

EXECUTIVE SUMMARY

In September 2020 the CMF requested TA from the IMF in respect of a review of its regulatory regime for money market mutual funds. Between October 2020 and February 2021, organizational and preparatory work was undertaken by the mission team.

This assessment relies on the information submitted by the CMF and other parties interviewed. While the mission did not include a review of supervisory case files, the descriptions of the current approach provided by the regulator, the central bank and industry are mutually consistent as between each other.

The review assesses the proportionality and appropriateness of the current regulatory regime against the mission team’s own assessment of the particular risks facing the Money Market Fund (MMF) regime in Chile, having regard to global practices in the regulation of MMFs and also standards and policy recommendations set by global bodies such as the International Organization of Securities Commissions (IOSCO) and the Financial Stability Board (FSB).¹ The review does not constitute a formal assessment of the Chilean regime against any such standards, but should, nevertheless, give some indication as to the kind of conclusions which might be reached if such an assessment were carried out.

The review finds that the MMF sector in Chile has a number of specific characteristics which have contributed to a pattern of relative stability both in the level of investment in MMFs and in the impact of MMF funding on the banking sector. These characteristics are central to assessing the Chilean regulatory regime. Nevertheless, as one would expect, a number of risks can be identified and the focus of this report is whether the regulatory mitigants in place appear, in the judgement of the mission, proportionate to those risks.

The review finds that the Chilean regulatory regime is robust in many of its features, both in terms of the regulatory framework which applies and the supervisory practices, which involve regular day-to-day oversight of the MMF sector. With regard to the regulatory framework, the review finds that it is generally comprehensive, although large parts of it are not designed specifically for MMFs. Supervisory practices are strong and would be likely to identify and promptly tackle any significant deviation from compliance with the regulatory framework by an individual MMF. This provides strong reason to believe that individual investors are well protected by the current regulatory regime. However, the review finds that, despite the impressively stable character of the Chilean MMF sector during recent periods of economic and financial stress, there is scope for improvements in those aspects of the regulatory regime which underpin the financial stability of the Chilean financial system. In particular, the report recommends changes, including in relation to mark-to-market pricing, which should add to the

¹ In considering how to address the recommendations set out in this report, the CMF should also have regard to the FSB report on *Policy Proposals to Enhance Money Market Fund Resilience* published in October 2021.

resilience of the Chilean financial system by reducing the risk of shock amplification through the MMF sector.

It is recommended that these changes be brought in progressively over a period of time, to be defined locally, which ensures that their introduction does not itself raise any concerns among investors. As a provisional suggestion, some possible timings have been included in this report, but these should be tested by consultation with the sector prior to adoption. This is in recognition of the evidence of relative resilience of the Chilean MMF sector and, in particular, the substantial exposure to central bank securities which adds to the resilience of the sector. That underlying resilience means that, while these changes are important in order to further strengthen the MMF sector of Chile (and indirectly, the banking sector) in the event of unexpected, extreme stress, there is little reason in the current conjuncture to require their urgent implementation.

Table 1. Chile: Key Recommendations

Recommendations and Authority Responsible for Implementation	Priority	Timeframe ²
<i>Recommendation 1: Swing Pricing</i>		
MMFs (i.e., Type 1 funds) should have a tested operational capacity to move promptly to swing pricing in times of financial stress (CMF).	3	Medium term
<i>Recommendation 2: Supervision of Swing Pricing</i>		
The CMF should have the capacity to require the whole sector to move in an orderly and coordinated way to the adoption of swing pricing and should factor into its inspections program the achievement of reassurance that each MMF has operable plans to move immediately to swing pricing overnight, if so required (CMF).	3	Medium term
<i>Recommendation 3: Mark-to-market Pricing</i>		
Over a period of time consistent with the stable operation of the sector, the sector should move to mark-to-market pricing as a default; the plan should be worked out in cooperation with industry and the CCB and should probably involve an extended period of dual values where both market values and cost price are consistently displayed together for all investors (CMF, CCB).	2	Medium term
<i>Recommendation 4</i>		
A cost-benefit analysis should be conducted on the introduction of a specific regulatory requirement that Type 1 funds be confined to fixed income instruments with a duration of no more than 90 days. The study should also assess costs and benefits of alternative ways in which to manage the risk that holding longer duration assets constitutes for MMFs (CMF, CCB).	1	Near term
<i>Recommendation 5</i>		
There should be an explicit operational mandate within the CMF for the relevant supervisors to assess the extent to which Type 2 funds are also operating in ways which might justify the extension of similar requirements to them (CMF).	3	Near term
<i>Recommendation 6</i>		
The CMF should publish guidelines which set out common reference parameters for stress test scenarios to be applied by MMFs and which provide a reporting template to be used by MMFs. MMFs should report results of the stress tests to the CMF semi-annually (CMF).	2	Near term
<i>Recommendation 7</i>		
Managers should be asked by the CMF to conduct scenario exercises to test their operational capacity and legal powers to suspend and/or gate redemptions (CMF).	2	Near term

² Near term: < 12 months; Medium term: 12 to 24 months.

Recommendations and Authority Responsible for Implementation	Priority	Timeframe ²
Recommendation 8		
The CMF should include in its inspection work, regular reviews of whether managers of MMFs periodically check the robustness and timeliness of the valuations provided by valuers (CMF).	1	Near term

I. INTRODUCTION

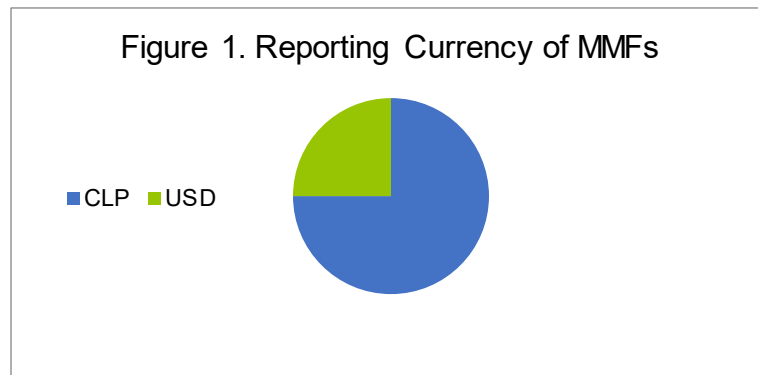
A. Outline of Mission

1. **The mission was conducted in several phases:**
 - (i) an initial questionnaire prepared by the mission and completed by the CMF with additional supporting material provided in March 2021;
 - (ii) a number of virtual meetings then took place between March and May 2021 with senior officials and representatives of the CMF, CCB, CAMF, and an independent valuer of MMF assets;
 - (iii) an information assessment phase;
 - (iv) drafting of this report; and
 - (v) due diligence and approval by the IMF for publication, which occurred between June and November, 2021.

