



ABI RESPONSE TO BCBS/IOSCO – MARGIN REQUIREMENTS FOR NON-CENTRALLY-CLEARED DERIVATIVES

The ABI

The Association of British Insurers (ABI) is the voice of insurance, representing the general insurance, protection, investment and long-term savings industry. It was formed in 1985 to represent the whole of the industry and today has over 300 members, accounting for some 90% of premiums in the UK, and who, as institutional investors, have some £1.8 trillion of funds under management.

The ABI's role is to:

- Be the voice of the UK insurance industry, leading debate and speaking up for insurers.
- Represent the UK insurance industry to government, regulators and policy makers in the UK, EU and internationally, driving effective public policy and regulation.
- Advocate high standards of customer service within the industry and provide useful information to the public about insurance.
- Promote the benefits of insurance to the government, regulators, policy makers and the public.

The ABI welcomes the opportunity to comment on the consultation on margin requirements for non-centrally-cleared derivatives.

The consultation paper provides some clarification on some of the domestic plans for implementation. However, it also presents some new questions that will need to be clarified in a short time period if the implementation deadline is to be met. Since the true impact of the Regulation on the investment community can only be assessed once all of the technical details are finalised, we would like to ensure that the standards produced are practicable, realistic and credible, and achieve their stated objectives.

Overall, we are concerned at the general preference to ensure prudential stability at the serious expense of client protection, and believe that the overall balance is not currently correct.

In addition, the Consultation Paper is silent about exemptions and waivers that have already been granted in, eg. Dodd-Frank in the US, and EMIR in Europe. Certain transactions are not subject to central clearing requirements and we therefore seek clarity that these are also automatically out of scope for non-centrally cleared margin requirements.

The regime in overall terms needs to be specified on a basis that, with regard to financial counterparties, is prudentially at least as robust as would result from application of margining through central clearing.



The bilaterally-cleared case can conceptually be treated as a very small centrally-cleared arrangement where the users should bear both the scale benefits (more bespoke tailoring to customer requirements) and the scale drawbacks (e.g. less scope for netting of position risk and collateral requirements – more likely to be the financial counterparties). Indeed the fundamental objection to mandatory central clearing is that it changes the terms of trade in favour of the financial counterparty and against the customer, so the regulator should wherever possible be striving to minimise this effect. This is helped by having a level playing field between central and bilateral whereas the current policy appears to be to create an unlevel one.

This is particularly exacerbated by the fact that many of our Members have more highly-rated funds than the banks, so the bias is for the investor to underwrite the banks.

The collateral requirements of non-financial counterparties (the customer who is either hedging his assets or future cash-flows or who is gambling at his own risk) might vary significantly and regulators should not seek to needlessly frustrate customer requirements from determining agreements between counterparties. If collateral requirements happen to be specified at levels that are lower than those that would apply through central clearing, then the financially regulated counterparty, or both counterparties if each are financial, should be required to hold additional capital to make good the shortfall.

Central clearing inevitably requires a limited spread of eligible assets for use as collateral since the spread must be acceptable to all users. In a bilaterally-cleared context there is no reason, in principle, why the counterparties need to be constrained in allowing such wider spread of eligible of assets as they agree between themselves, provided that an appropriate haircut (for which a regulatory minimum tariff could be devised) is applied to valuation of such assets used as collateral. This could be characterised as having the same effect as if the counterparties were to go to the trouble of undertaking repo transactions of the assets in question, but there is no need in the bilateral case actually to enforce an obligation to undertake this.

We respond to your specific questions below.



Q1. What is an appropriate phase-in period for the implementation of margining requirements on non-centrally-cleared derivatives? Can the implementation timeline be set independently from other related regulatory initiatives (eg central clearing mandates) or should they be coordinated? If coordination is desirable, how should this be achieved?

It is clear that the recommendations must be aligned to the development of central clearing (both in terms of timing and regulation) and this must be applied globally. There is significant risk of regulatory arbitrage if this is not the case.

In particular, as central clearing can only be promoted once it exists, the implementation of these standards should follow the implementation of central clearing.

In addition, where central clearing of standardised derivatives cannot yet be supported, the margin requirements for non-centrally-cleared derivatives should be assessed using a basis consistent with the potential margin requirements of cleared derivatives.

