

Current ICAAP	ICARA process
A specified list of risk categories sets out how investment firms are expected to identify, manage and assess their risks. This can mean that risks are put into categories that are not a natural fit.	The focus should be on the investment firm's business model and its activities. From there it will identify, assess and estimate the potential harm to clients, to markets, and to the firm itself.
Investment firms assess their different exposure risks according to the detailed capital requirements set out in CRD/CRR.	Investment firms will focus on risks to their financial adequacy from potential changes in book value of assets, changes in value of trading book positions, and losses from potential failure of counterparties. Investment firms should consider risks to themselves in light of the knock-on effect they may have upon their clients and the markets they operate in.
Wind-down plan not required as part of the ICAAP.	Investment firms will have to consider wind-down as part of the ICARA process.

DP: Supervisory Review and Evaluation Process (SREP)

- Purpose: to review a non-SNI investment firm's compliance with the IFD and IFR and evaluation of the management and coverage of risks:
  - the risks above
  - The geographical location of an IF's exposures
  - the business model of the IF
  - an assessment of systemic risk
  - the security of IF's network and information systems
  - any interest rate risk arising from non-trading book activities
  - governance arrangements
- The ICARA process would help an investment firm to demonstrate how it is meeting its obligations in relation to appropriate resources – meaning both financial and non-financial resources.

DP: Supervisory Powers

- Additional capital guidance
  - Risks not sufficiently covered by the 'Pillar 1', or no robust governance arrangements, or inadequate ICARA process
  - As a 'buffer' to allow for economic cyclical fluctuations above own funds
- Specific liquidity requirement
  - Material liquidity risks are not sufficiently covered under IFD
  - inadequate governance arrangements for assessing the liquidity risks

DP: ICARA - Identifying and assessing harm

- "Identifying and assessing the potential harm to clients and markets is a fundamental part of a firm's ICARA process. This should help an investment firm understand what can go wrong, so it can consider if its controls and financial resources are adequate to minimise the risk of harm to clients and markets. Some of the risks may already be partially or fully captured by applying minimum K-factor own funds requirements. But we would still expect all investment firms to perform their own risk assessment of the relevant activities of their individual business model."(p. 92).

- "In our view, when assessing the risks they might pose to clients and financial markets, and to which they themselves are or might be exposed, investment firms need to consider 'what-if' scenarios for the activities they undertake, the harm that *can* be caused and the events leading to that harm. The assessment would need to factor in the likelihood of the events materialising, and that different events might occur at the same time." (p. 93).

- "Investment firms would be expected to estimate any potential loss impact based on their knowledge and experience, which, where the control framework is sophisticated enough, may be further supported by statistical models. When using such models, we would expect investment firms to understand how appropriate the inputs and outputs of the model are, which include the scenarios and assumptions." (p. 93)

DP: ICARA – Documenting the ICARA process

- FCA expects that an IF would use the ICARA document to clarify
  i. why it believes its ICARA process is fit for purpose,
  ii. what has changed as a result of the annual review,
  iii. a review of risk management since the last annual review, plus
  iv. an overview of the capital and liquidity planning and scenario and stress testing.

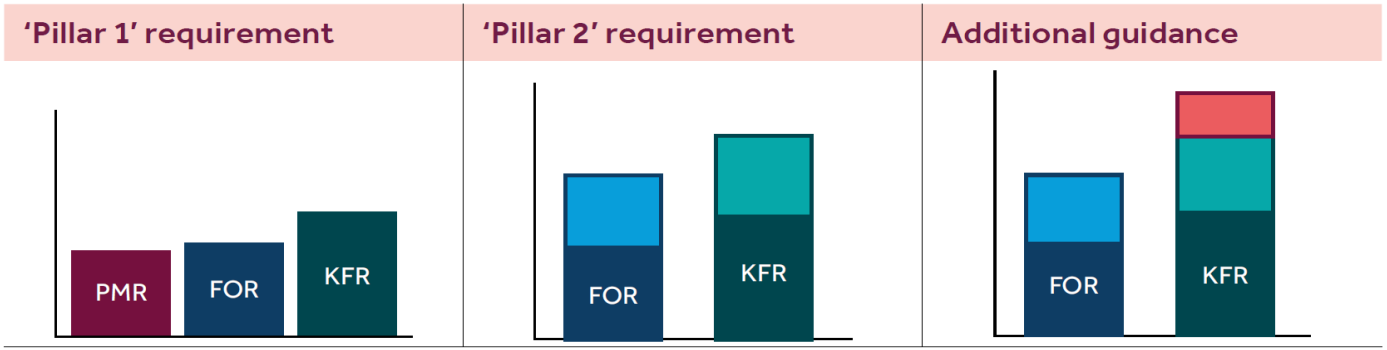
DP: Supervisory Powers

- SREP → additional requirements necessary?
  - Currently, Individual Capital Guidance (ICG): not directly legally binding
    - Under the new regime, the Pillar 2R: legally binding requirement.
  - Additional capital guidance Pillar 2G
    - The ability to set an additional buffer where a 'buffer' is needed to allow for economic cyclical fluctuations.
    - These fluctuations may be specific to an IF's business model, activities, and its potential to cause harm
    - Pillar 2G is meant to act as a buffer and, like ICG, is linked to the overall financial adequacy requirement. Similar to the current ICG, 'Pillar 2G': not a formal regulatory requirement, i.e. not automatically grounds for enforcement action.
    - If an IF falls below the 'Pillar 2G' component → notification to FCA
    - Note: Unlike CRD, in the new regime there is no combined (capital conservation and counter-cyclical) buffer regime.