B. Chile's MMF Sector

2. **MMFs form a substantial part of the Chilean securities sector.** There are 56 MMFs in Chile with combined assets under management as of March 3, 2021 of USD 30.8 billion representing circa 43 percent of the mutual fund (MF) market in Chile.

3. **Chilean MMFs generally hold assets denominated in the Chilean peso (CLP), an inflation-linked alternative denomination linked to the CLP (Unidades de Fomento – UF) or USD.** The reporting currencies of MMFs are CLP and, more recently, USD. The proportion of foreign assets is quite high at 17 percent. 81 percent of all assets in MMFs are denominated in CLP, with 17 percent in USD and 1.5 percent in UF. This means that MMF investors may move out of local currency exposure by switching from one MMF to another.

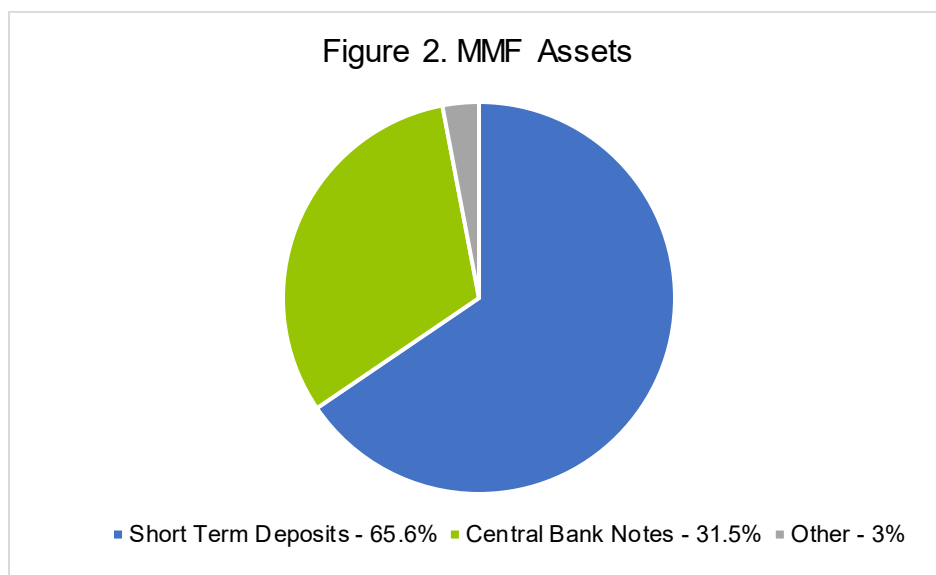


Source: CMF; IMF Staff Calculations.

4. **MMFs are a key investment product/store of value for retail investors.** MMFs are held by both retail and institutional investors, but predominantly by retail investors. The retail investor base includes a significant number of small companies. Retail investors can invest in

and switch between MMFs with few costs or frictions. Tax liabilities are not realized when switching between MMFs but only when cashing out of MMFs.

5. **In Chile MMFs cannot be divided into so-called “prime” (i.e., banking) and government MMFs as is the case in some other jurisdictions.** The assets of MMFs are predominantly (98 percent) Chilean short-term bank deposits or CCB Notes. Of the 56 MMFs, only two hold foreign currency bonds while 14 hold USD-denominated short-term deposits.



Source: CMF; IMF Staff Calculations.³

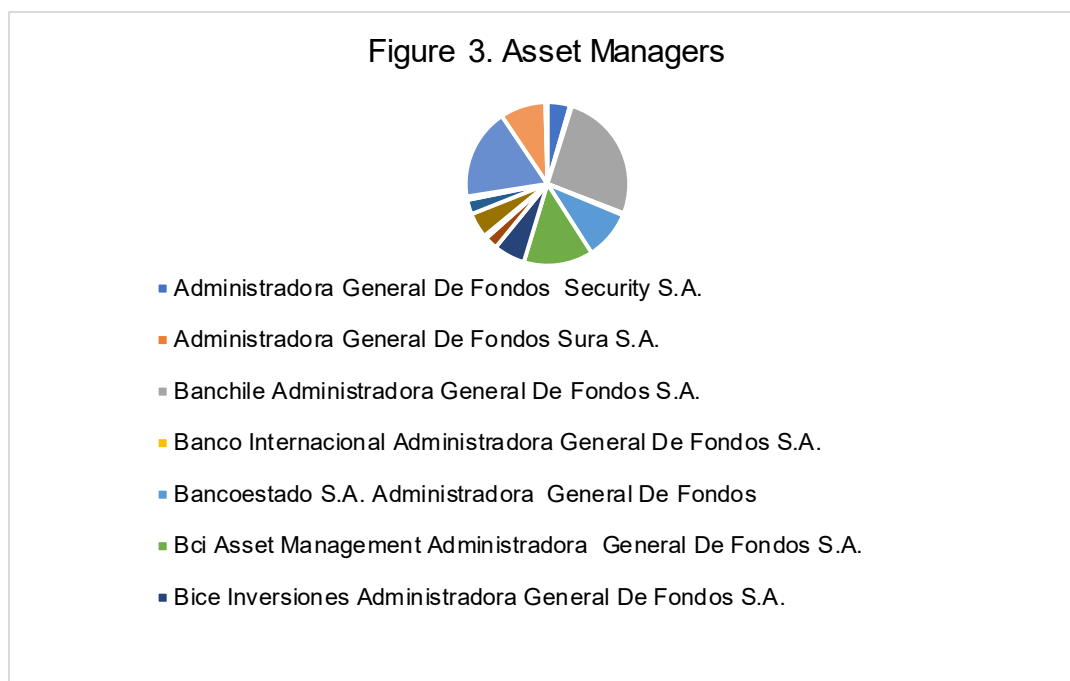
6. **However, the balance between the two principal types of investment has changed significantly over time.** This has happened as the scale of investment in CCB notes has risen. It is an important feature of the Chilean MMF sector that the balance of its risk exposure as between the state and the banking sector has shifted over time, without investors having to shift out of one type of MMF into another.

7. **MMFs in Chile are an important source of bank funding.** It is understood from the CCB that MFs (in particular MMFs) represent some 10 percent of the liabilities of Chilean banks. This means that a dysfunction in the Chilean MMF sector would immediately have an impact, at the margins, on the ability of Chilean banks to raise short-term funding. The impact would almost certainly vary significantly from bank to bank, depending on their access to alternative short-term funding options.

8. **There is a relative concentration of MMF asset managers as shown in the chart below.** There are 15 asset managers for 56 MMFs. The MMF asset managers are connected to

³ Other 3% includes: Promissory Notes, Bank Bonds, Treasury Bonds, Corporate Bonds, Foreign Treasury and Central, Bank Bonds, Long Term Deposits, Foreign Corporate Bonds of Local Issuer, Invoices, Foreign Bank Bonds, Mortgage Notes.

banks and other financial institutions in Chile. Six of these service over 80 percent of all MMFs and only those six manage more than five percent of total MMF assets in Chile.