We would anticipate that these requirements will have more limited applicability for insurers once most standardised derivatives are centrally cleared (providing FX contracts are exempt). However, there will clearly be a period of time until this is achieved and it is important to ensure that these requirements reflect that appropriately.

However, insurers do use certain derivatives that are unlikely to be suitable for central clearing, such as total return swaps (on, for example, property portfolios), and, as such, will fall within the scope of these requirements.

The significant implementation effort required to introduce these requirements, alongside other regulatory change (including Solvency II for European insurers), should be reflected in the proposed timeline.

In the interim, we believe that counterparties should be able to implement sooner, as many of them already exchange variation margin, with each side carrying out their own assessments of the risks applicable to a given trade.

Q2. Should foreign exchange swaps and forwards with a maturity of less than a specified tenor such as one month or one year be exempted from margining requirements due to their risk profile, market infrastructure, or other factors? Are there any other arguments to support an exemption for foreign exchange swaps and forwards?

In our view, FX forwards (and FX swaps comprising a range of spot and forward contracts) should be excluded from the initial margin requirement proposals.

For FX forwards, the systemic risk is primarily driven by settlement risk (loss of principal), rather than the volatility of the mark-to-market value or replacement cost risk. Subjecting FX



to mandatory IM may create suboptimal risk incentives and result in an increase in settlement risk.

This settlement risk can be better mitigated through either Continuous Linked Settlements (CLS) or the establishment of prudent settlement limits (rather than through initial margin). The risks emerging through mark-to-market exposure can be managed through the use of variation margin. These processes are well established, generally available and have worked well through various market risk episodes including Lehmans and, more specific to FX, the Iceland event.

(94% settlement risk is for products with less than 1 year maturity. These are primarily mitigated via use of CLS. Of daily traded value >99% FX Swaps and 98% FX forwards with maturity of less than 1 year. 68% is up to 7 days; 13.3% is 7days-1month; 16.2% is 1-6 months. *Source: GFMA)

Replacement risk is covered through the use of a Credit Support Annex (CSA), which is current industry practice with a strong trend to increased use. We believe the proposed standardised CSA will assist in reducing this risk even further.

For portfolios that do not have easy access to eligible securities, the need for initial margin would make the use of FX forwards uneconomic. This will have a major unintended consequence as the majority of forward FX transactions are executed to reduce the currency risk in asset portfolios. For example, hedged share class products for retail investors. If these transactions became uneconomic, then increasing proportions of investment portfolios may become un-hedged – leading to increasing amounts of currency volatility and, potentially, increasing systemic risk.

In summary, we recommend that all FX contracts be exempt from these requirements.

Q3. Are there additional specific product exemptions, or criteria for determining such exemptions, that should be considered? How would such exemptions or criteria be consistent with the overall goal of limiting systemic risk and not providing incentives for regulatory arbitrage?

Considering first the objective of reducing systemic risk, we are concerned that the introduction of (symmetric) bi-lateral initial margin for insurers will result in an increase, rather than a decrease, in systemic risk:

We accept that some re-hypothecation (or reuse) of initial margin is likely to be required to avoid significant liquidity issues.

However, this results in a new (and significant) exposure for the insurer as their posted initial margin is now at risk.



There is a fundamental difference between the risk of posting IM to Central Clearing Houses – it provides protection for the clearing counterparty and there is no limited risk of the default of the Central Clearing House. However, this is not the case for non-centrally-cleared derivatives where the credit quality (and systemic importance) of the appropriate counterparties is a key consideration.

In addition, the additional expenses (and opportunity costs) of posting initial margin may well outweigh the residual risks being run. Insurers operate their derivative investment conservatively – strong documentation, fully collateralised, high quality counterparty relationships – and, being subjected to prudential regulation, insurers will need to hold (or consider holding) capital against any residual counterparty risks.

We would therefore strongly advocate two-way margins which are collected at a third party with security interests to both parties.

There is already a base for a model for this in the US with “40 Act Funds” (investment companies registered under the Investment Company Act of 1940) but for VM only, and these agreements are individually negotiated, taking much legal time and costs.

We understand that ISDA is in the process of finalising a standardised tri-party agreement that would be critical in progressing this methodology, but we recognise that the structure does not exist and therefore has not been tested yet in Europe.

In the interim, we propose that no initial margin is posted (unless both parties to the trade agree otherwise) until such tri-party agreements can be organised.

