

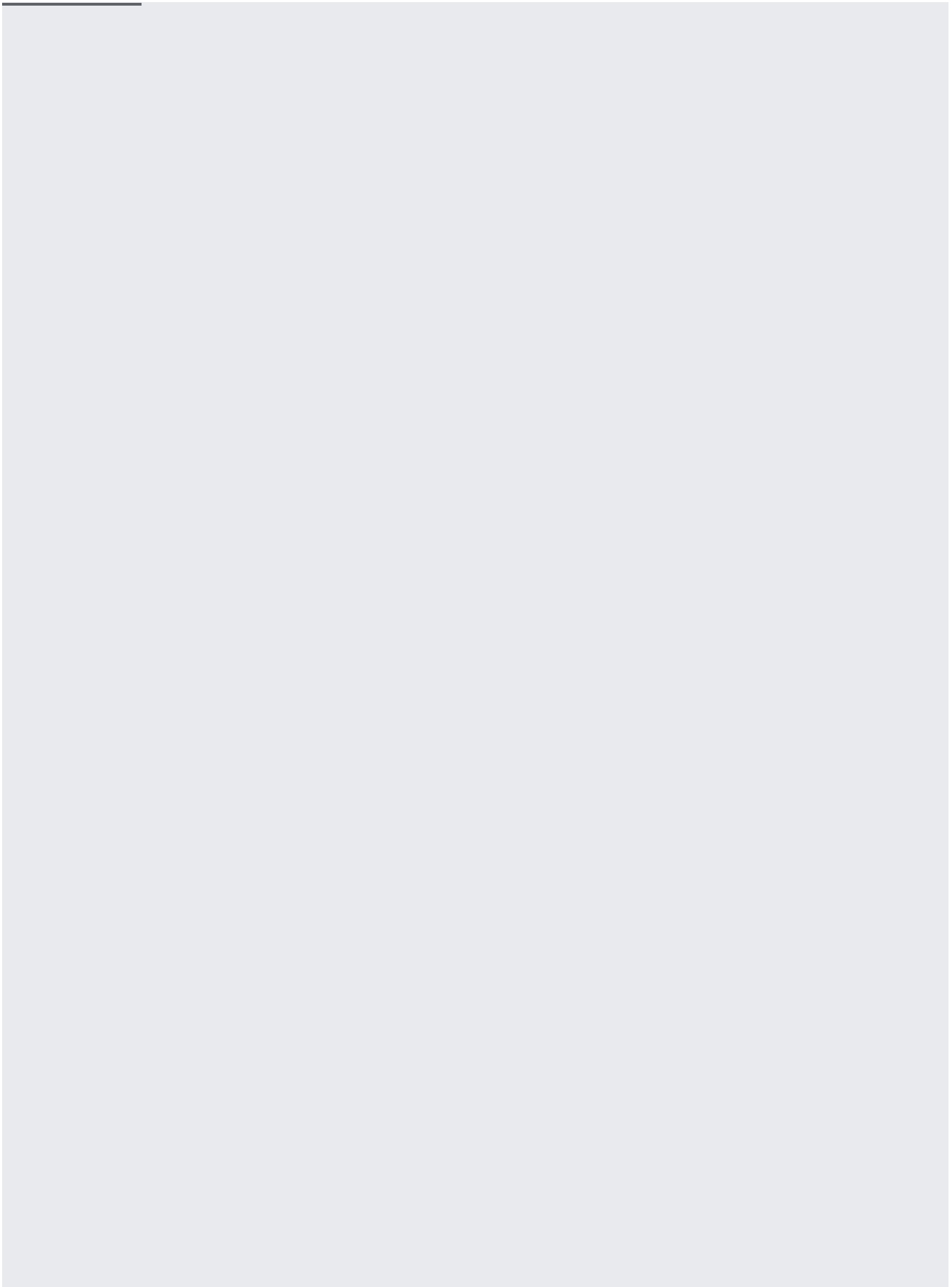
This page shows you how to create, disable and delete Hash-based Message Authentication Code (HMAC) keys associated with service accounts in your project. For general information, see [HMAC keys \(/storage/docs/authentication/hmackeys/\)](/storage/docs/authentication/hmackeys/).

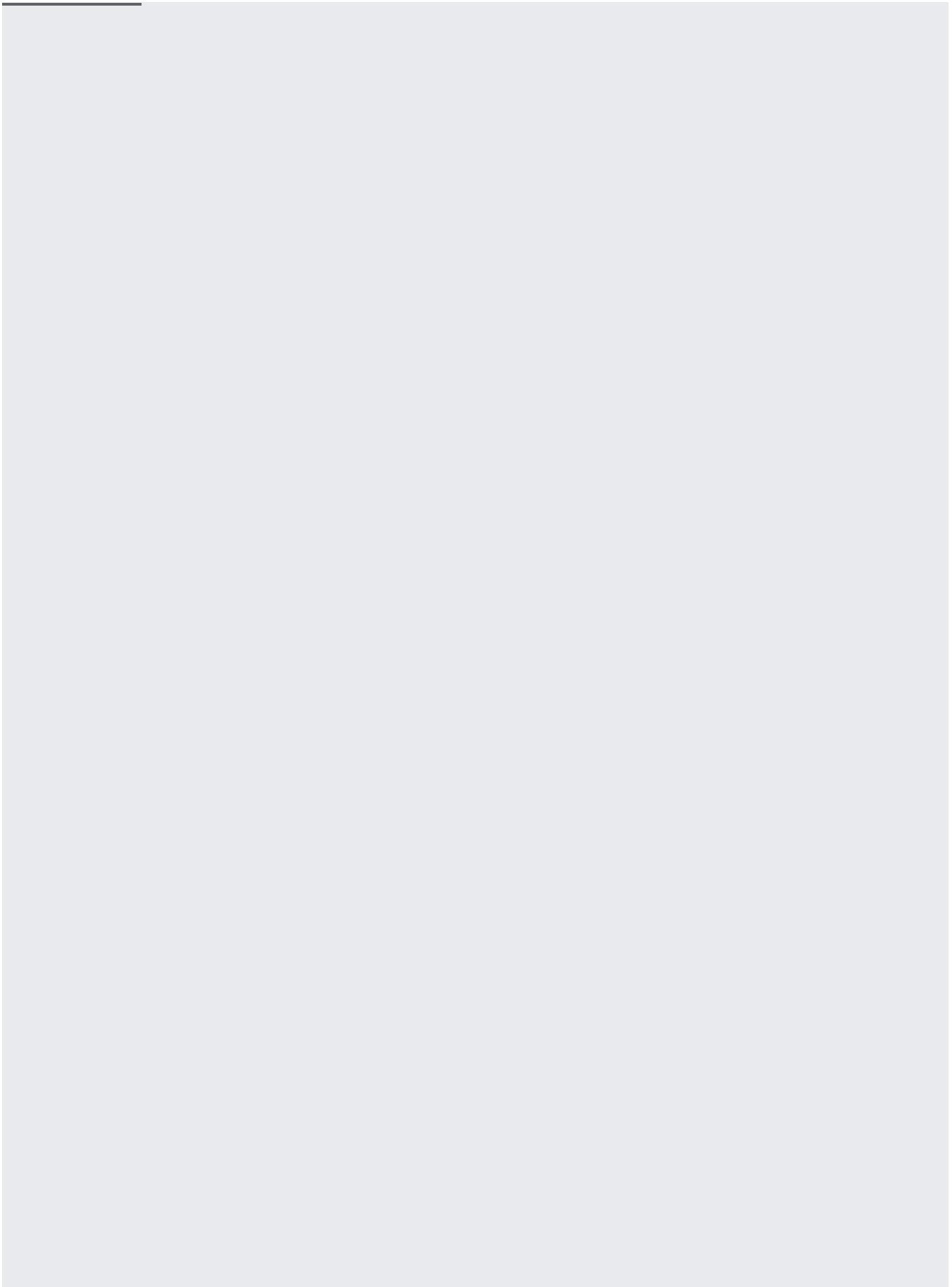
Before using this feature in Cloud Storage, you should:

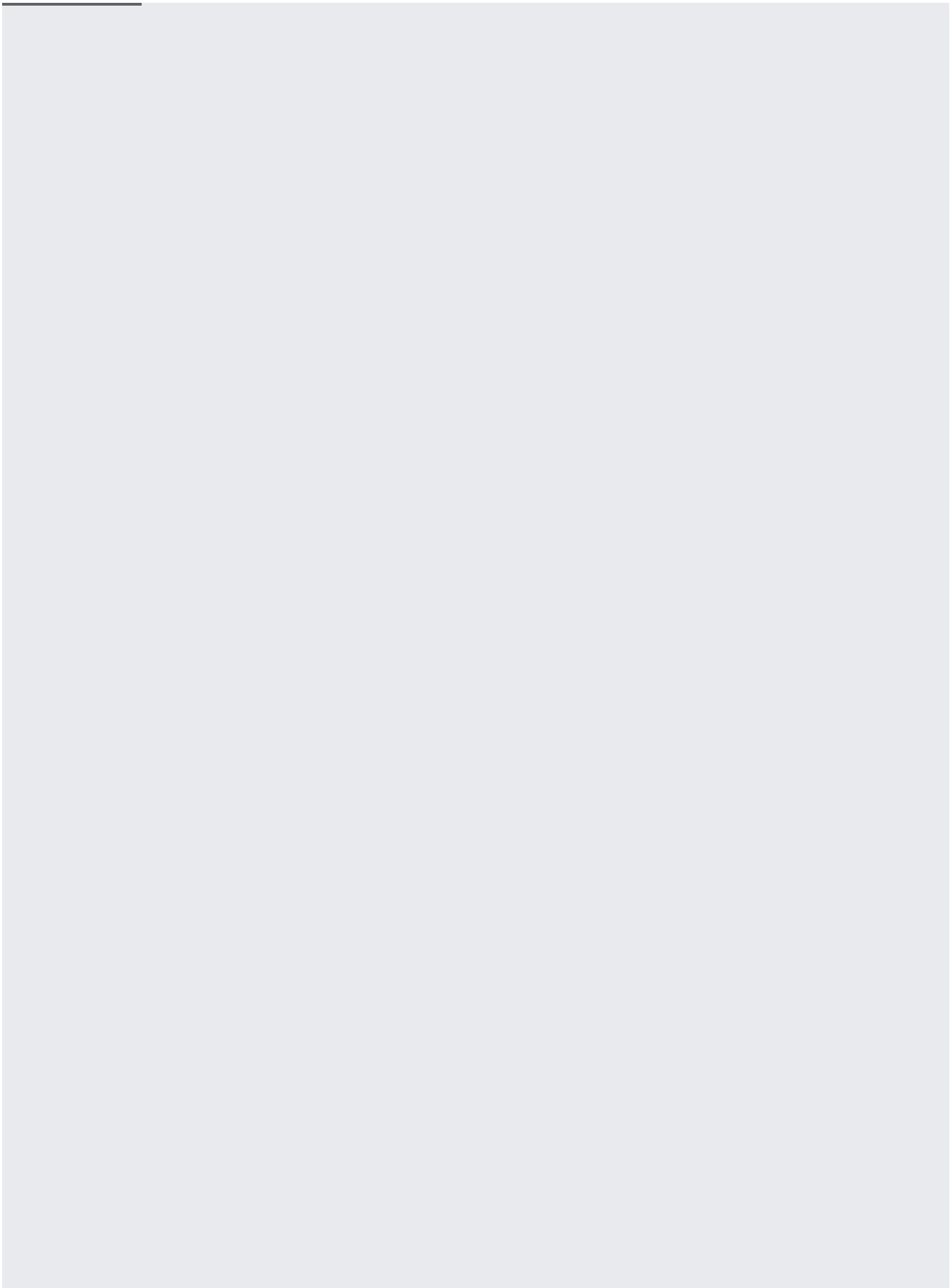
1. Have sufficient permission to work with HMAC keys in the desired project:
 - If you own the project, you most likely have the necessary permissions.
 - You should have the IAM permissions that are prefixed with `storage.hmacKeys` for the project. See [Using IAM Permissions \(/storage/docs/access-control/using-iam-permissions/\)](/storage/docs/access-control/using-iam-permissions/) for instructions on how to get a role, such as `roles/storage.hmacKeyAdmin`, that has these permissions.
2. Have a service account in your project that you intend to create HMAC keys for. See [Creating a service account \(/iam/docs/creating-managing-service-accounts#creating_a_service_account\)](/iam/docs/creating-managing-service-accounts#creating_a_service_account) if you don't currently have one.