Source: CMF; IMF Staff Calculations.

9. **The assets held by MMFs in Chile are generally tradeable on one secondary market or off-market.** The mission confirmed with all parties that short-term deposits are actively traded and the stock exchange provides an effective market structure.

10. **The valuation process relies on a small number of independent valuers using models extrapolating from secondary market prices.** The CMF, CCB, and the CAMF consistently described the market practice in this regard. Where there is reliance on model valuation, rather than solely on market valuation, the quality of valuation is closely dependent on the depth of trading on secondary markets since models extrapolate from the trades which have taken place.

C. Chile's Approach to the Regulation and Supervision of MMFs

11. **MFs in Chile are categorized in one of eight types of MF, with Type 1 in practice being the category applicable to MMFs.** The eight types are:

1. Short-term debt = < 90 days
2. Short-term debt = < 365 days
3. Medium and long-term debt
4. Mixed mutual fund (range of short, medium, and long)
5. Mutual fund for investment in capitalization instruments

6. Free investment mutual fund (not 1 to 5 above)
7. Structured mutual fund (seeks pre-determined yield)
8. Mutual fund aimed at qualified investors (any of 1 to 7 above).

12. **The short-term debt of a MMF is not to be greater than 90 days but this applies to only 50 percent of the assets of the MMF.** A MMF is permitted to have a range of asset types. However, the data provided by the CMF shows that the assets are predominantly under 90 days in maturity. There is further detail on this later in the report.

13. **The regulatory regime provides for transition to market prices in certain circumstances.** Circular 592 exempts Type 1 MFs from applying the International Financial Reporting Standards (IFRS) valuation criteria, permitting the use of the acquisition/purchase internal rate of return (IRR) but only within certain deviation tolerance thresholds of 0.1 percent of the portfolio, 0.6 percent, and 0.8 percent depending on the type of asset.

14. **The regulatory framework is supplemented by daily reporting of valuations to the regulator.** This allows for close supervisory familiarity with the market and engagement to explore any anomalies that arise. The CAMF is also involved in this process.

15. **The daily reporting regime is supplemented by inspections.** The inspections and supervision processes are undertaken by the Patrimonial Funds Control Division (DCFP) of the CMF based on a risk management control system and internal control assessments. Given the strong reliance of the regulatory system on the daily reports from fund managers, these inspections are a critical additional supervisory support to the robustness of the Chilean approach.

16. **The CMF has a broad range of powers of direction, which appear to give it the capacity to respond appropriately to stresses in the MMF sector.** Article 5 of Law 3538 provides the CMF with a wide range of regulatory powers. These powers include: (i) determining the standards for the application and compliance with the applicable laws and regulations; (ii) administratively interpreting the laws, regulations, and other rules that govern supervised individuals, entities, or activities; (iii) reviewing and investigating complaints or claims; (iv) examining without any restrictions any files or other documents of supervised individuals and entities; and (v) inspecting supervised entities.

17. **The supervisor operates a separate risk assessment division, which is good practice.** The Regulatory Impact Analysis (RIA) division undertakes risk analysis across all market sectors and provides “big picture” all-industry, financial stability and systemic views. This risk analysis is provided to the commissioners of the CMF and also assists them with their discussions with the CCB. By operating separately from the CMF supervision divisions, the RIA division provides an important and separate means for relevant issues to be raised and escalated with the appropriate CMF supervisors.

18. **The direct supervision by the CMF is supplemented by CCB monitoring of the general trends in the market.** Central bank monitoring of the sector provides a natural source of challenge in the event that the supervisor was subject to any form of group think with the industry. It should be especially useful given that the central bank has direct access to market information because it is directly involved in selling short-term securities to the sector.

19. **The CMF and the CCB sit together on the Financial Stability Council (FSC) where information and insight can be exchanged.** The FSC, which meets monthly, includes the Ministry of Finance, the CCB Governor, the Chair of the CMF, and the Chair of the Pensions Supervisor.

II. SUMMARY REGULATORY RISK ANALYSIS

A. Regulatory Risk Summary

20. **While the risk to investors from a badly run MMF is real at a global level, the mission team felt it reasonable to discount that risk for the purposes of this report and to focus on the financial stability risk association with MMFs.** We can explain this by considering what those risks to investors are and why they are relatively low in Chile. Investors in MMFs in any country may be inappropriately disadvantaged in a number of ways which can be summarized as: bad marketing, bad valuation, or bad administration. Where, as in Chile, there is a reasonably strong market with clear pricing, multiple MMF suppliers and comparable alternatives readily available between which investors may quite easily switch, market discipline tends to be quite strong. This is reinforced in Chile by quite active secondary markets for the deposits in which MMFs traditionally invest, daily oversight of valuation at both industry association and regulatory level, and low levels of conflicts of interest on the part of professional asset valuers. Observing these features of the Chilean MMF market is what allows us to focus our attention on the second area of risk, namely that a run on MMFs will amplify a period of market stress in either the short-term funding market generally (in Chile this is primarily a secondary market in short-term deposits) or the MMF sector in particular.

21. **MMFs are a common feature of financial markets across the globe, but vary significantly in a broad range of key characteristics each of which impacts their riskiness.** It has been estimated that, globally, the equivalent of circa \$8 trillion is invested through money market funds. This number is up from just under \$5 trillion about a decade ago. This makes MMFs a globally significant form of intermediation of short-term lending and a focus of understandable concern that their behavior can impact all short-term money markets and banks in particular. The assets and investor base of MMFs vary greatly across the world: they can have primarily a retail or an institutional investor base; they may cycle funding primarily into banks or into the state; they may operate to intermediate funding within a jurisdiction or between jurisdictions; they may publish portfolio values based on the cost of assets purchased or on the basis of the current market values of assets purchased; they may either accumulate dividends/interest or distribute them as and when received; they may be confined to assets of less than 90 days or may invest in assets of up to 365 days.