Q4. Is the proposed key principle and proposed requirement for scope of applicability appropriate? Does it appropriately balance the policy goals of reducing systemic risk, promoting central clearing, and limiting liquidity impact? Are there any specific adjustments that would more appropriately balance these goals? Does the proposal pose or exacerbate systemic risks? Are there any logistical or operational considerations that would make the proposal problematic or unworkable?

We support the introduction of variation margin, which aligns well with existing collateral practice for OTC derivatives followed by insurers.

However, collateral is not used in all jurisdictions across the globe – there are a number of countries where standard collateral arrangements are not enforceable. As such, introducing variation (and initial) margins in those jurisdictions (without the introduction of suitable safeguards) will increase risk, rather than reduce it.

The proposed margin thresholds apply on a symmetric basis – the Working Group should give consideration to asymmetric margin thresholds. The factors considered in the paper, such as whether an entity is subject to prudential regulation, could be used to determine the margin requirements of each individual party.



We believe that if required, initial margin should be posted by all entities, whether SIFIs or not, such that the risks posed to each other are adequately reflected.

Q5. Are initial margin thresholds an appropriate tool for managing the liquidity impact of the proposed requirements? What level of initial margin threshold(s) would be effective in managing liquidity costs while, at the same time, not resulting in an unacceptable level of systemic risk or inconsistency with central clearing mandates? Is the use of thresholds inconsistent with the underlying goals of the margin requirements? Would the use of thresholds result in a significant amount of regulatory arbitrage or avoidance? If so, are there steps that can be taken to prevent or limit this possibility?

The introduction of bi-lateral initial margin will increase insurers' exposure to banks (if posted initial margin can be re-hypothecated), increasing systemic risk.

Insurance companies are already subject to risk-based prudential regulation and capital requirements.

We request that you consider that margin tools need to be aligned in the global context with the Dodd-Frank Act and US regulations, as well as those in Europe and other regions, in order to avoid regulatory arbitrage and to ensure operational efficiency.

Q6. Is it appropriate for initial margin thresholds to differ across entities that are subject to the requirements? If so, what specific triggers would be used to determine if a smaller or zero threshold should apply to certain parties to a non-centrally-cleared derivative? Would the use of thresholds result in an unlevel playing field among market participants? Should the systemic risk posed by an entity be considered a primary factor? What other factors should also be considered? Can an entity's systemic risk level be meaningfully measured in a transparent fashion? Can systemic risk be measured or proxied by an entity's status in certain regulatory schemes, eg G-SIFIs, or by the level of an entity's non-centrally-cleared derivatives activities? Could data on an entity's derivative activities (eg notional amounts outstanding) be used to effectively determine an entity's systemic risk level?

On the assessment of baseline minimum amounts and the methodologies for initial margin, we feel that the working group should give strong consideration to standardising margin requirements and haircuts, either through

- prescriptive requirements, or
- prescribed models and methodology (consistent with those used by CCPs)

The use of internal models, which will all differ, will generate a number of operational challenges – such as making valuation and dispute resolution more difficult.



In our view, posting intra-day margin will result in such a negligible reduction in systemic risk as to render it unnecessary.

The treatment of provided margin is a key concern.

In particular, if posted initial margin can be re-hypothecated, this will result in increased bank exposure for the insurers and a potential increase in systemic risk.

However, we accept that some re-hypothecation (or re-use) of initial margin is likely to be required to avoid significant liquidity issues across the global market.

Margin custodian agent should be nominated by the buy-side, to avoid conflicts of interest, and these agents will need to be appropriately regulated and rated.

Finally, the operational aspects of these relationship should be standardised (wherever possible).

We propose that you set top threshold levels but allow counterparties to set their own threshold if they choose to. This has the advantage of incentivising the two-way model.

With respect to transparency and reporting, our Members have no concerns with allowing our national regulators access to requested information, save that the appropriate safeguards are in place to ensure the appropriate level of confidentiality of that information.

In the same vein, our Members would be happy to provide the notional outstanding data to the national regulator if it believes it can be used to effectively determine an entity's systemic risk level, as long as the responsibility for that reporting can be delegated to a counterparty, such as a bank or broker.