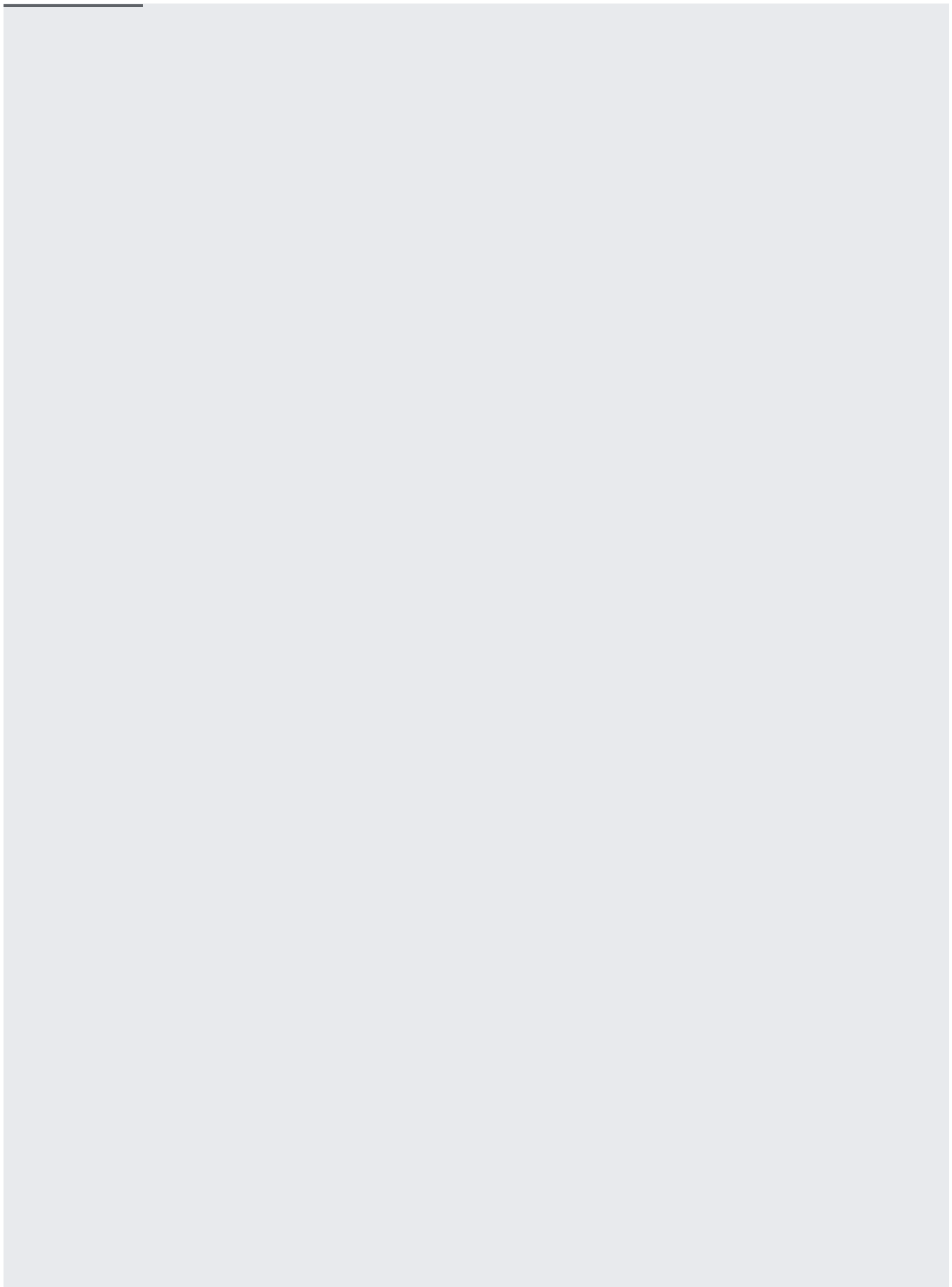
Important: When you create an HMAC key, you are given the *secret* for that key, which you must store securely. If you lose it, you are no longer able to use the HMAC key to authorize requests.

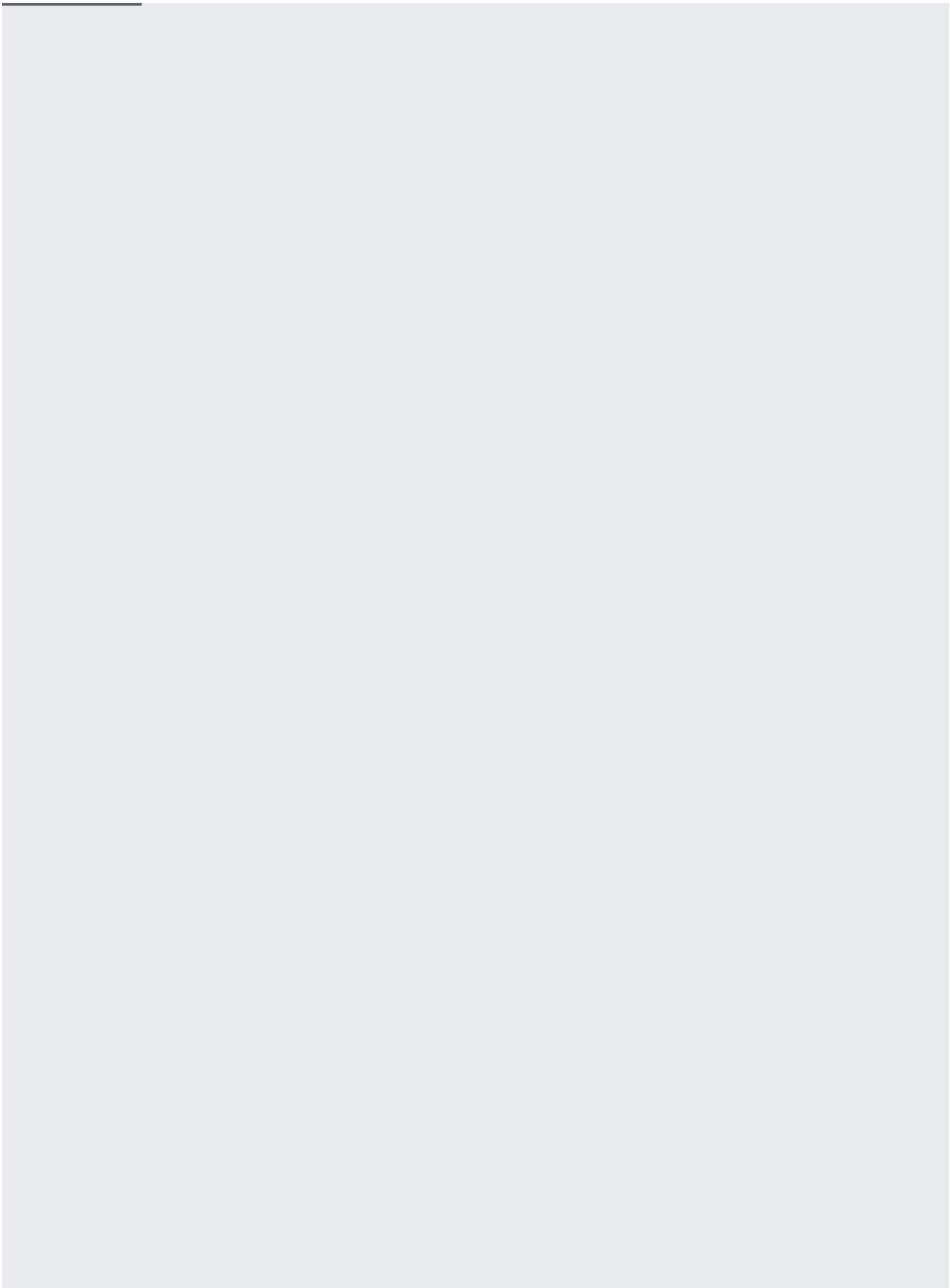
To create an HMAC key for a service account:

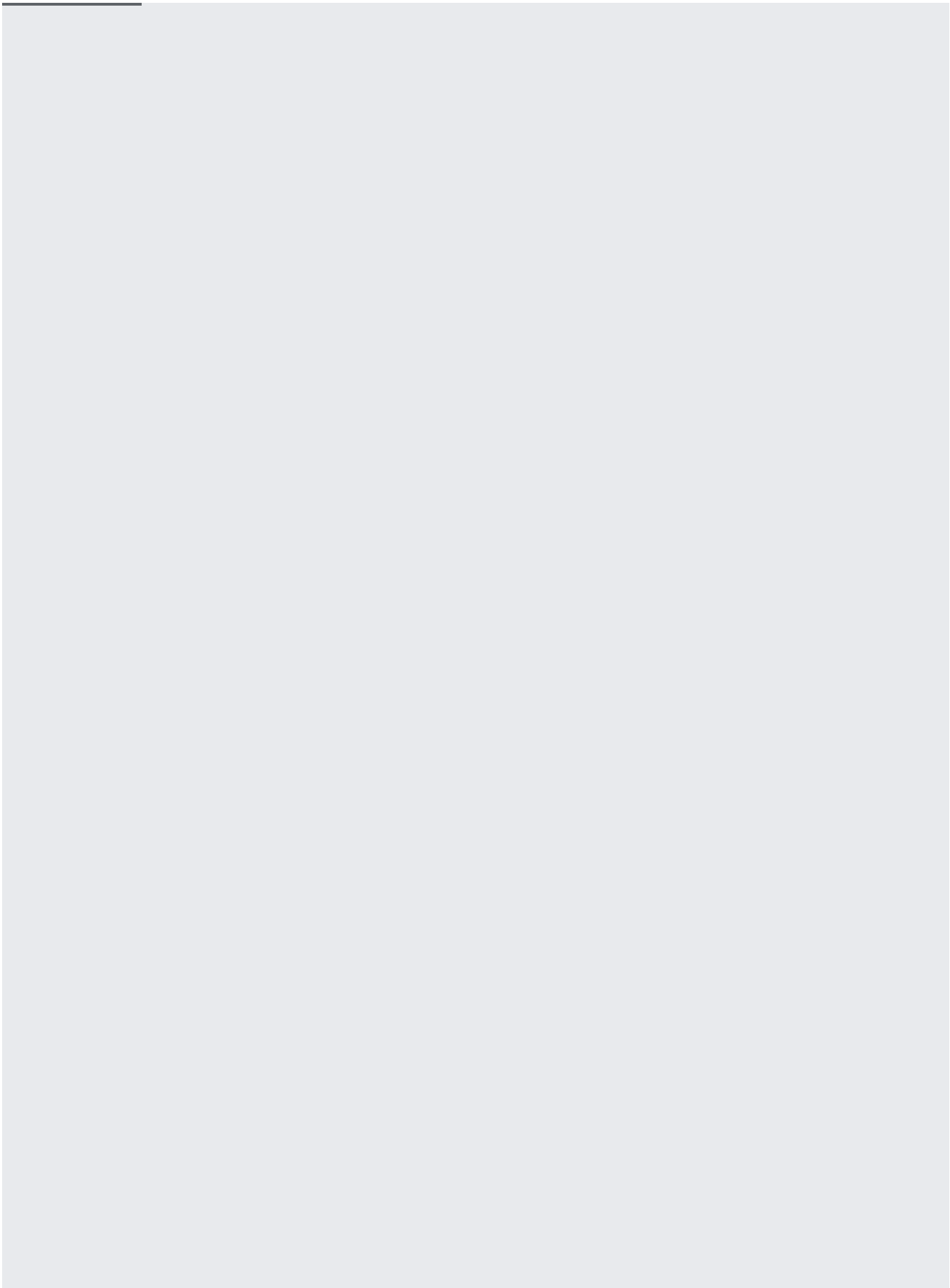


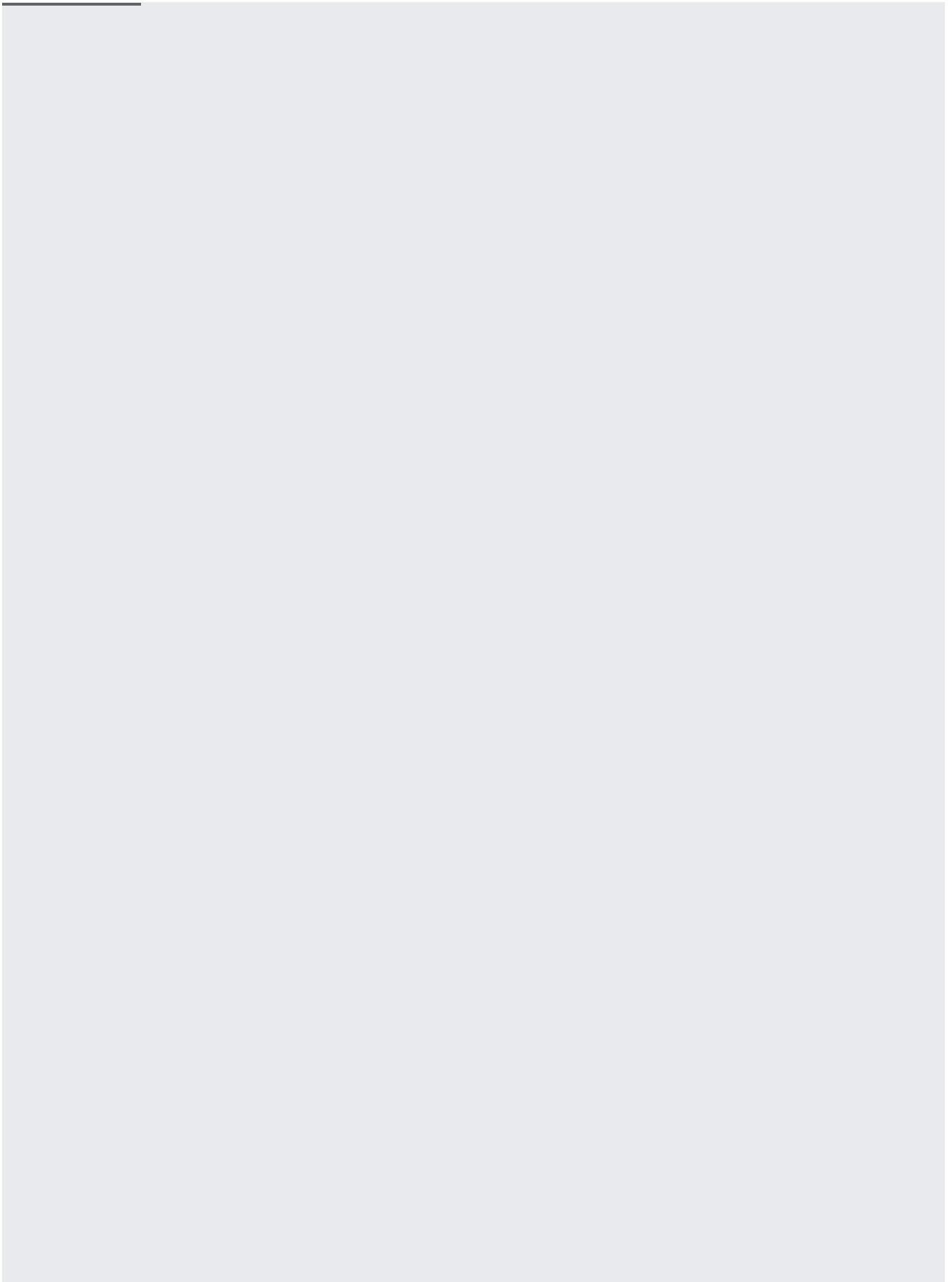




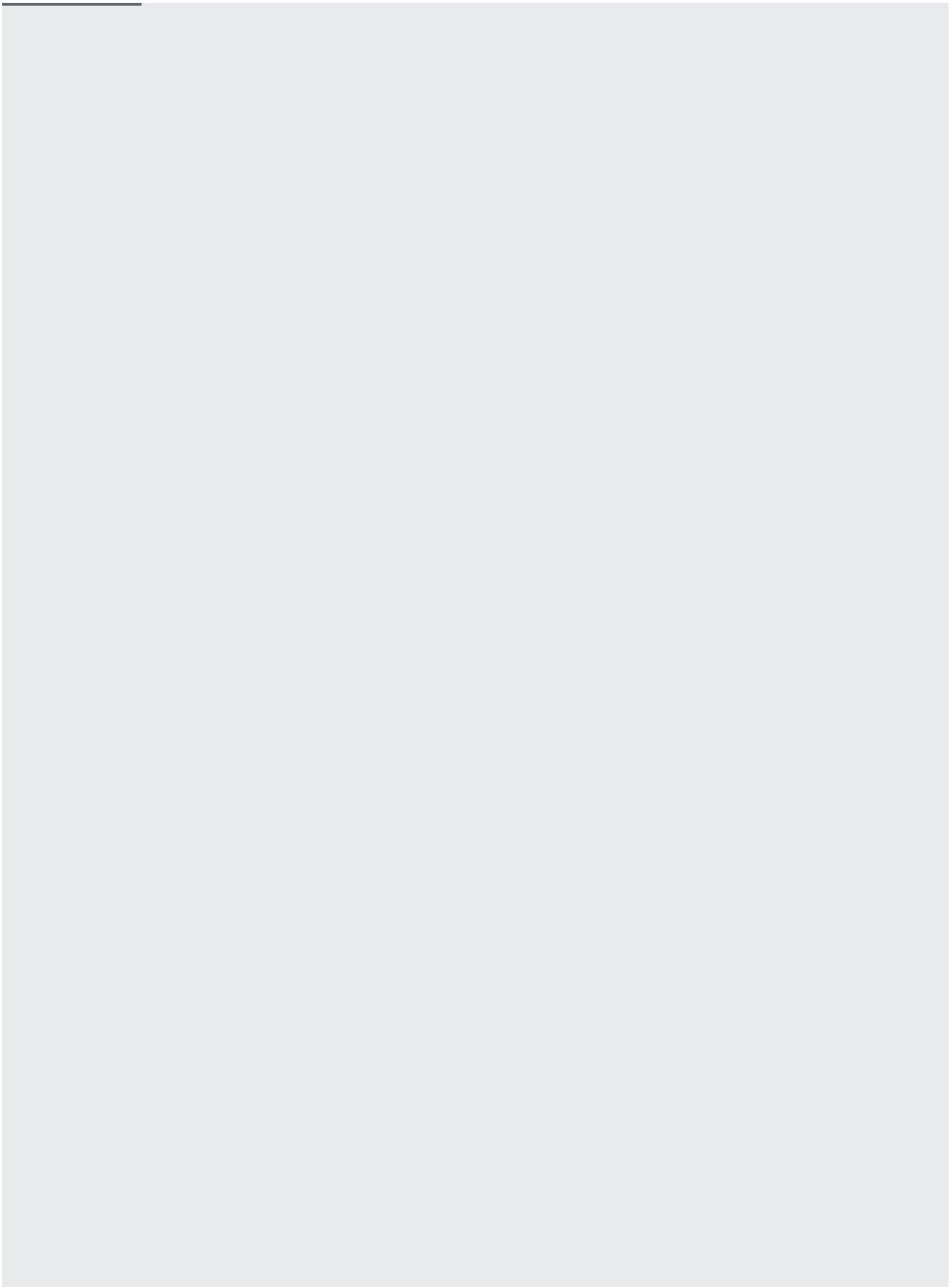


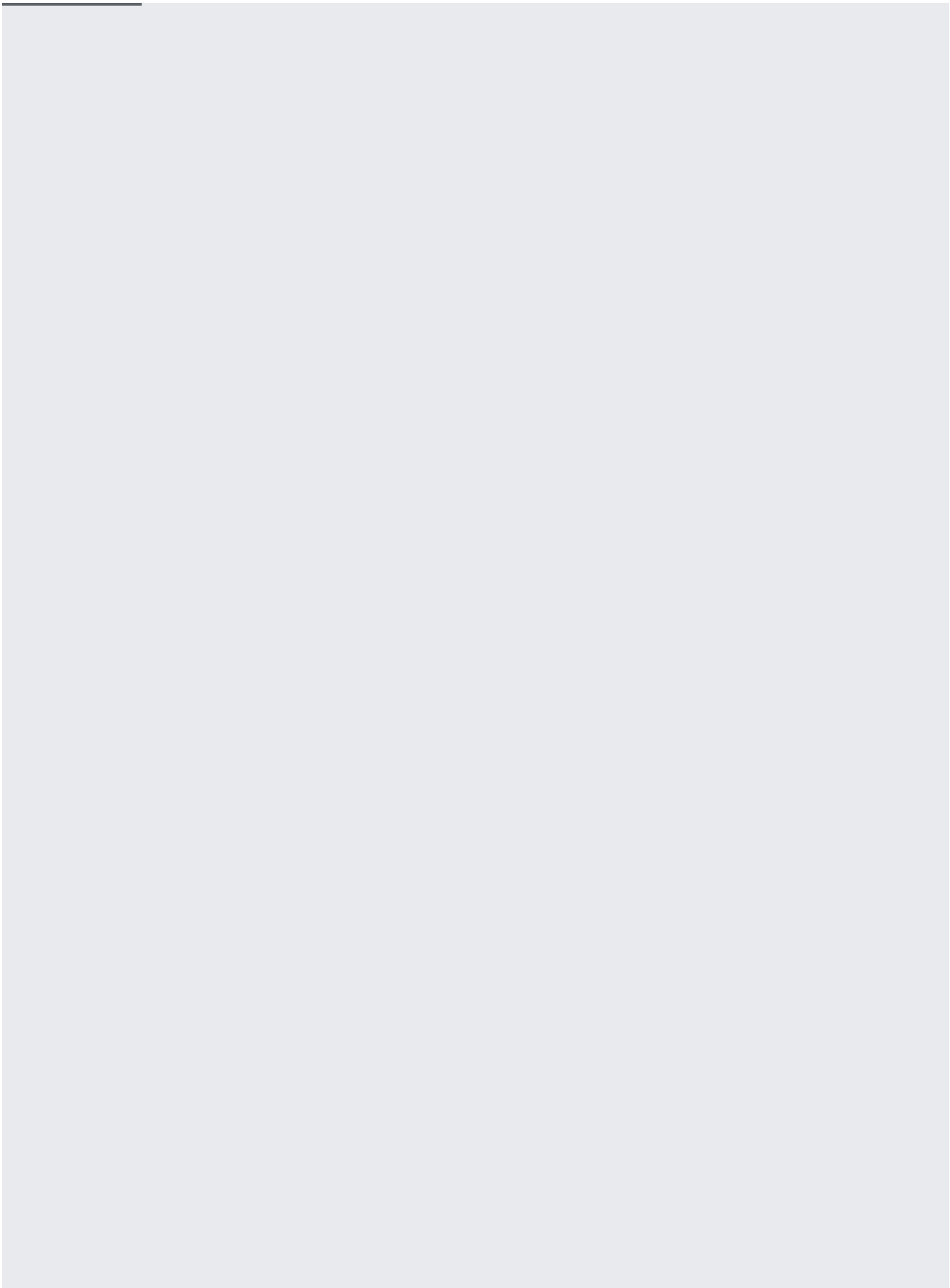