22. **Globally, the behavior of MMFs in periods of extreme market stress appears to depend critically on three factors: first, on what is called “first mover advantage”, second on drivers for a “flight to quality” and third on drivers for a “flight to cash”.** With regard to the first, under circumstances of rising market uncertainty, there can be a tendency for some investors to want to move quickly to seek advantage over other investors who might seek to redeem soon. Any imminent possibility that an MMF might suspend redemptions or any lack of clarity as to the true value of an MMF is likely to make investors even more willing to redeem as a response to uncertainty rather than as a response to actual deterioration in asset quality. The second driver of the behavior of MMFs in periods of market stress is asset quality deterioration. While not always so, the fundamental business model for many MMFs is to provide a higher rate of interest than is available to retail customers from a bank deposit by lending to banks in another way. This can involve providing deposits to banks that do not benefit from a state guarantee or purchasing short-term bank paper, which is also not guaranteed by the state. The higher level of risk involved—and combining monies to access the wholesale market—gives access to a higher rate of return, which attracts investors. But MMFs operate on tight margins. Any counterparty default significantly impacts all investors in ways which are likely to be well outside the risk appetite of investors. For this reason, MMF investors will tend to shift from MMFs with banking assets to MMFs with sovereign assets in time of market stress. This is the “flight to quality” phenomenon. The third driver of potential MMF behavior in periods of market stress, is a sudden increase in the working capital requirement of the investors in MMFs, primarily because of some form of leverage they have taken on or another activity involving margin calls which vary upwards with market stress. This driver is unrelated to the state of health of the MMF and should be understood as exogenous both to the MMF sector and to MMF regulation. This is the “flight to cash” phenomenon under which investors simply want to hold cash because the market is volatile and they either anticipate needing cash or like cash because it has the lowest possible issuer risk within the jurisdiction.

23. **Investors in MMFs in Chile appear relatively insensitive to prospective small changes in value in the MMFs in which they invest.** This is the first of the three globally present risks that we consider here. Generally speaking, while much of the ultimate investment through MMFs comes from non-financial corporations and households, the behavior of investors in times of market stress will depend on whether that investment is done directly or through institutional intermediaries such as pension funds, insurers, and asset managers. It is reasonable to speculate that such institutional intermediators are likely to be more sensitive to market trends and more sensitive to the potential to achieve a first mover advantage. They are almost invariably better informed and less sensitive to the costs and frictions of making frequent choices. But in Chile, a substantial portion of the investment in MMFs is under the direct control of the ultimate beneficiaries, rather than institutional intermediaries. This contributes to making the sector more

stable.⁴ The lack of easily accessible alternatives for small investors to MMFs makes those investors less likely to withdraw funds even where there is market speculation about the credit worthiness of short term deposit or paper issuers. Such retail investors are unlikely to move their funds out of MMFs except in periods of extreme market stress. When it comes to direct retail investors, this conclusion is sensitive to a number of influences: in particular, the tax implications of unwinding an MMF investment and, secondly, the precise mode of access by which choices are made to invest or withdraw. This means that the MMF market is likely to see less instability in periods of moderate market stress and uncertainty and even in periods of extreme uncertainty, investors are likely to be slow to move. However, if they do move it is likely to be on a large scale and to happen quite suddenly.

24. Chilean MMFs benefit from a blended asset profile, combining exposure to Chilean central bank assets with exposure to short term bank deposits. This is important in considering the second of those globally present risks. Unlike in Chile, in some jurisdictions there are MMFs which invest solely or primarily in public debt and other MMFs which invest primarily in bank debt. Where this occurs, it is possible to identify very clearly how the phenomenon of a “flight to quality” operates in periods of market stress. In the U.S., where this is the case, there has been a repeated and evident movement out of “prime” MMFs into public debt MMFs in periods of market stress. This is strong evidence that in periods of market stress both investors and asset managers running MMFs will tend to move away from exposure to some or all of the banking sector. But the growing role of Chilean central bank assets in the portfolio of MMFs reduces the likelihood that Chilean MMFs will perform like prime MMFs. If this feature of the Chilean MMF sector—i.e., investing in central bank paper—is maintained, it is likely to underpin stability in the sector because it leads to a blended investment portfolio.

25. However, following the post-2008 reforms in regulation, the third risk is that periods of market stress are now significantly more demanding in cash terms for all financial market participants. Institutional investors and treasury desks will very quickly experience increasing demands for cash to meet margin calls, as asset prices move or market nervousness rises. They will want to hoard actual cash in the face of uncertainty. This institutional behavior differs from retail investor behavior. That means that where MMF assets are not public or are mixed, it is still quite likely that there will be significant withdrawals from term deposit and MMF options into ultra-short term deposit options, e.g., overnight, as market stress deepens. This means that even MMFs whose asset profile remains quite low risk can also experience redemption pressure if they have a financial sector, institutional or treasury function investor base. In these respects, while it is problematic to generalize, the Chilean MMF sector appears at the lower end of the risk spectrum, with a pattern of mixed assets (public and bank) assets and with an investor base that is not strongly exposed to leveraged or repo-based positions

⁴ Pension funds do have considerable assets in MMFs due to the need to be prepared for the relatively easy option, for pension investors, of switching between pension providers, but pension funds are not predominant in MMF investment.

in wholesale markets as would be likely to drive cash hoarding as a response to rising financial market stress and falls in other asset prices.

26. The most important tail risk faced by the Chilean MMF sector is a risk of loss of confidence in local currency assets. This means that the main risk facing the Chilean MMF sector does not fit neatly into any of the three categories of risk (first mover advantage and flight to quality or cash) previously discussed. Rather the key risk to be guarded against is the risk of real-economy developments reducing cash and near-cash holdings in the Chilean economy as a whole. While this risk may be deemed small at any time and while there is very substantial evidence of Chilean investors being content to hold their short-term investments in the CLP or in UF, the scenario that there would be a run out of the local currency which impacted on the MMF sector, is probably the best tail-risk scenario for regulatory planning.

27. A second tail risk scenario would be a generalized concern about the Chilean banking sector in its entirety. In this eventuality, investors could conclude that the exposure of the MMF sector to the banking sector meant the whole sector was unattractive and would prefer to exit the whole sector. This would probably occur as part of stress in all short-term funding markets. Given “too-big-to-fail” considerations, this scenario turns out very similar to the previous one.

28. The MMF sector, if it did experience redemption stress, would almost certainly drive immediate knock-on effects in the banking sector. The main source of potential amplification from stress in the MMF sector in any country arises from their influential role in providing short-term financing to banks, often—but not solely—through their role in commercial paper markets. They can also, as in Chile, invest directly in banks by taking short-term deposits. In this regard their role is substantial. Impacts on the short-term funding of the banking sector will ripple through to lending markets quickly and can rapidly have very significant impacts on economic activity.

29. On the basis of this, we can conclude that any enhancement to the current regulatory regime for MMFs in Chile should focus on the remote but potentially serious risk of concerns about the Chilean currency. This is different from the financial sector stresses considered above. Such a stress would cause very significant additional amplifying stress in the banking sector, which could only be countered by sustained central banking-style interventions. While these scenarios are remote risks, they are, for that reason, worth preparing for.⁵

⁵ It is also worth noting that it is quite possible for investors to remain in the Chilean MMF sector and to move into a greater weighting of USD\$ - denominated assets. Precise scenarios would need to be modelled both to test the viability of moving from within the Chilean MMF sector into predominantly USD\$ assets at any time and the impact on the Chilean banking sector. A key point in this regard is that Chilean banks issue USD\$ - denominated short term deposits.