Q7. Is it appropriate to limit the use of initial margin thresholds to entities that are prudentially regulated, ie those that are subject to specific regulatory capital requirements and direct supervision? Are there other entities that should be considered together with prudentially-regulated entities? If so, what are they and on what basis should they be considered together with prudentially-regulated entities?

Whilst we completely agree with the desire to support entities that are prudentially regulated, we are not convinced that the correct balance is being struck. Whilst there is a desire for SIFIS to take in more margin and differentiating SIFIs post systemic risk, ultimately the non-SIFI risk is to the end users.

We believe that if required, initial margin should be posted by all entities, whether SIFIs or not, such that the risks posed to each other are adequately reflected. Margins should be both posted and collected by systemically risky entities not only to protect their own position in times of market stress, but also to protect the impact of their failure on others.

Differentiating between SIFIs and non-SIFIs does not capture the real exposure between market participants and does not take into account the stable and robust nature of pension and insurance funds.



If the use of initial margin thresholds is limited to SIFIs, this would result in pension and insurance funds being used to bolster the capital position of the SIFIs at the expense of individual investors, savers and pensioners.

Unfortunately our Members are unable to see the numbers involved so we are also unable to compute them, and are therefore reliant on the banks and brokers to provide that data to you.

Q8. How should thresholds be evaluated and specified? Should thresholds be evaluated relative to the initial margin requirement of an approved internal or third party model or should they be evaluated with respect to simpler and more transparent measures, such as the proposed standardised initial margin amounts? Are there other methods for evaluating thresholds that should be considered? If so what are they and how would they work in practice?

Please see our response to Q7.

Q9. What are the potential practical effects of requiring universal two-way margin on the capital and liquidity position, or the financial health generally, of market participants, such as key market participants, prudentially-regulated entities and non-prudentially regulated entities? How would universal two-way margining alter current market practices and conventions with respect to collateralising credit exposures arising from OTC derivatives? Are there practical or operational issues with respect to universal two-way margining?

Our Members are obliged to rely on counterparties (banks/brokers) to inform us of the impact on their balance sheets, and if they already have position that it is material to them.

If there was segregation into which to post security, our Members generally can put up the requisite collateral. However, some strategies will not have eligible collateral, so this would have a high impact on them.

Additionally, those with eligible assets might be using them some other way, eg. stock lending, so the end user will be disadvantaged by lower returns to the fund.

Q10. What are the potential practical effects of requiring regulated entities (such as securities firms or banks) to post initial margin to unregulated counterparties in a non-centrally-cleared derivative transaction? Does this specific requirement reduce, create, or exacerbate systemic risks? Are there any logistical or operational considerations that would make the proposal problematic or unworkable?

Please see our response to Q7. We do not believe that this will impact systemic risk in any meaningful way.



Q11. Are the proposed exemptions from the margin requirements for non-financial entities that are not systemically important, sovereigns, and/or central banks appropriate?

Yes, we believe the proposed exemptions are appropriate, save for the request for confirmation that those entities that already exempt from central clearing through very recent legislation (eg. pension funds in the EU's EMIR) are also exempt from these margin requirements.

Q12. Are there any specific exemptions that would not compromise the goal of reducing systemic risk and promoting central clearing that should be considered? If so, what would be the specific exemptions and why should they be considered?

Please refer to our answer to Q2, where we outline our reasons for recommending that all FX contracts be exempt.

Considering the transactions with affiliates, some global insurers use intra-group transactions to give economic benefit to affiliates from centrally contracted hedges.

As intragroup trading is exempt from central clearing in EMIR and clearly does not compromise systemic risk, we seek confirmation that intra-group trades are also automatically out of scope for non-centrally cleared margin requirements.

Q13. Are the proposed methodologies for calculating initial margin appropriate and practicable? With respect to internal models in particular, are the proposed parameters and prerequisite conditions appropriate? If not, what approach to the calculation of baseline initial margin would be preferable and practicable, and why?

We are concerned that the use of bespoke internal models for margin requirements and haircuts will generate significant operational challenges, for example, around valuation and dispute resolution.

However, we do believe that there should be a model that is risk-based and therefore more sophisticated than just using % notional.

We are not convinced that the industry yet understands what might constitute acceptable tolerances. These need to be calculable within a day-to-day framework, and additionally needs to be replicable on the buy-side insurance and investment funds rather than by just the price takers, ie the banks and brokers.