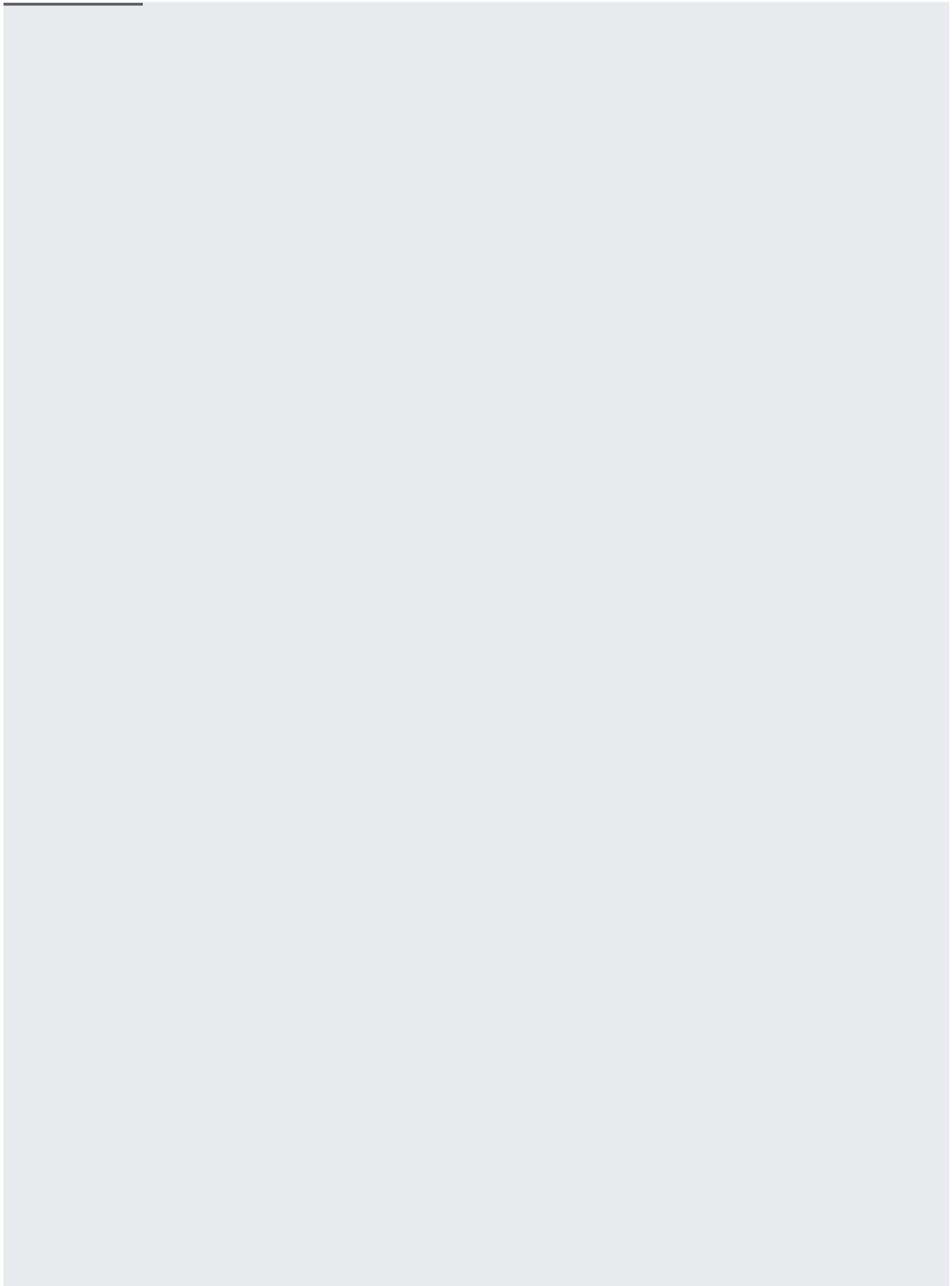


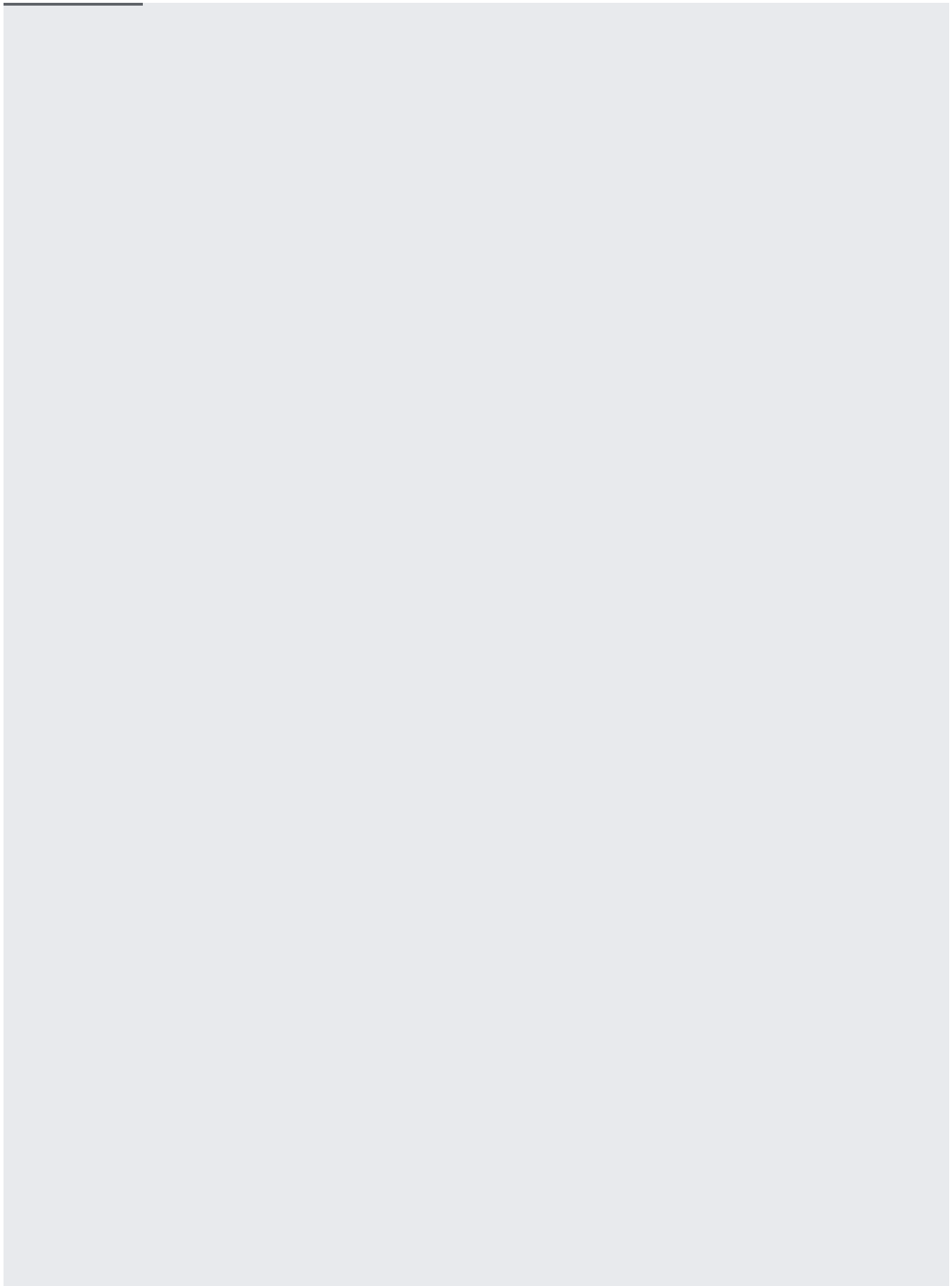


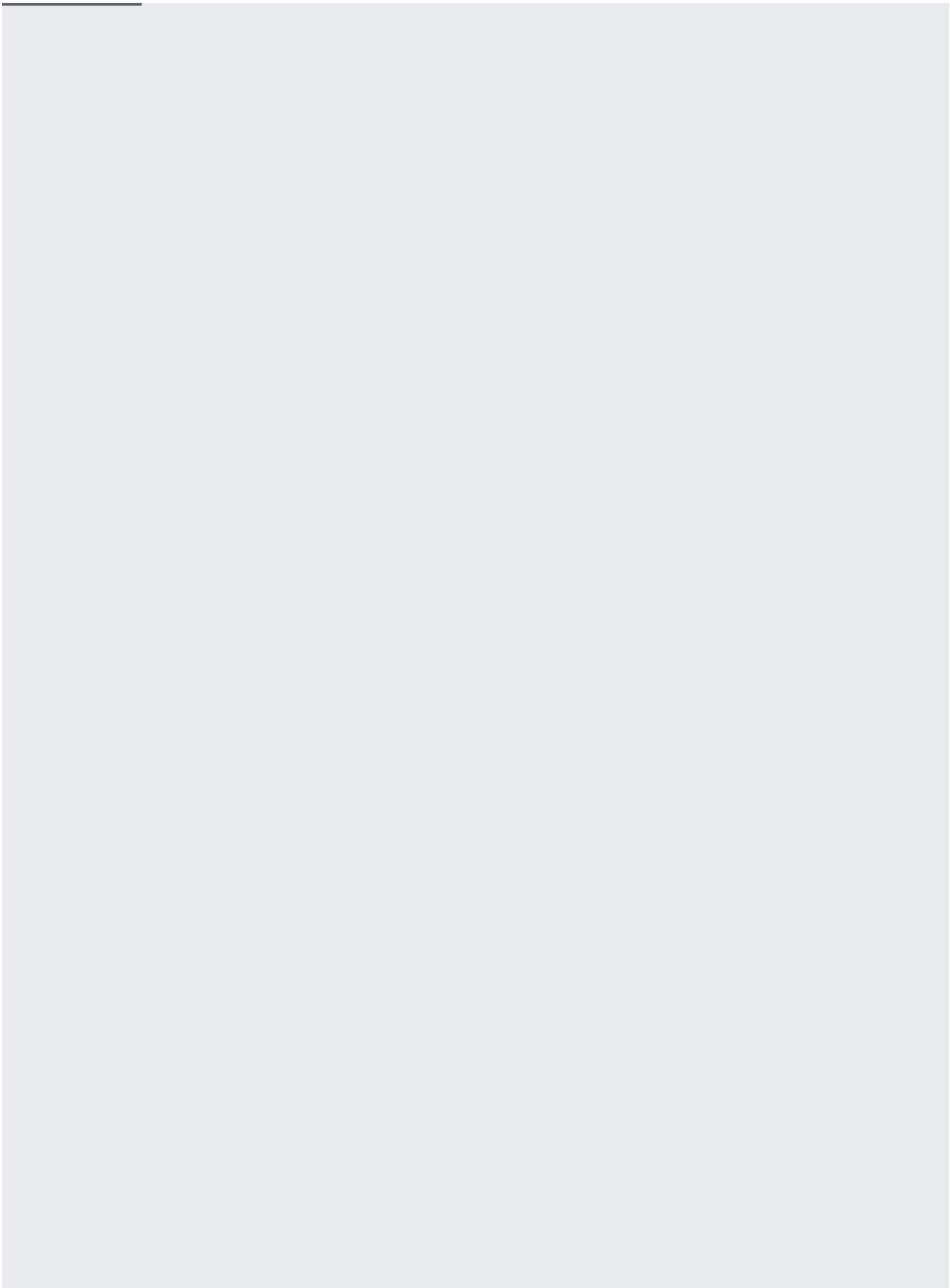
To list the HMAC keys for a project, and get information about the keys:

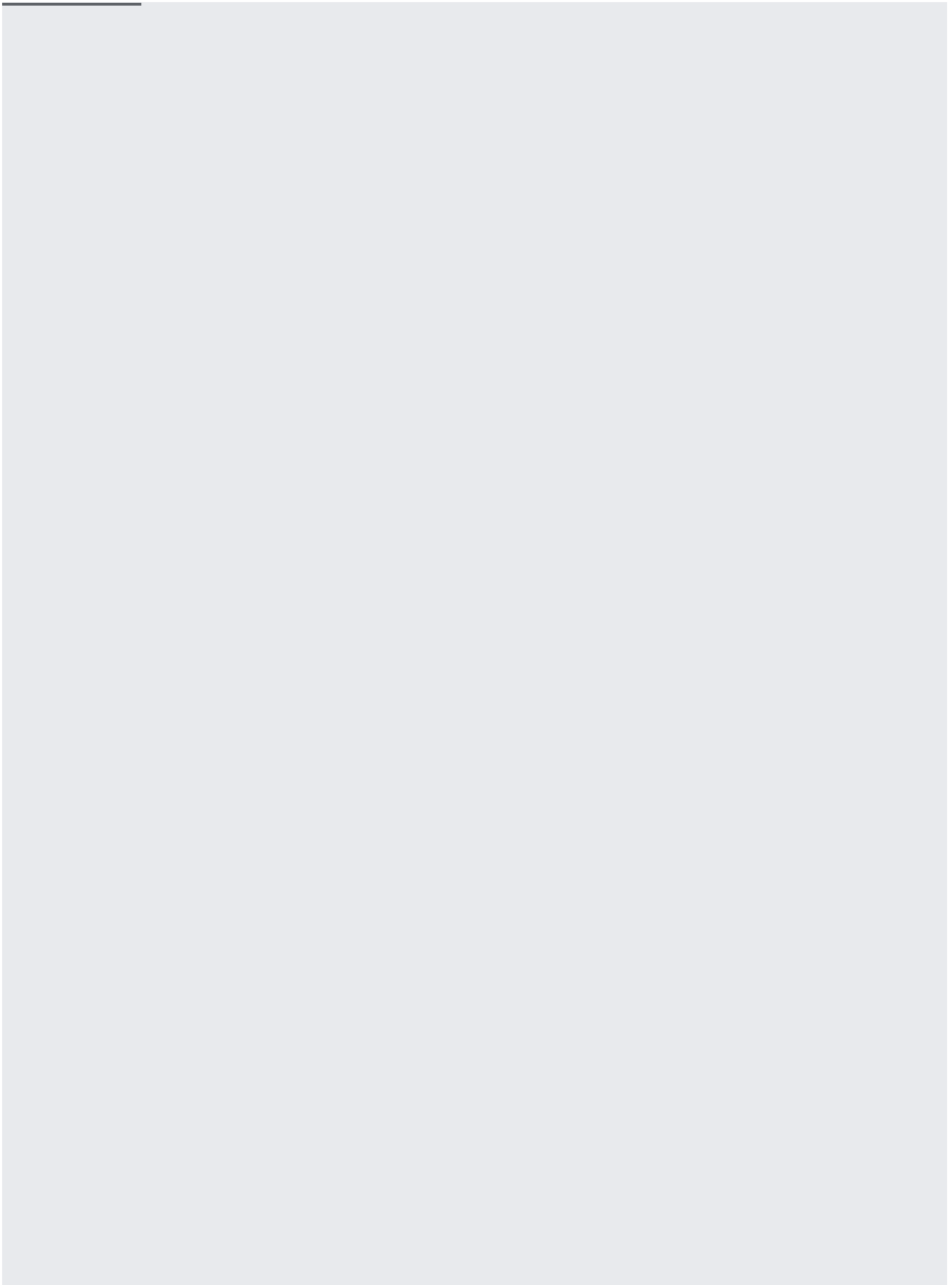


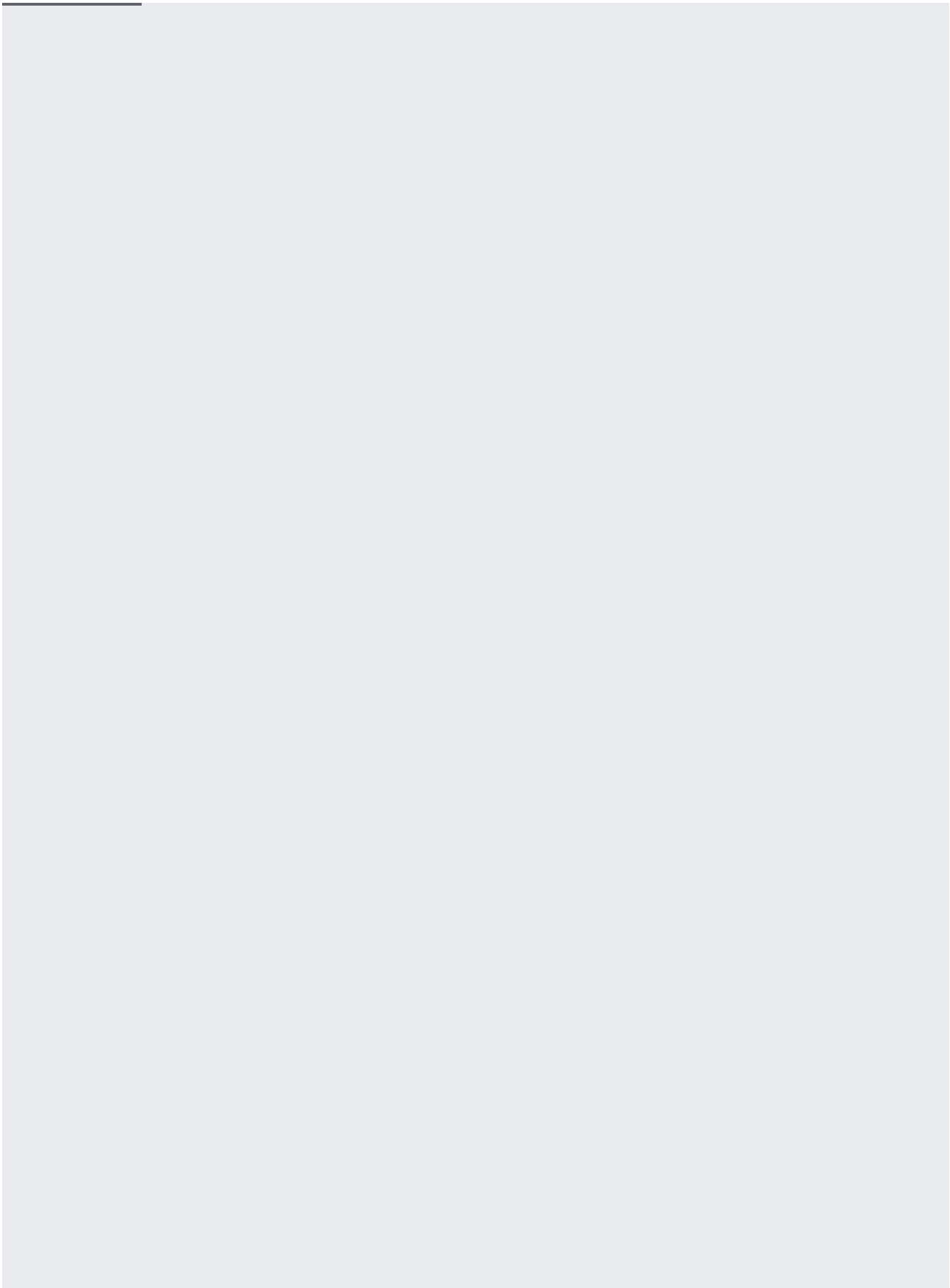


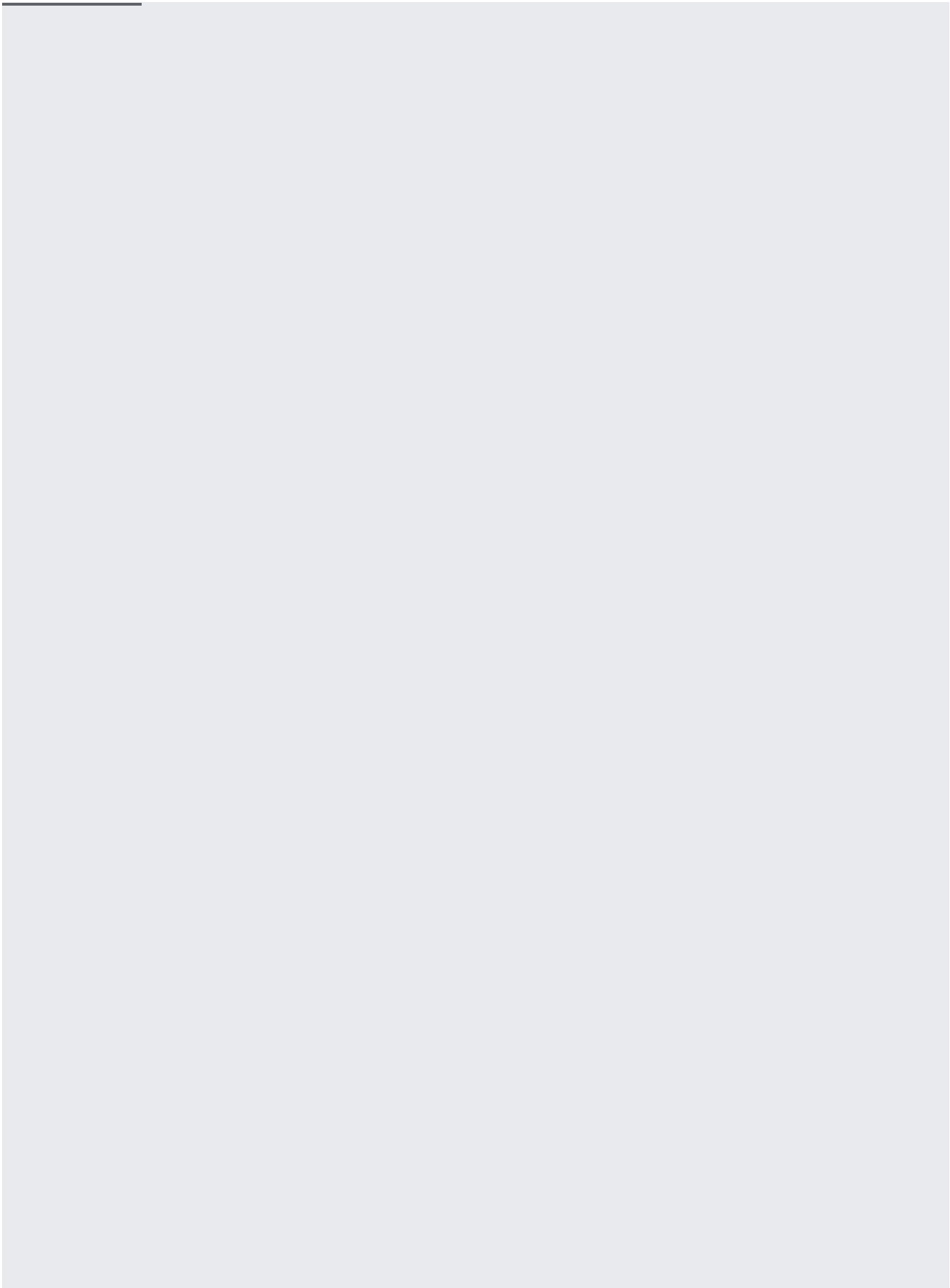


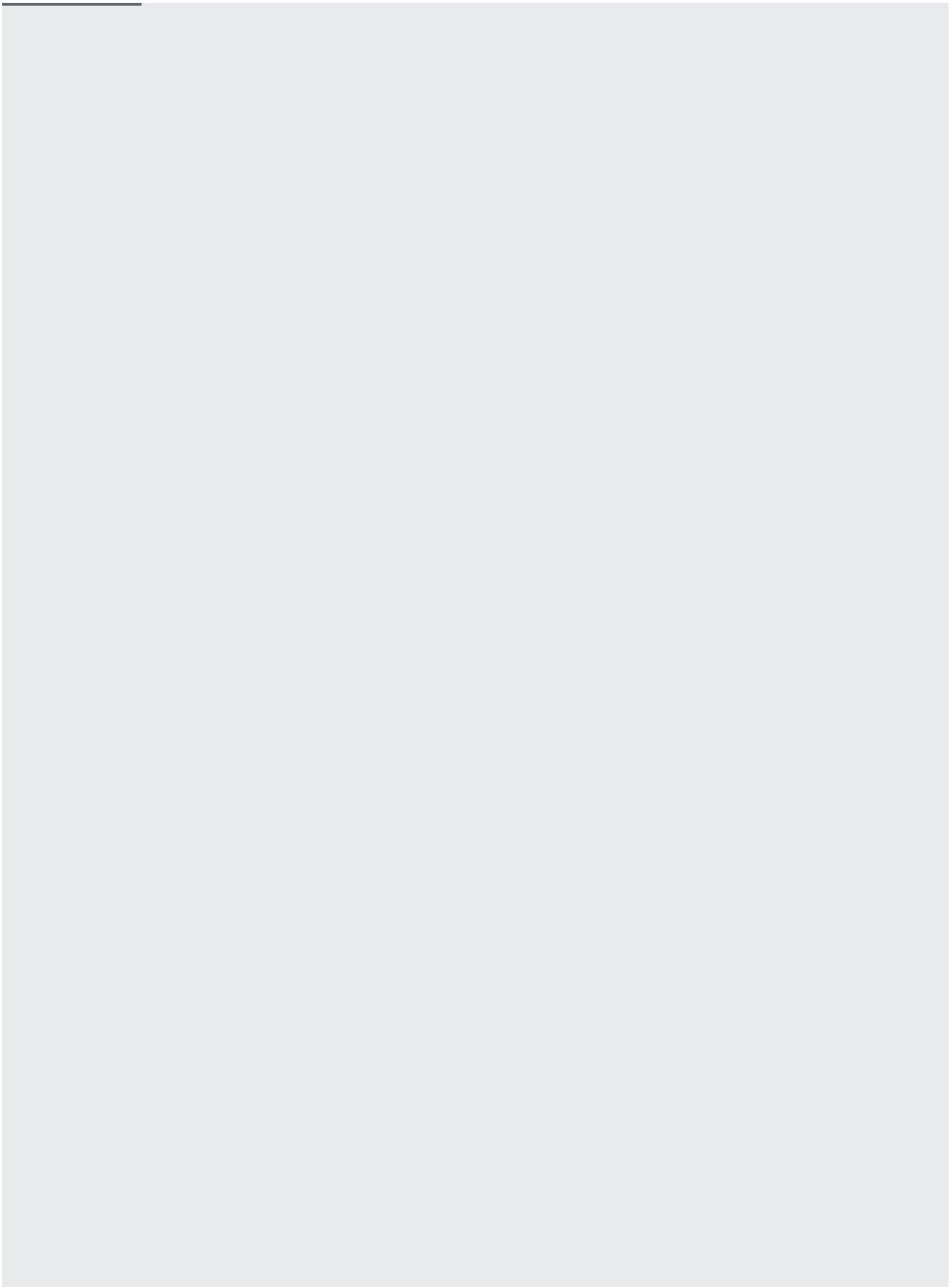