DP: Stacking Order of Own Funds and Capital Guidance

- "Pillar 2R" = own fund requirements (>= minimum requirement of Pillar 1). These are capital (typically, the assessment of 'Pillar 2R' is meant to consider events, risks, and harm within a twelve-month period).
    - 'Pillar 1' and 'Pillar 2R' > legally binding minimum own funds requirement
- "Pillar 2G" typically needs to consider what may happen throughout an economic cycle. So it is independent of whether the total requirements are driven by the FOR or the KFR.
    - "…'Pillar 2G' would act as a buffer; it would form part of the total amount of capital resources an investment firm should hold, but it would not be part of the minimum own funds requirement. For the 'Pillar 2G' component, we anticipate that an investment firm may temporarily fall below the level advised in the guidance in adverse circumstances. "

DP : Figure 11.4 – Example A: non-SNI investment firm

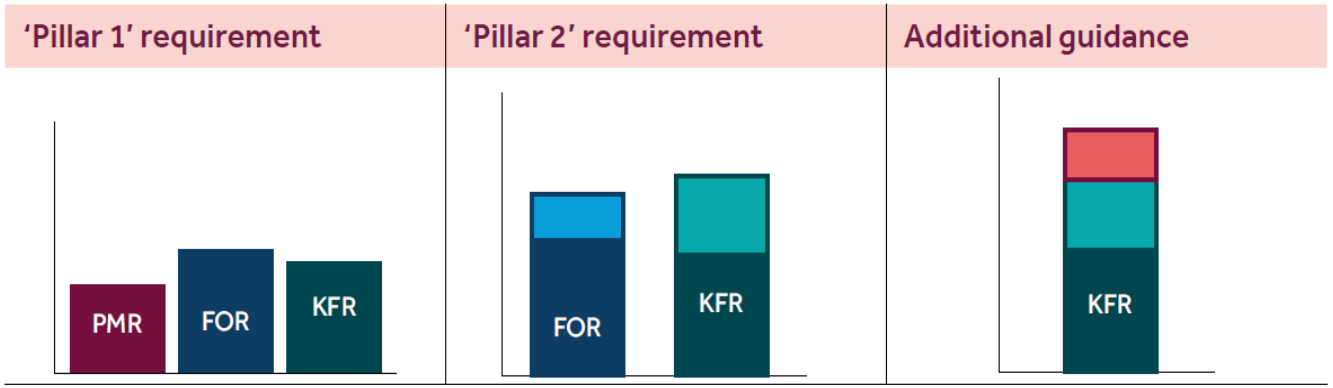


Key:

	Additional capital required for orderly wind-down in addition to FOR
	Additional capital required so that the firm can mitigate the harm that it poses to others and itself not captured or not fully captured by KFR
	Additional capital guidance

An investment firm with a known PMR, calculates is FOR and KFR. It determines that KFR is its highest 'Pillar 1' requirement. The investment firm then calculates any additional own funds required for an orderly wind-down. This is added to its FOR. It also cacluates any additional own funds needed to mitigate the harm that it may pose to others and the risks it faces itself. This is added to its KFR. Either of these own funds requirements may be further adjusted by our supervisory review process. 'Pillar 2G' is additional to the highest component of 'Pillar 1' plus 'Pillar 2R'.

DP : Figure 11.7 – Example D: An SNI investment firm



Key:

	Additional capital required for orderly wind-down in addition to FOR
	Additional capital required so that the firm can mitigate the harm that it poses to others and itself not captured or not fully captured by KFR
	Additional capital guidance

An investment firm with a known PMR, calculates is FOR and KFR. It determines that FOR is its highest 'Pillar 1' requirement. The investment firm then calculates any additional own funds required for an orderly wind-down. This is added to its FOR. It also cacluates any additional own funds needed to mitigate the harm that it may pose to others and the risks it faces itself. This is added to its KFR. Either of these own funds requirements may be further adjusted by our supervisory review process. 'Pillar 2G' is additional to the highest component of 'Pillar 1' plus 'Pillar 2R'.

DP: Concentration Risk

- All IFs should monitor and control their concentration risk, including in respect of their clients.