We believe that a standardised model should be the starting position, although this will obviously have higher levels and be more expensive. We understand the DTCC is setting



up systems to calculate margin/margin efficiency models, as well as the cost of doing that for each model for each counterparty means.

Q14. Should the model-based initial margin calculations restrict diversification benefits to be operative within broad asset classes and not across such classes as discussed above? If not, what mitigants can be used to effectively deal with the concerns that have been raised?

We believe that if required, initial margin calculations should be permitted across asset classes within a portfolio or strategy where transactions are covered by the same legally enforceable netting agreement.

Q15. With respect to the standardised schedule, are the parameters and methodologies appropriate? Are the initial margin levels prescribed in the proposed standardised schedule appropriately calibrated? Are they appropriately risk sensitive? Are there additional dimensions of risk that could be considered for inclusion in the schedule on a systematic basis?

Please see our response to Q13.

Q16. Are the proposed methodologies for calculating variation margin appropriate? If not, what approach to the calculation of baseline variation margin would be preferable, and why?

Yes. These are the same as current market practice, ie mark-to-market, and already widely used by most market participants.

Q17. With what frequency should variation margin payments be required? Is it acceptable or desirable to allow for less frequent posting of variation margin, subject to a corresponding increase in the assumed close out horizon that is used for the purposes of calculating initial margin?

In our view, posting intra-day margin will result in such a negligible reduction in systemic risk as to render it unnecessary.

We therefore advocate daily VM payments, with minimum transfer amounts, which may mean that margin may not be posted on any given day. We believe the threshold should be set sufficiently low, and negotiated between the two counterparties to agree a reasonable level for the specified portfolio across the spectrum, be it cash equities through to real property.



Q18. Is the proposed framework for variation margin appropriately calibrated to prevent unintended procyclical effects in conditions of market stress? Are discrete calls for additional initial margin due to “cliff-edge” triggers sufficiently discouraged?

We believe that if VM is being exchanged on a daily basis that this covers the majority of the risk, and there is unlikely to be a cliff-edge event intra-day. We see the bigger risk if one of the counterparties becomes a risk in itself.

We advocate that the model for centrally cleared derivatives should be followed, ie, that in certain situations the VM call can be increased.

Q19. What level of minimum transfer amount effectively mitigates operational risk and burden while not allowing for a significant build-up of uncollateralised exposure?

Please see our response to Q17.

Q20. Is the scope of proposed eligible collateral appropriate? If not, what alternative approach to eligible collateral would be preferable, and why?

In terms of eligible collateral, there are a number of considerations

First, the broadening of eligible assets. There is clearly a balance to be struck between a broad range of collateral, minimising the liquidity implications of sourcing that margin, and the inclusion of volatile assets within the margining requirements which will lead to more frequent “topping-up” of margin holdings.

For an insurers perspective, the inclusion of high-quality corporate bonds is valuable, though it will clearly depend on the definition of “high-quality”.

The use of bank debt, equity or other bank exposures for margin requirements does not seem to fit particularly well with limiting systemic risk.

There also needs to be some option for counterparties to apply a more restrictive list of eligible collateral. For example, UK insurers do not receive capital credit for an investment in gold under current regulations and, as such, this is not a suitable asset for an insurer to receive as initial margin.

Also UCITS cannot use gold. Various US funds may not be able to be used, but a broad list of eligible collateral will allow negotiation with counterparties.

It is also worth noting that, where insurers (or other market participants) receive cash as initial margin, it will need to be invested (with banks) to generate a yield. This generates a further potential exposure to systemic risk.



We therefore propose that you define as wide a list as possible, and then allow for bilateral negotiation within that list. Some funds will have a variation of collateral available, and the negotiation will work well as whatever you deliver out you would have to accept in, so this becomes self-policing.

Q21. Should concrete diversification requirements, such as concentration limits, be included as a condition of collateral eligibility? If so, what types of specific requirements would be effective? Are the standardised haircuts prescribed in the proposed standardised haircut schedule sufficiently conservative? Are they appropriately risk sensitive? Are they appropriate in light of their potential liquidity impact? Are there additional assets that should be considered in the schedule of standardised haircuts?

We suggest that regulators suggest indicative upper and lower limits for any particular group, and then allow for bilateral negotiation.