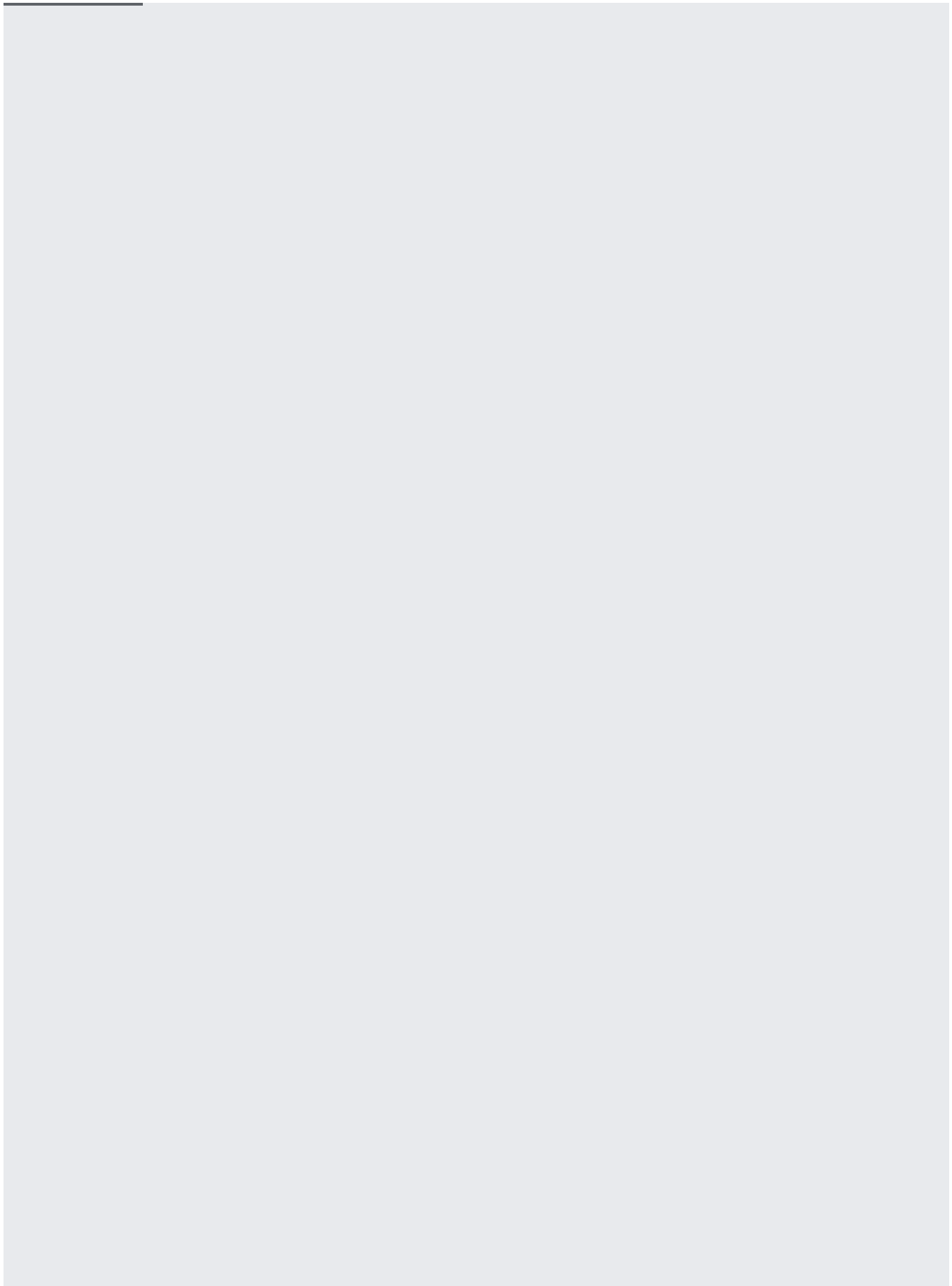


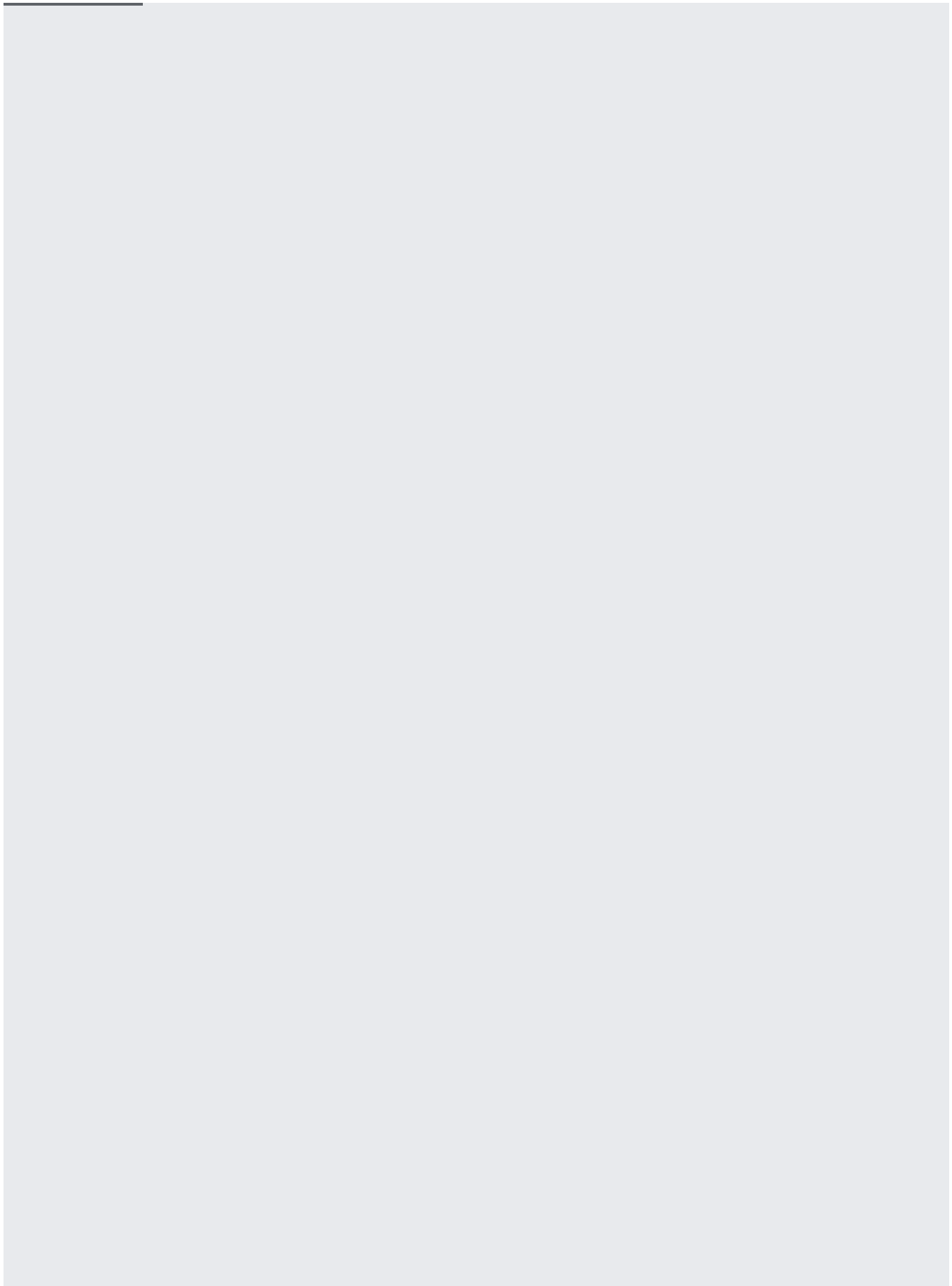


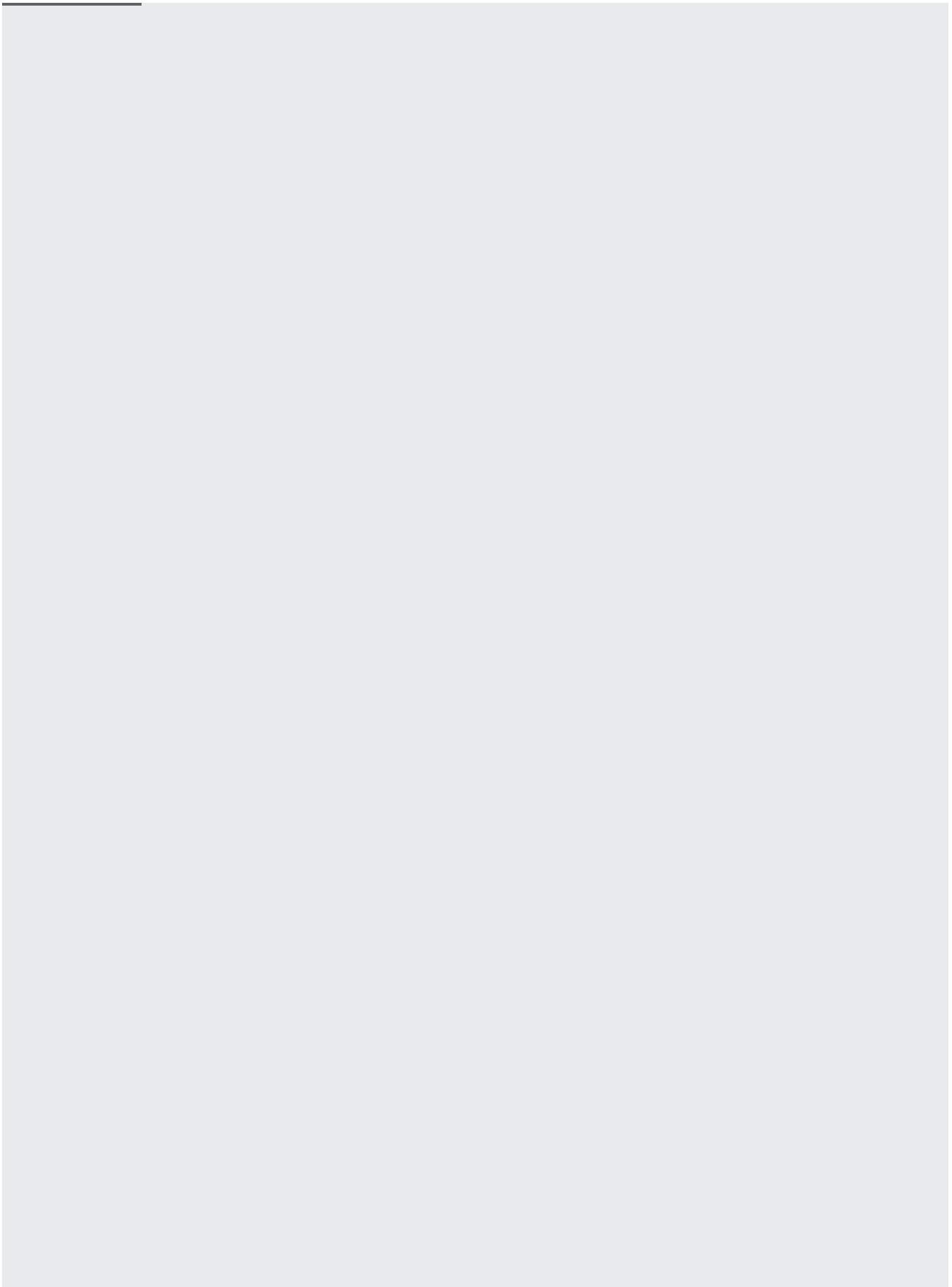


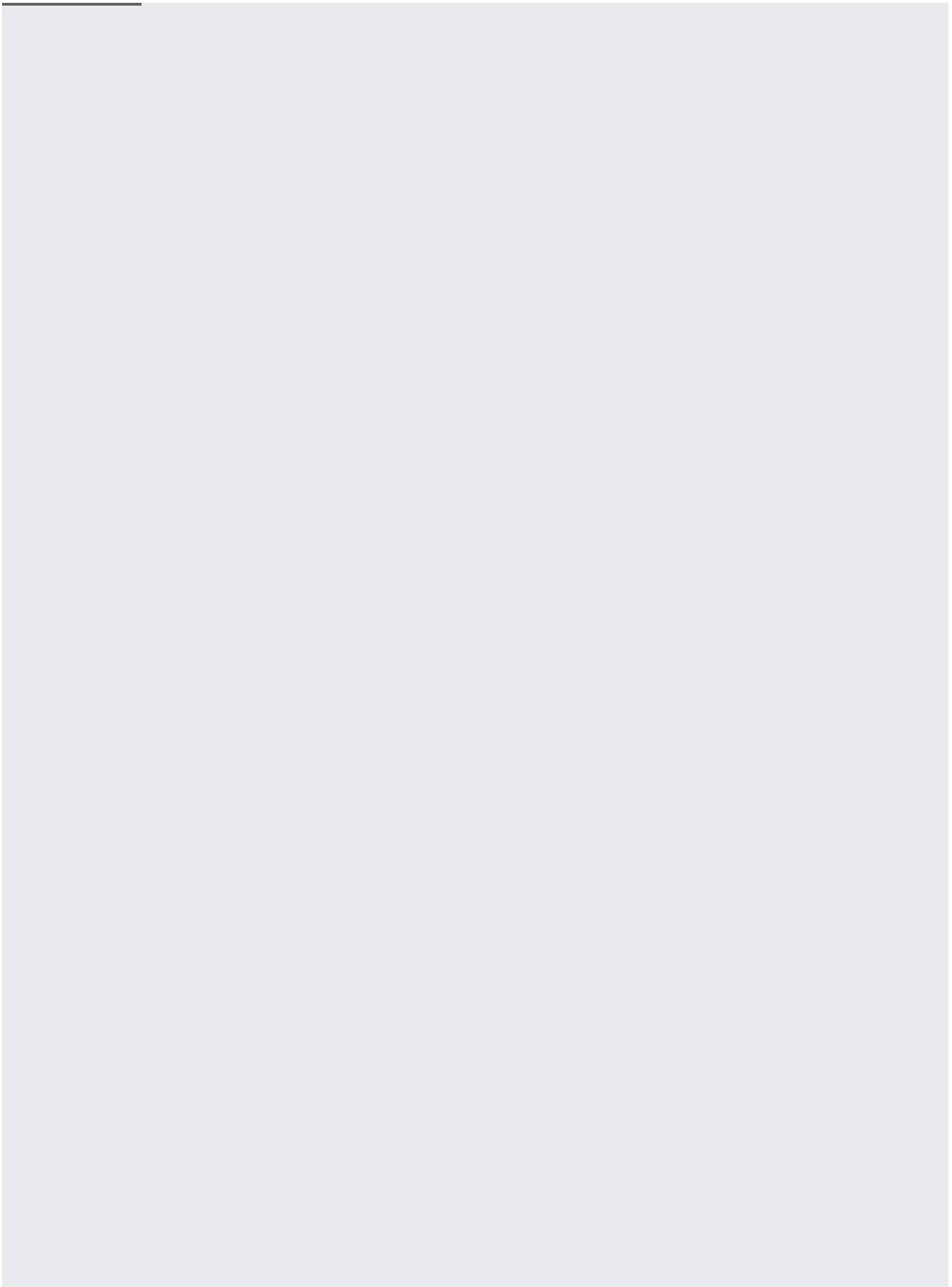