B. Regulatory Risk Mitigants

30. **We have adopted the approach that the purpose of any regulatory framework is to address a tendency within a market sector to perform, if unregulated, in a manner which does not meet reasonable expectations, from the point of view of the public interest.** As outlined in the previous section, having looked at the past performance and structure of the Chilean MMF sector, it is reasonable to conclude that the main issue is to identify any additional mitigants which can have a proportionate impact on the ability to contain certain unlikely scenarios of systemic stress in the MMF sector, as discussed in the previous section.

31. **For the purpose of assessing the Chilean regulatory regime, we now focus on a number of key potential mitigants.** A “key potential mitigant”, for our purposes, is a feature of the MMF regulatory approach which could be in place to reduce the inherent risk of either an investor protection or financial stability harm occurring, or both. The themes we have focused on are themes also mostly highlighted in the IOSCO Policy Recommendations for MMFs. We set out below each of these potential mitigants and indicate our view on whether the relevant risk is mitigated to a reasonable degree by the current regulatory regime in Chile. We have prioritized ensuring that our recommendations are balanced with regard to the risks in Chile in particular, rather than seeking conformity to approaches to MMF regulation elsewhere, given that the sector is different in different countries.

Mitigant 1: clarity of the definition of MMFs in law

In practice, MMFs in Chile are defined and formally named as a “Type 1” MFs. Chile Law 20,712 requires all MFs to have the words “Mutual Fund” in their name, but it does not require any funds to have the term “Money Market Fund” in their name. We have considered whether to recommend that Type 1 MFs should be required to adopt the name “Money Market Fun”. One advantage of this approach is that it would ensure that the bulk of MFs which present the characteristics of a MMF describe themselves as such. This helps to make it clear that these are not the appropriate vehicles for longer-term investment. It would be better than “Type 1 Fund”, which requires some technical knowledge to be understood.

32. **A key drawback of this approach is that, if the provision were confined to Type 1 funds, then any other funds which presented to investors or potential investors as having similar investment objectives and liquidity features would not be captured.** The more regulation constrains MMFs, the more likely that funds just outside the perimeter of “Type 1” funds would begin to display characteristics of MMFs. Type 2⁶ funds with assets maturing up to 365 days are obviously relevant. In other words, there is a boundary issue.

⁶ IOSCO in its MMF Recommendations states that MMFs may generally be defined as investment funds that seek to preserve capital and provide daily liquidity, while offering returns in line with money market rates. What are called
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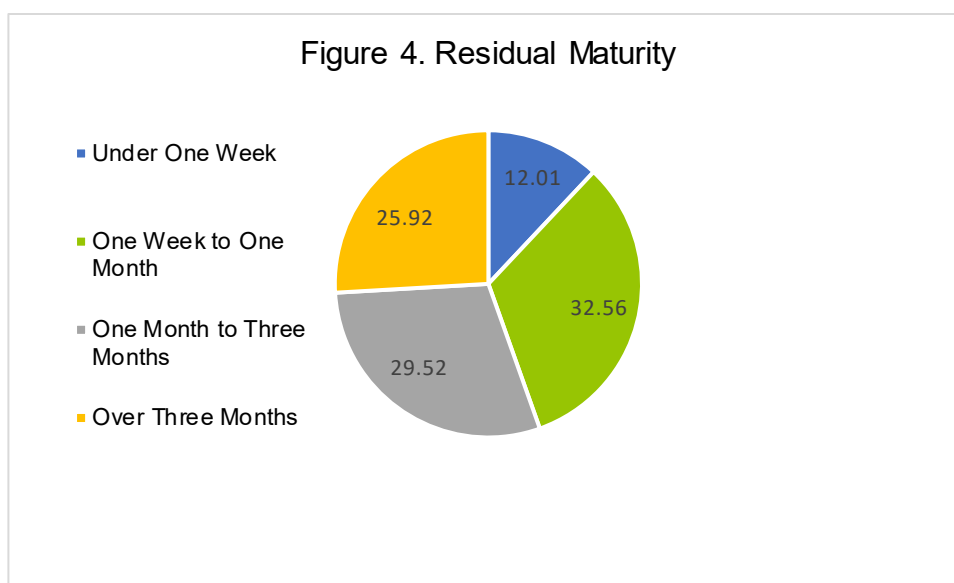
33. **On balance, we have decided not to recommend any change to the law concerning the naming of funds.** The reasoning is that the focus of our analysis of the risks supports prioritization of financial stability issues. We do later recommend active attention to the behaviors of investors in Type 2 funds to ensure that the current naming conventions do not facilitate a lack of clarity in the future (See Mitigant 3).

Mitigant 2: appropriate restrictions on MMF assets so that they are suitably liquid

34. **In Chile the regulatory framework creates an explicit requirement around the maturity of assets but otherwise delegates the judgement of liquidity to the asset manager.** Not only do MMFs in Chile invest predominantly in assets with very short maturities but they also invest in assets which are or can be actively traded on secondary markets, particularly term deposits. It is preferable that both aspects of the liquidity of MMF assets is underpinned by regulation and/or supervision.

35. **Article 59 of Law 20712 establishes limits for investments of mutual funds that are not directed to qualified investors.** This is supplemented by the requirements of NCG 376. These requirements cover a range of issues, including liquidity. These requirements are for all MFs rather than for MMFs in particular. The short-term debt of a Type 1 MF is not to be greater than 90 days, however it should be noted that this applies in accordance with NCG 376 to only 50 percent of the assets of these MMFs. The following chart shows the residual maturity of portfolio assets as a percentage of total MMF assets and shows that over 25 percent of MMF assets have maturities of longer than 90 days.

“Type 1” funds in Chile generally conform to this definition. They mainly hold assets maturing in less than 90 days and are used by investors who potentially require quick access to funds. In Chile, Type 2 funds hold assets of up to 365 days. In some jurisdictions, funds holding assets with slightly longer maturities such as this can also play a similar MMF-type role. More broadly, it is a feature of some jurisdictions, particularly as money market funds have been the subject of additional regulatory requirements, that other open-ended mutual funds can mimic the investment strategies of money market funds by investing in short term assets and attracting investors who are primarily concerned to preserve capital values while having strongly assured access to funds. In the event that the recommendations in this report lead to an expansion in the investors of this type holding Type 2 funds in Chile, then it would be entirely appropriate to extend the proposed approach to Type 2 funds. See Chapter III, Mitigant 3 for further discussion of this issue.



Source: CMF; IMF Staff Calculations.