We would recommend that any diversification requirements, such as prescriptive concentration limits, be set at a high level.

We do, however, see the potential for a lack of liquidity to be exacerbated by the requirement for less liquid assets having to be subject to a large haircut.

Q22. Are the proposed requirements with respect to the treatment of provided margin appropriate? If not, what alternative approach would be preferable, and why? Should the margin requirements provide greater specificity with respect to how margin must be protected? Is the proposed key principle and proposed requirement adequate to protect and preserve the utility of margin as a loss mitigants in all cases?

We believe that the key principle about protecting both collecting and posting party is laudable, but wonder why it is thought necessary since only part of this is achieved under current, universal, bilateral exchange of collateral under ISDA by way of title transfer.

We would also question how easily the review of local insolvency laws can be achieved.

We would also suggest no further specificity as to how margin is protected, but propose a principle-and-outcome based approach, and leave it to local regulators to specify how that is achieved.

Q23. Is the requirement that initial margin be exchanged on a gross, rather than net basis, appropriate? Would the requirement result in large amounts of initial margin being held by a potentially small number of custodian banks and thus creating concentration risk?



We believe that using a gross system and a ring-fenced third party custodian arrangement could lead to significant concentrations of exposure to those deposit-takers, who themselves could be some of the same counterparties with whom the trades are placed.

Our Member's assets are already sitting with custodian banks, just for a different purpose and we fear that there are a limited number that can cope with collateral assets.

If our Members were to be given the right to appoint their custodian, we believe this would help reduce that risk.

Q24. Should collateral be allowed to be re-hypothecated or re-used by the collecting party? Are there circumstances and conditions, such as requiring the pledgee to segregate the re-hypothecated assets from its proprietary assets and treating the assets as customer assets, and/or ensuring that the insolvency regime provides the pledger with a first priority claim on the assets that are re-hypothecated in the event of a pledgee's bankruptcy, under which re-hypothecation could be permitted without in any way compromising the full integrity and purpose of the key principle? What would be the systemic risk consequences of allowing re-hypothecation or re-use?

Considering the reduction of systemic risk, we do have concerns that the introduction of (symmetric) bi-lateral initial margin for insurers will result in an increase, rather than a decrease, in systemic risk due to the likely requirement for rehypothecation for liquidity purposes.

We are not sure that the proposal to somehow preserve client asset status and allow some re-use or re-hypothecation at the same time is achievable, as we believe that the legal analysis might render those two goals irreconcilable and therefore it might require changes to local laws or client protection regimes to make it happen.

However, where possible, counterparties should be entitled to negotiate the rehypothecation or reuse of variation margin where these negotiations do not conflict with the security interest being given.

Q25. Are the proposed requirements with respect to the treatment of non-centrally-cleared derivatives between affiliated entities appropriate? If not, what alternative approach would be preferable, and why? Would giving local supervisors discretion in determining the initial margin requirements for non-centrally-cleared derivatives between affiliated entities result in international inconsistencies that would lead to regulatory arbitrage and unlevel playing field?

Considering the transactions with affiliates, some global insurers use intra-group transactions to give economic benefit to affiliates from centrally contracted hedges.



As intragroup trading is exempt from central clearing under EMIR, we therefore seek clarity that intra-group trades are also automatically out of scope for non-centrally cleared margin requirements.

Q26. Should an exchange of variation margin between affiliates within the same national jurisdiction be required? What would be the risk, or other, implications of not requiring such an exchange? Are there any additional benefits or costs to not requiring an exchange of variation margin among affiliates within the same national jurisdiction?

Please see our response to Q25.

Q27. Is the proposed approach with respect to the interaction of national regimes in cross-border transactions appropriate? If not, what alternative approach would be preferable, and why?

For the interaction of national regimes in cross-border transactions, we recommend that a simple, clear approach be adopted.

At the moment in Asia, the Middle East and South America, not all netting is allowed, or the definitions of “netting” are different, leading to difficult enforceability across the globe.

There is a need for an internationally consistent regime which will be key to ensuring a level playing field and avoiding regulatory arbitrage. Otherwise, we fear a potential log-jam where decisions cannot be made nor collateral passed. We believe there is a need to be totally consistent and in concert across the world.

However, we believe full convergence and harmonisation may be difficult to achieve in the short term.

We would advocate consistency with whatever is decided in the cleared environment.