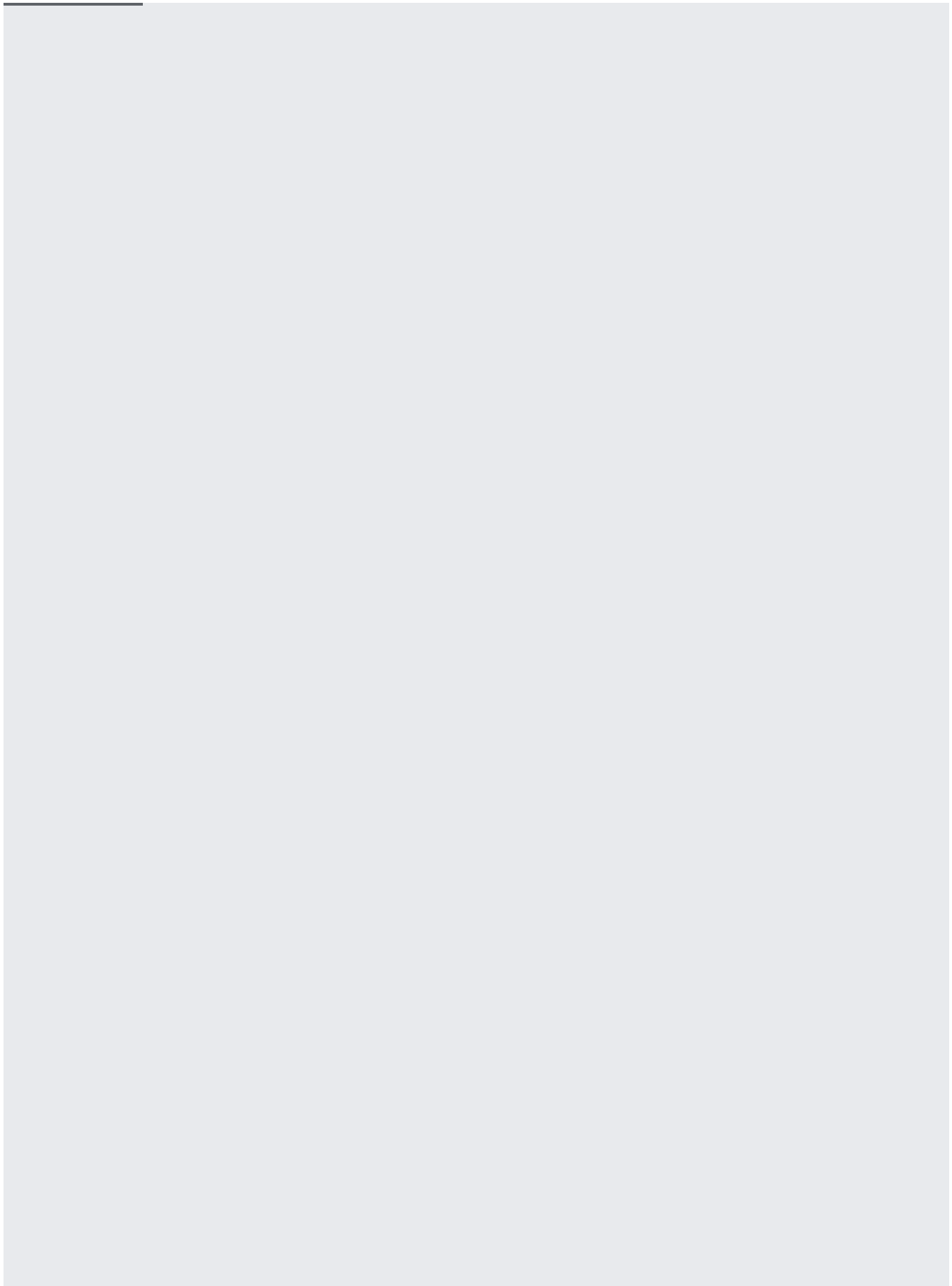


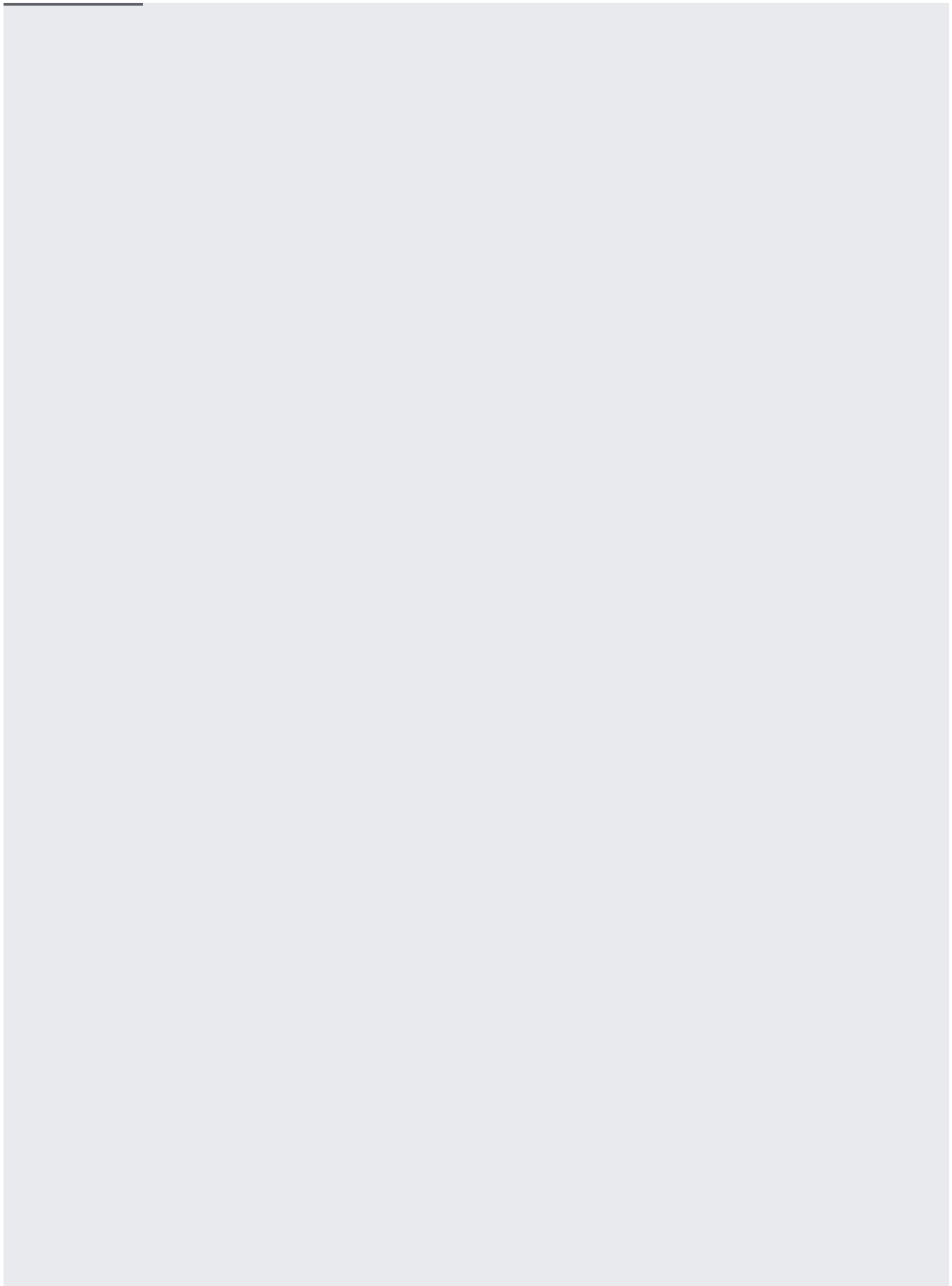


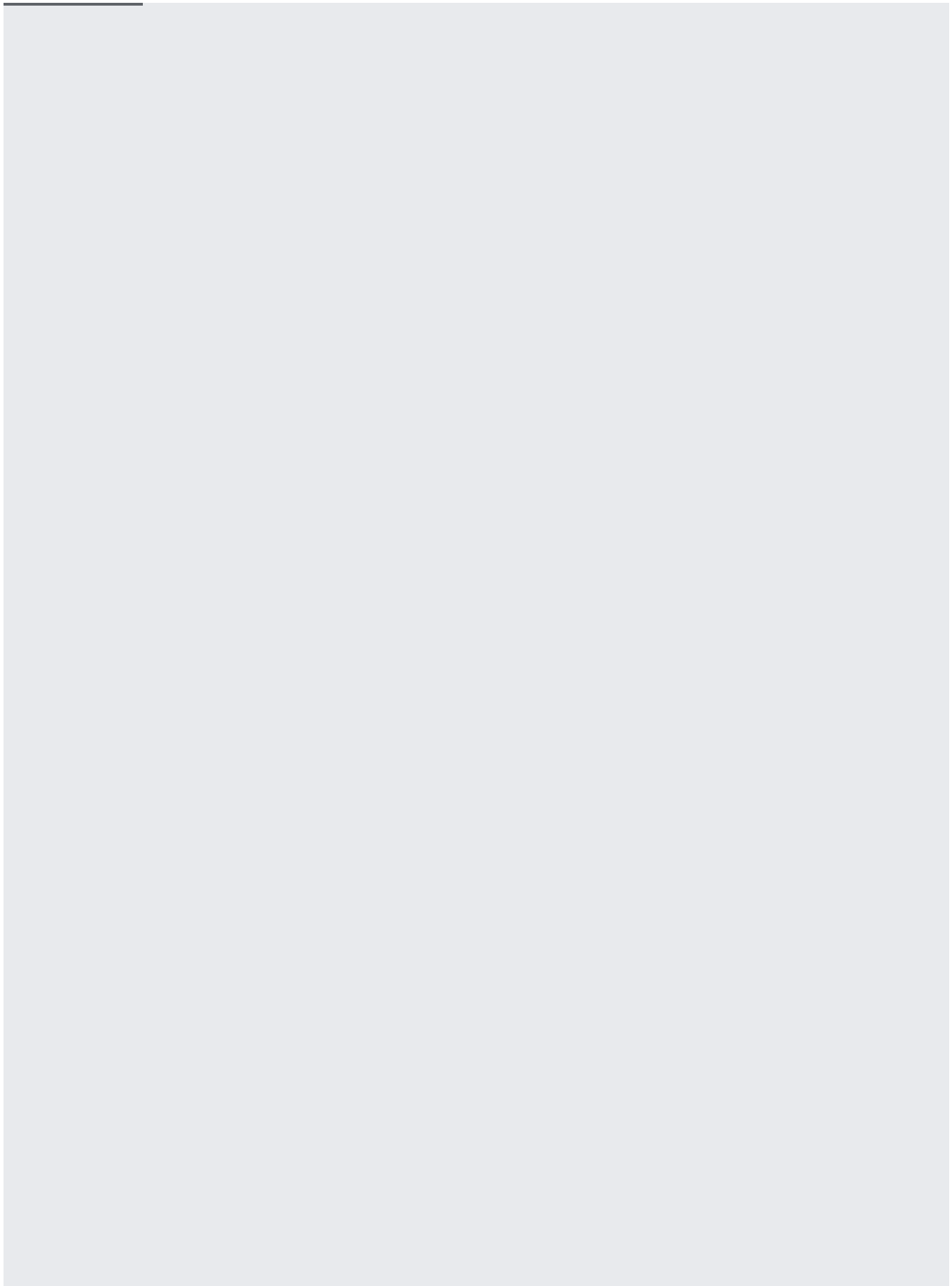


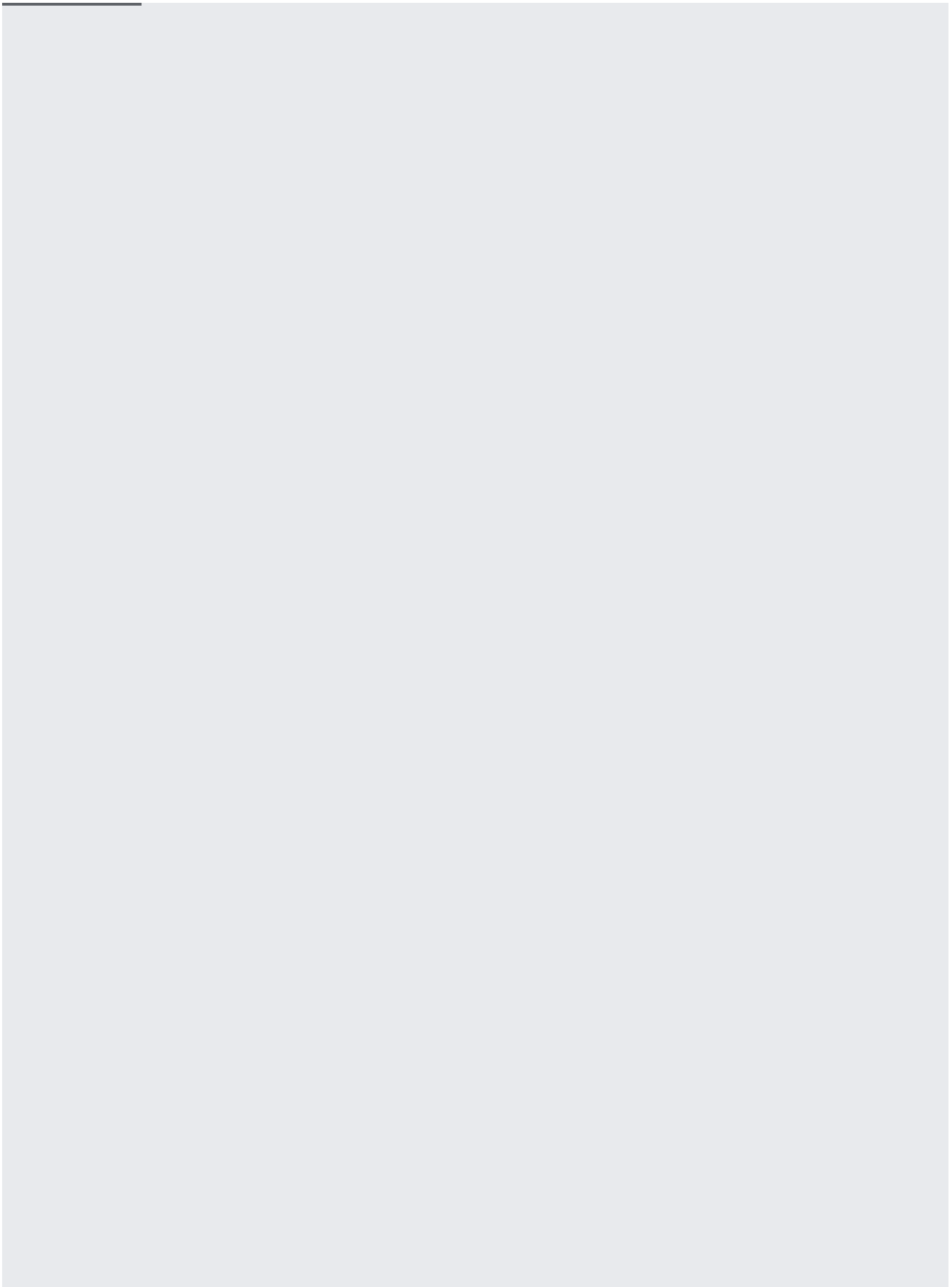