36. **In effect, MMFs define their own limitations by identifying as Type 1 funds and do, nevertheless, hold substantial portions of their portfolio in assets of greater than 90 days initial maturity.** It is understandable why this occurs. Lengthening the weighted average maturity in this way will enhance yield if there is not an inverted yield curve. This is quite closely monitored. CMF and MMF managers (in respect of their MMFs) have MMF portfolio data showing the assets of each MMF. This data includes the maturity date of the assets, which on a half yearly basis provides a liquidity analysis of assets broken down into assets maturing in under one week, one week to one month, one month to three months, and over three months. However, it is difficult for regulators to assess the significance of rising levels of holdings of assets with maturities greater than 90 days. The mission was not convinced that supervision, no matter how well done, is going to provide the requisite level of assurance that MMFs are robustly liquid in terms of their residual maturity. It is recognized that there is a trade-off between the degree of stability of MMFs and the blended yield they offer to investors. The current 90-day rule is allowing these MMFs to hold some quite long dated assets. That constitutes a significant risk because of the degree of liquidity transformation it allows in a portion of the portfolio. It would be prudent to reduce this risk, even if that reduces the yield available to investors. **It is recommended that the CMF and the Central Bank should conduct a study to assess the costs and benefits of the introduction of a specific regulatory requirement that Type 1 funds are confined to fixed income instruments with a duration of no more than 90 day and the costs and benefits of alternative ways in which to manage the risk that holding longer duration assets constitutes for MMFs.**

37. **The second aspect of liquidity is the health of secondary markets.** Circular No. 1,990 requires a manager to establish liquidity policies for each MMF. These policies must be reviewed and evaluated periodically by the MMF Manager. These policies should, as a minimum, include the following:

- i) Management of liquidity mismatches in the funds and contingency plans in scenarios of illiquidity, considering, at least, statistics on the historical behavior of redemptions.
- ii) Monitoring of the maturities of the instruments in the portfolio.
- iii) Review of the proportion of assets held as available or easily liquidated funds.

38. **Circular 1,990 also requires managers of MMFs to undertake stress testing on a periodic basis on the investment portfolio of MMFs.** Our interviews indicated that certain fund managers perform the stress tests every six months, however in general, stress tests are performed on a monthly basis and frequency is increased whenever there are adverse market conditions.

39. **The CMF monitors on an on-going basis the market liquidity of MMFs.** In cases where adjustments have been made to the valuation of instruments due to significant market movements (e.g., rate increases or decreases), the DCFP performs an analysis of the situation with respect to the impact on the portfolios, share value, nominal profitability, and on the participants of the affected funds and is then able to raise any matters of concern with the relevant managers of the MMFs.

40. **The CMF also monitors stress testing practices.** It has observed that the managers of MMFs consider different criteria such as changes in market conditions, liquidity, portfolio valuation gaps, and level of actual and potential redemptions and respectively performed on a daily and or monthly basis and reported/escalated accordingly. The results of such tests are then considered, if necessary to make changes to the liquidity level of the MMF. Although the CMF examines the stress testing exercises undertaken as part of the periodic supervisory engagement with the managers of MMFs, this information is not reported to the CMF outside of this process.

41. **While stress testing occurs, the coordination of quality assurance of these stress tests appears relatively weak.** Good stress testing is critical to identifying any potential issues arising for the portfolio of an MMF from weakening secondary market liquidity. Supervisors have observed that at least some stress testing is done to a good standard with a range of variables and scenarios defined as one would expect. However, there is an additional benefit to a centralized analysis of a common set of scenarios which did not appear to us to be achieved to an appropriate degree. Such a centralized coordination of stress testing provides an intimate understanding of where trigger points are likely to be. For that reason, *it is recommended that i) the CMF should publish guidelines which set out common reference parameters for the stress test scenarios to be applied by MMFs,⁷ including a reporting template and ii) MMFs should*

⁷ More detailed adverse stress scenarios may be included. In addition, managers should be guided to have regard to any adverse scenarios from the CCB, where these are available, to supplement, but not to replace, the common CMF parameters.

report results of the stress tests to the CMF semi-annually. The parameters should at least cover matters such as:

- redemption levels;
- asset liquidity;
- interest rates; and
- exchange rates.

Mitigant 3: whether supervisors have the capacity to identify other funds or securities which operate like MMFs.

42. **There is a risk in Chile, as already discussed, that Type 2 funds could operate substantially as MMFs.** MFs self-select as Type 1 funds and can alternatively self-select as Type 2 funds. The impact of this is to increase the potential yield but at the cost of reducing the liquidity of the fund assets. It has to be acknowledged that this relationship between maturity and liquidity is not always straightforward. Secondary market liquidity can be a complex phenomenon, linked not only to asset residual maturity or the yield curve, but also to potentially complex behaviors by market participants driven by their expectations and the potential for margin trading and market making to generate profit. However, it is a reasonable assumption that shorter maturity assets will usually be more liquid, and this appears strongly true of the Chilean market. For that reason, any drift by typical MMF investors from Type 1 funds to Type 2 funds constitute a weakening of the resilience of the Chilean financial sector.

43. **The current regulatory framework requires disclosure of key information to investors.** NCG 365 requires the fund managers to inform the participants, both in the internal regulations (section I.1) and in the informative brochure (section IV.2) about the characteristics of the funds they market, including the type of asset in which they invest, the term of payment of redemptions and duration of the fund, so that investors have information that allows them to distinguish the type of investment they are making. But this welcome disclosure to investors does not resolve the financial stability issue.

44. **In addition to disclosure requirements, the degree of daily scrutiny by the CMF is substantial.** It was our conclusion that it is possible—because markets evolve—that other securities could develop increasingly MMF-like features and this should be kept under careful review. In our judgement, the kind of scrutiny of the market that is conducted means that the CMF would understand if a pattern of Type 2 funds operating as MMFs developed and could respond appropriately. It should be clear to supervisors that it is part of their role to spot such shifts and initiate compensatory changes in policy. *It is recommended that, in so far as MMF-specific regulation is introduced for Type 1 funds, there should be an explicit operational mandate with the CMF for the relevant supervisors to assess the extent to which Type 2 funds and other securities are or may be also operating in ways which might justify the extension of similar requirements to them.*

Mitigant 4: the application of the general principles of fair value and the restriction of the use of amortized cost to prudently limited circumstances

45. **There is a general requirement for MFs to apply the classification and valuation criteria for financial instruments established in IFRS standards.** However, Circular 592 of 2010 states that Type 1 MFs, i.e., MMFs, are exempt from applying those requirements and permits the MMF instruments that make up the MMF investment portfolios to be valued at the internal rate of return implicit in the acquisition of the instrument (purchase IRR).

46. **There is an important safeguard to this exception.** In the event that there are relevant differences between the valuation of the instruments in the portfolio of MMFs at the purchase IRR and market IRR above the ranges or adjustment bands defined in the regulations, the MMF through its management company must justify whether or not it is appropriate to make adjustments to market prices for the MMF. These requirements are detailed in Circular 1,990 with MMF instruments being valued according to amortized costs with the following triggers that move the valuation of those instruments to mark to market:

- At portfolio level, the total deviation cannot be greater than 0.1 percent of the portfolio value
- At the instrument level, no nominal instrument may have a deviation greater than 0.6 and 0.8 percent of the present value in the case of an instrument denominated in currencies other than the CLP.