- However, non-SNI firms should report to competent authorities on their concentration risk.
  - default of counterparties and trading book positions (both for an individual
  - counterparty and on an aggregate basis)
  - location of client money
  - location of custody assets
  - location of a firm's own cash deposits, and
  - earnings

DP : Reporting Requirements

- For all IFs : level and composition of own funds
  - own funds requirement and calculations
  - the level of activity (B/S, revenue by investment service and applicable K-factor)
  - concentration risk requirement
  - liquidity requirements
- Simpler than current COREP (for which reporting templates will need to be developed).
- For non SNIs : Concentration risk reporting

DP: Environmental, social and governance (ESG) risks

- From 26 December 2022, IFs shall disclose information on environmental, social and governance risks, including physical risks and transition risks
  - once in the first year and biannually thereafter
  - The EBA > whether any ESG-specific adjustments to the K-factors necessary for the prudential treatment of ESG-exposed assets
  - "All investment firms in the UK are encouraged to consider material ESG-related risks when calculating their capital and liquidity requirements. For example, there may be a risk that assets become illiquid or of minimal value. In these cases, we may consider imposing additional individual requirements on firms if we do not think they have adequately considered these risks."

DP : Disclosure Requirements

- IF should also disclose its KFR and FOR
- If requested by the FCA > result of its ICARA process, including the composition of any additional own funds requirement set as a result of the SREP.
- To be published on the same date annual financial statements (exception: ESG disclosure biannually) as well as same medium and location.

Article number of disclosure requirement	SNIs that have issued AT1	Non-SNIs
47 – Risk management objectives	√	√
48 – Governance		√
49 – Own funds	√	√
50 – Own funds requirement	√	√
51 – Remuneration policy and practices		√
52 – Investment policy		√[1]
53 – Environmental, social and governance risks		√[2]

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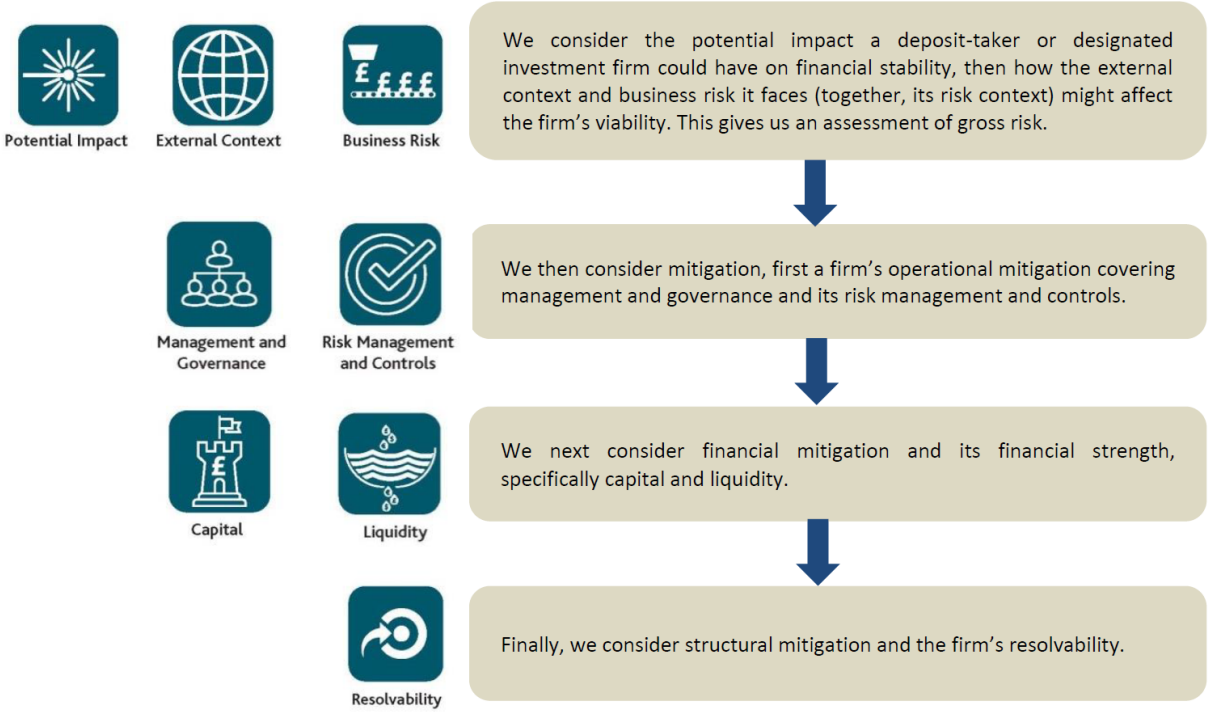
Appendix: From PRA's Approach to Banking Supervision (2018)

Figure 2: Our risk assessment framework



Gross risk			Mitigating factors				
Potential impact	Risk context		Operational mitigation		Financial mitigation		Structural mitigation
Potential impact	External context	Business risk	Management and governance	Risk management and controls	Capital	Liquidity	Resolvability

P. 11: "The intensity of our supervisory activity varies across firms. The level of supervision principally reflects our judgement of a firm's potential impact on the stability of the financial system, its *proximity to failure* (as encapsulated in the Proactive Intervention Framework, described later), its resolvability, and our statutory obligations. Other factors that play a part include the type of business carried out by the firm, and the complexity of the firm's business and organisation.

Our risk assessment framework. We take a structured approach when forming our judgements. To do this we use a risk assessment framework (see Figure 2).