47. **The operation of this regime appears well developed.** Management companies of MMFs maintain daily valuation service contracts for the investment portfolios of their MMFs with external providers and the MMFs are required to provide daily, weekly, and monthly data to the CMF in respect of the portfolio assets of MMFs. These are monitored within the CMF. Circular 1,850 requires the provision of daily information of MFs and details the frequency of what is required to be communicated by the managers of MMFs. This includes net asset value (NAV) information. However, NAV of the instruments held in the investment portfolios of MMFs are valued at purchase IRR, as explained previously even while the value of such instruments is subject to their own fluctuations.

48. **The mission reflected carefully on the prudence of this approach which appears to be working well.** Our focus is on making recommendations which, as discussed above, will strengthen the resilience of the Chilean financial system in anticipation of the possibility of periods of extreme stress. It is a characteristic of good planning for extreme tail risks that it involves carefully selected actions, actions which can seem disproportionate having regard to recent experience. The net point is that operating an approach which does not highlight the true net present value of a fund will attract a portion of investors who have a low appetite (or no appetite) for fluctuating values in their near-cash holdings. Such investors are the most likely to

initiate a “flight to quality” event.⁸ It would not improve this situation to narrow the adjustment thresholds as that would still mean that within a stable market, investors would still be attracted into the sector who are highly sensitive to NAV variation. While the risk of a flight to quality is low in Chile, it ceases to be negligible if there are too many investors in MMFs with no appetite for fund NAV fluctuation. By reducing the number of such investors in Type 1 funds, the resilience of the Chilean financial system is strengthened. Our conclusion is that while the current approach is prudent, the degree of prudence is not quite optimal. On that basis the mission concluded that a move to mark-to-market pricing by eliminating the current exemption is the better course.

49. **The mission recognized that this change, while important, is not urgent.** Therefore, Chile should take advantage of the time available to it to engineer this change gradually over a period of time. *Therefore, our recommendation is that over a period of time consistent with the stable operation of the sector, the sector should move to mark-to-market pricing as a default; the plan should be worked out in cooperation with industry and the CCB and should probably involve an extended period of dual value display where both market values and cost price are consistently displayed together for all investors.*

Mitigant 5: regulatory assurance of MMF valuation practices

50. **Chile has a strong system for independent review of valuations.** Article 21 of the 20712 LUF law requires external audit firms to issue an opinion in the annual report of the MMF on the internal control mechanisms imposed by the fund managers, which includes the activities and assets of the MMF. In addition, in the MMF’s annual report, the MMF’s external audit firm

⁸ It is accepted that all mutual and investment funds must comply with the requirements of NCG 365, which requires that the subscription agreement contract must contain the declaration of the provider (contributor) that the potential investor has been duly informed by the fund manager of the following: *"That the profitability of the funds is essentially variable and undetermined, except in the case of guaranteed funds as regards to the part that is guaranteed and maintained in the fund until the end of the investment period"*. The informative brochure must include a section referring to the risks inherent to the investments): *"Risks inherent to the investments: it shall state and briefly describe what are the specific risks of investing in the fund based on the investment policy and management strategy; such as, for example, liquidity risk of the investments; market risk and sector risk (electricity, national, emerging countries, etc.), as the case may be. In addition, it shall indicate other risks identified by the fund manager, such as those inherent to the performance of operations with derivative contracts, if applicable*. Where the fund invests mainly in debt instruments, the brochure must refer in a summarized and clear way the fact that the investment could be diminished by the losses that will be produced by increases in interest rates and by deteriorations in the solvency of the entities in which the resources were invested, a voiding summarizing such risks with the sole expressions "credit risk" and "market risk". This means that the fund manager of a MMF must use a description which is sufficiently clear, simple and summarized, to describe the main risks of the investment in the MMF. It was not our view that these provisions acted as an effective counterbalance to allowing the value of the MMF to be published based on amortized cost.

must express its opinion on the MMF's compliance with the MMF's policies and rules contained in the MMF's internal regulations.

51. **The valuation of MMFs is carried out by the manager of MMFs based on either market prices or the advisory services provided by independent price vendors not related to those managers.** There is a high degree of transparency of valuation changes and the reasons for those to the CMF.

52. **These arrangements appear adequate and proportionate.** All the evidence was that the valuers operate diligently and reflect market changes in a timely way. But critical to the on-going effectiveness of this approach is the quality of mutual challenge by participants within the industry of each other, particularly with regard to issues such as the timeliness of adjusting valuations in response to market movements. The CMF does conduct inspections and the timeliness of valuation adjustments and the nature of the relationship between the manager and the valuer can be included in that. However, it would be desirable for a review of this aspect of CMF inspection practices to be conducted in order to ensure that there is sufficient guidance for those conducting inspections that they actively and consistently check for documented evidence of review and challenge of valuations. *On this basis, the CMF should include in its inspection work, regular reviews of whether managers of MMFs periodically check the robustness and timeliness of the valuations provided by valuers.*

Mitigant 6: regulatory requirements with regard to understanding the investor base

53. **Through Circular 1869, managers of MMFs are required to implement a risk management and internal control program, which has to include policies and procedures that deal with investor suitability.** This allows the managers of MMFs to understand the financial situation, investment horizon and degree of risk tolerance of investors.

54. **NCG 365 requires the MMF's informative brochure to include an investor profile.** This is to be determined by the opinion of the MMF's manager so that it is possible to identify the investor profile type which is suitable and consistent with the type of MMF, its purpose, policies, and the ability of an investor to redeem its investment in the MMF. The internal regulations of the MMF must indicate the type of investor that may invest in fund shares, i.e., whether only qualified investors or the general public.

55. **As shown in the chart above, almost all investors in MMFs are retail investors.** From the portfolio data provided by the CMF, no MMFs have more than two percent of their investors as institutional investors with only two MMFs having over one percent of their investors as institutional investors. As explained earlier, these characteristics are likely to make the Chilean MMF sector less susceptible to certain risks. The point to emphasize is that if the profile of the investor base were to alter significantly, the balance of regulatory risk would shift in proportion to that change and could require some rethinking of the current supervisory approach. If the stress testing recommendations made in this report are implemented, consistent additional information on the likely behaviors of investors should become available to the CMF from across

the sector. If that is done, the view of the mission is that no other recommendations are required on this particular point.

Mitigant 7: availability of liquidity risk management tools for use in periods of redemption pressure

56. Chile does require MMFs to set out when they would use some redemption tools.

NCG 365 requires that a MMF's Internal Regulations can provide for restrictions on redemptions of significant amounts. Significant daily redemption amounts are amounts which would require the liquidation of a significant part of the fund's investment portfolio, and could be expected to generate a considerable decrease in the value of the MMF. Such amount needs to be specified as a maximum daily amount or percentage of the MMF's net asset value on the day prior to the redemption request date and shall be determined based on the specific characteristics of the fund's investment portfolio.

57. A manager of a MMF can apply to the CMF for the CMF to approve the suspension of redemptions of a MMF. Article 40 of Law 3538, which is the law which creates the CMF, provides a power to the CMF that allows the suspension of redemption operations in special cases. If stress events occur, it can temporarily authorize the redemption of shares to be paid in another form, conditions and terms, or suspend redemption operations, cash distributions and the consideration of new contribution requests. The CMF may also authorize, for a term that may not exceed 60 days, the suspension of redemption operations, cash distributions and the consideration of new contribution requests, at the request of the fund manager and in view of the occurrence of exceptional circumstances that so warrant to protect the best interest of the participants of such fund.

58. The mission identified two issues which require further work: the application of the swing pricing tool and the testing of how quickly and smoothly Chilean MMFs can implement redemption management tools. It should be noted that swing pricing is one of several mechanisms for imposing the costs of redemption on the redeeming investor; others include anti-dilution levies and liquidity fees. While this report places emphasis on swing pricing, the authorities may determine that one of the other mechanisms is equally valid, and the relevant recommendations should be read in that context.

59. Swing pricing is a redemption management tool which allocates the cost of redemption to the redeeming investor. It is envisaged as a stabilizing tool. Globally, the debate on whether swing pricing will help stabilize a money market fund sector is still open. It is recognized that there are limited circumstances in which it would be helpful in stabilizing the Chilean MMF sector. In many stress situations, the costs of redemption is small and is likely to be readily borne by investors intent on exiting the MMF sector. Furthermore, the fear of swing pricing being implemented can actually hasten redemption pressure under certain circumstances. However, circumstances may arise where it would be useful. For this reason, the view of the mission was that the planning should be done for a coordinated triggering of swing pricing should such a situation arise. That preparatory work should be done now without at this point trying to define when it would be appropriate to trigger swing pricing. Therefore, it is

recommended that *the CMF should have the practical capacity to require the whole sector to move in an orderly and coordinated way to the adoption of swing pricing and should factor into its inspections program the achievement of reassurance that each MMF has operable plans to move immediately to swing pricing overnight, if so required.* It is important to emphasize that this is not a recommendation to introduce swing pricing now into the Chilean MMF sector. Rather, the recommendation is to prepare for that to be done should it prove desirable at a future point to do so in response to a stressed market. The preparatory work should include work on what would be the appropriate swing factor to introduce so as to be able to use market-wide swing pricing as an impactful tool. It would be desirable to consult industry on the composition of that swing factor.

60. **MMF markets which are historically stable are likely to have limited operational capacity to introduce redemption management tools at short notice.** This is because most funds will have little experience of the kinds of stress which lead to such tools being used.⁹ In many stressed markets, managers will often be reluctant to trigger redemption tools when they are the appropriate next step, because the manager is not quite sure how to do it—either logistically, legally or in terms of delegated authorities to decide. Managers can also be concerned with potential brand damage which may lead them to delay until the regulator mandates the tool to be applied. For these reasons, *it is recommended that managers be asked by the CMF to conduct scenario exercises to test their operational capacity and legal powers to suspend and/or gate redemptions.* Such “war gaming” if well done, can provide substantial additional resilience and allow stress management interventions to be executed in an orderly and prompt fashion. That itself can help to calm markets in difficult times.

Mitigant 8: regulatory requirements to manage and mitigate conflicts of interests

61. **Circular 1869 provides instructions on the implementation of measures related to risk management and internal control in fund managers.** The Circular requires that each fund manager must *"define policies and procedures that specify the methods according to which all potential conflicts of interest inherent to the management of third-party funds will be identified, managed and monitored, such as those existing between the different funds managed by the company. Such policies and procedures shall identify the persons assigned to monitor and control these conflicts"*.

62. **The CMF has issued several regulations that establish the need to comply with policies and/or disseminate information regarding the management of conflicts of interest and inappropriate incentives.** NCG 270 establishes rules for the publicity of policies and procedures related to the acquisition or disposal of securities of the entity and the handling and disclosure of information for the market and this is applicable to securities issuers and funds.

⁹ In some jurisdictions, there can be third party technology used to distribute and to redeem funds (platforms) which can also be a problem, because they are not well designed to administer gates or suspensions. We did not explore whether that is an issue in Chile.

Circular 1,869 also requires that entities must define policies and procedures that specify the methods according to which all potential conflicts of interest inherent to the administration of third-party funds will be identified, managed, and monitored, such as, for example, those existing between the different funds managed by the company. In addition, NCG 365 establishes that the internal regulations of the funds must specify the dispute resolution mechanism(s) to be used in the event of conflicts that may arise. There is also a significant degree of concentration in the valuer services, with two valuers dominating the market.

63. The regulatory framework for the management of conflicts of interest seems appropriate. Across the world, conflicts of interest are a feature of securities markets and are part of the trade-off price that is paid for important synergies. That trade-off is a particularly important trade-off in emerging and smaller markets. The management of those conflicts is sometimes very well done and sometimes not so well done in different markets. How well such conflicts are managed is as much, if not more, a matter of the culture in the relevant financial markets rather than a matter of formal rules. While our engagement with the Chilean market was at a high level, we saw nothing which led us to doubt that conflicts are well managed. Vigilance by the regulator is important in encouraging high standards. On that basis, we have no recommendations to make in this regard.

III. CONCLUSION

64. The mission acknowledged the stability and maturity of the Chilean MMF sector and the fundamental soundness of the current regulatory regime and by the quality of the CMF's regulatory arrangements.

65. It is making a number of recommendations focused on adding to the resilience of the Chilean regulatory regime to prepare for the relatively remote eventuality of a very powerful shock to the Chilean MMF sector, and the associated risk of that shock being further amplified by the MMF sector itself. There are eight recommendations made across a range of issues.

66. The most significant of these is based on the observation that not using mark-to-market pricing for MMFs as a default is not justified by anything in the objective market structure or the commercial activities in the Chilean economy. Indeed, it is inappropriate not to use market pricing for MMFs when the term deposits in which they predominantly invest are so actively traded. The lack of inter-market congruity between the short-term deposit market and the MMF market is a fault-line in the Chilean financial market structure. It should be eliminated. Nevertheless, it is recognized that market practice often becomes entrenched over time, and changes to the format and conventions of pricing of any asset need to be done with care. A cautious approach to the transition is recommended, based on a careful market consultation and a period of dual value display.