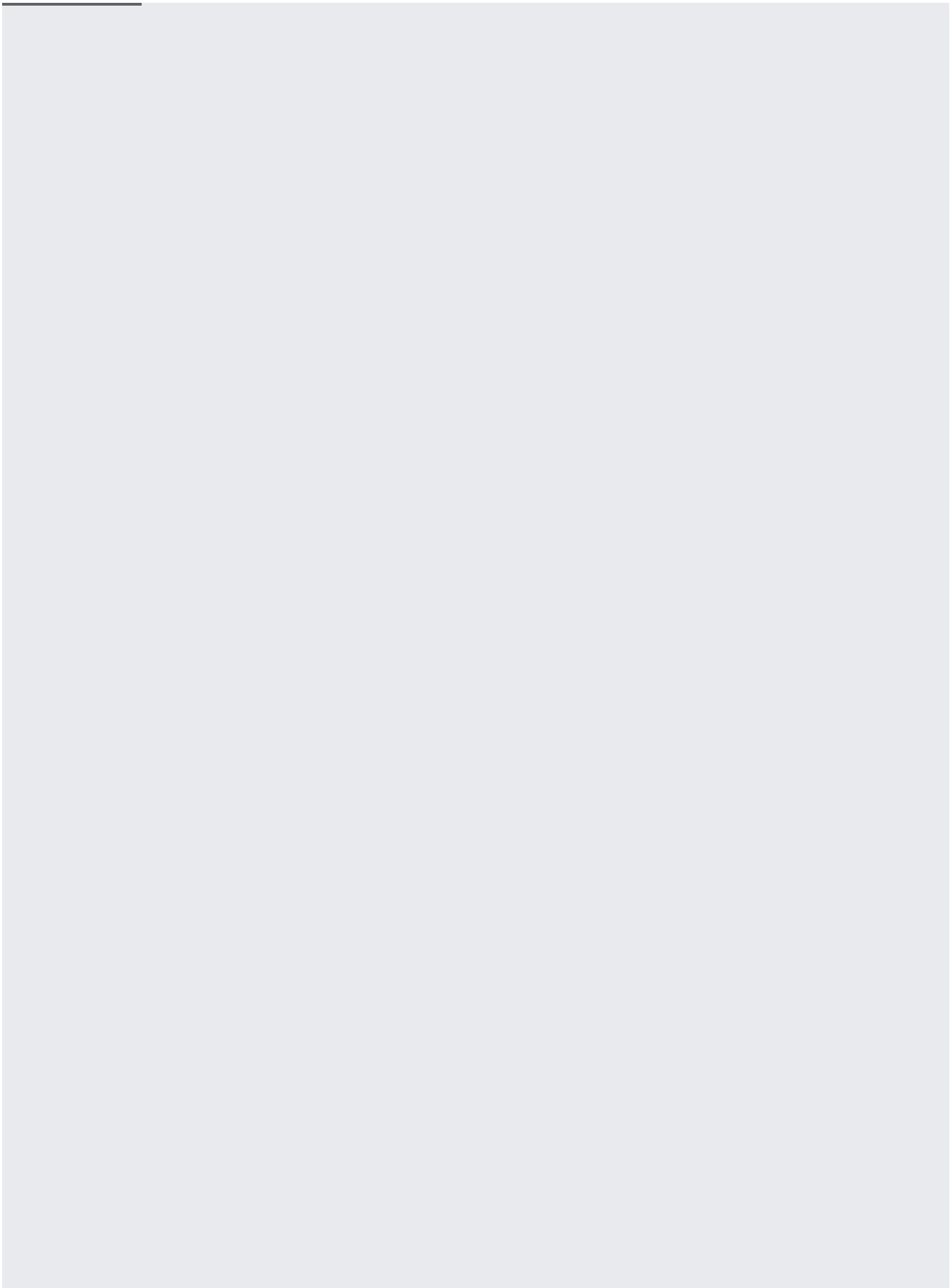
To switch an HMAC key between being active and inactive:

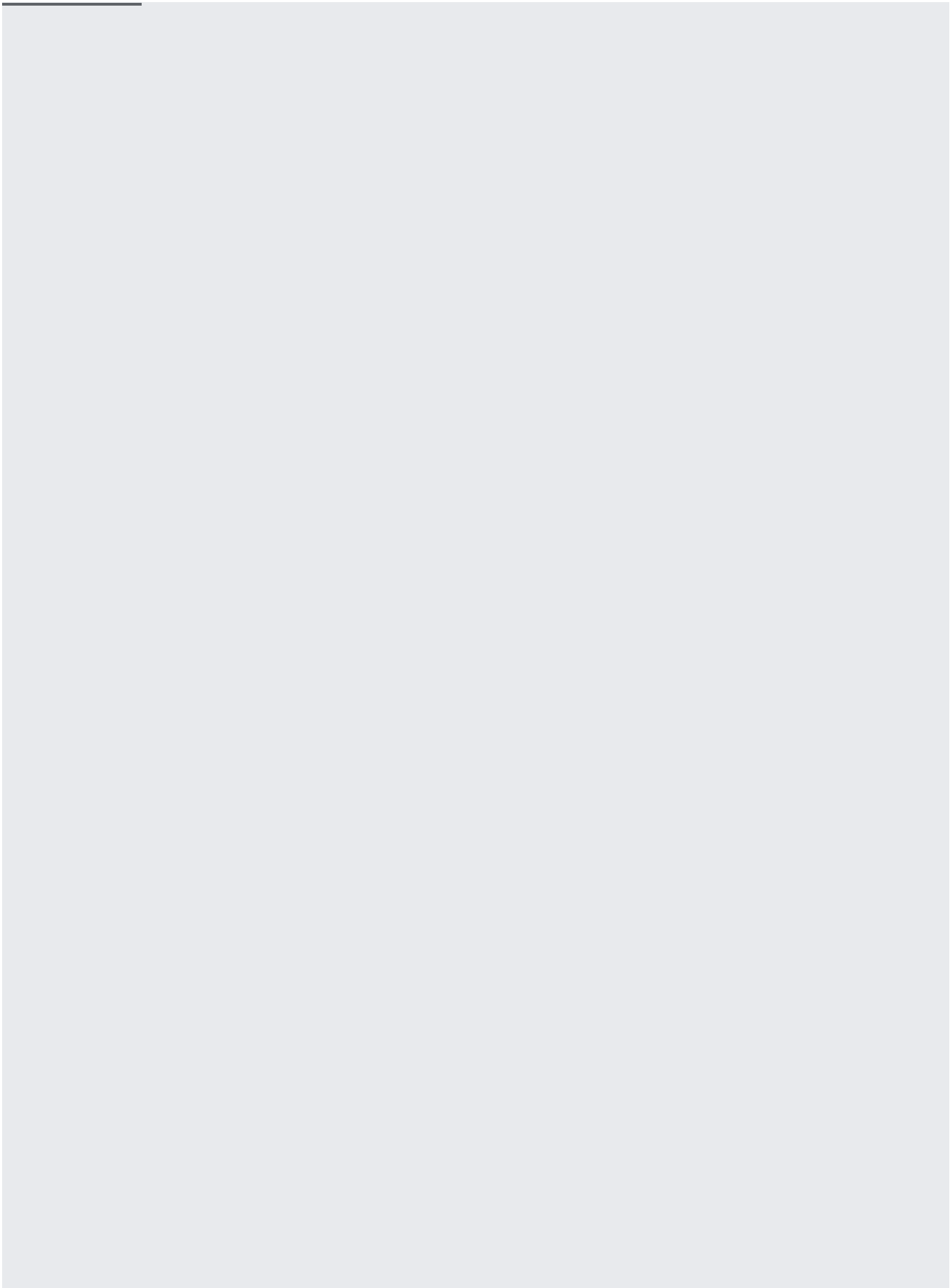


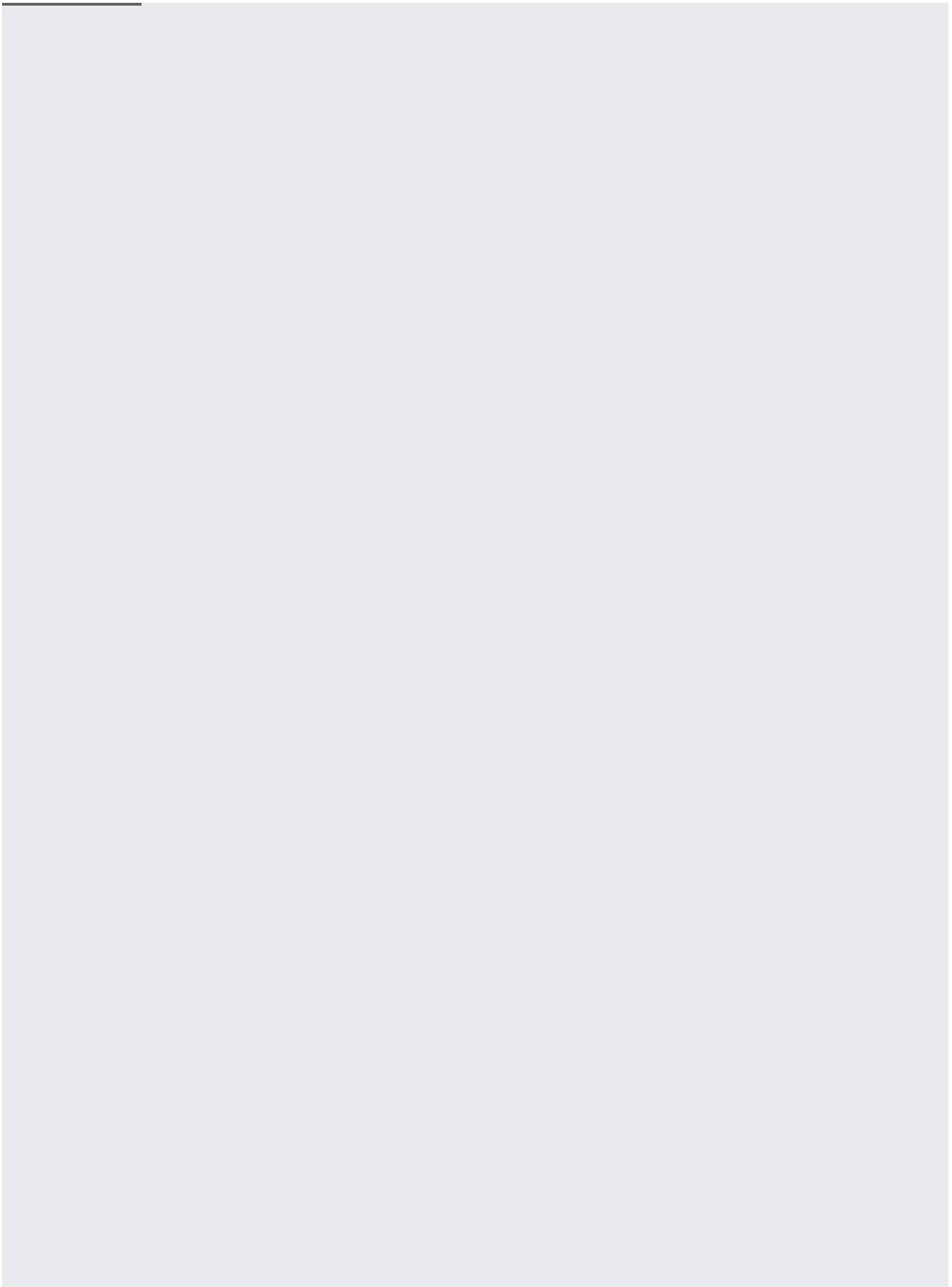


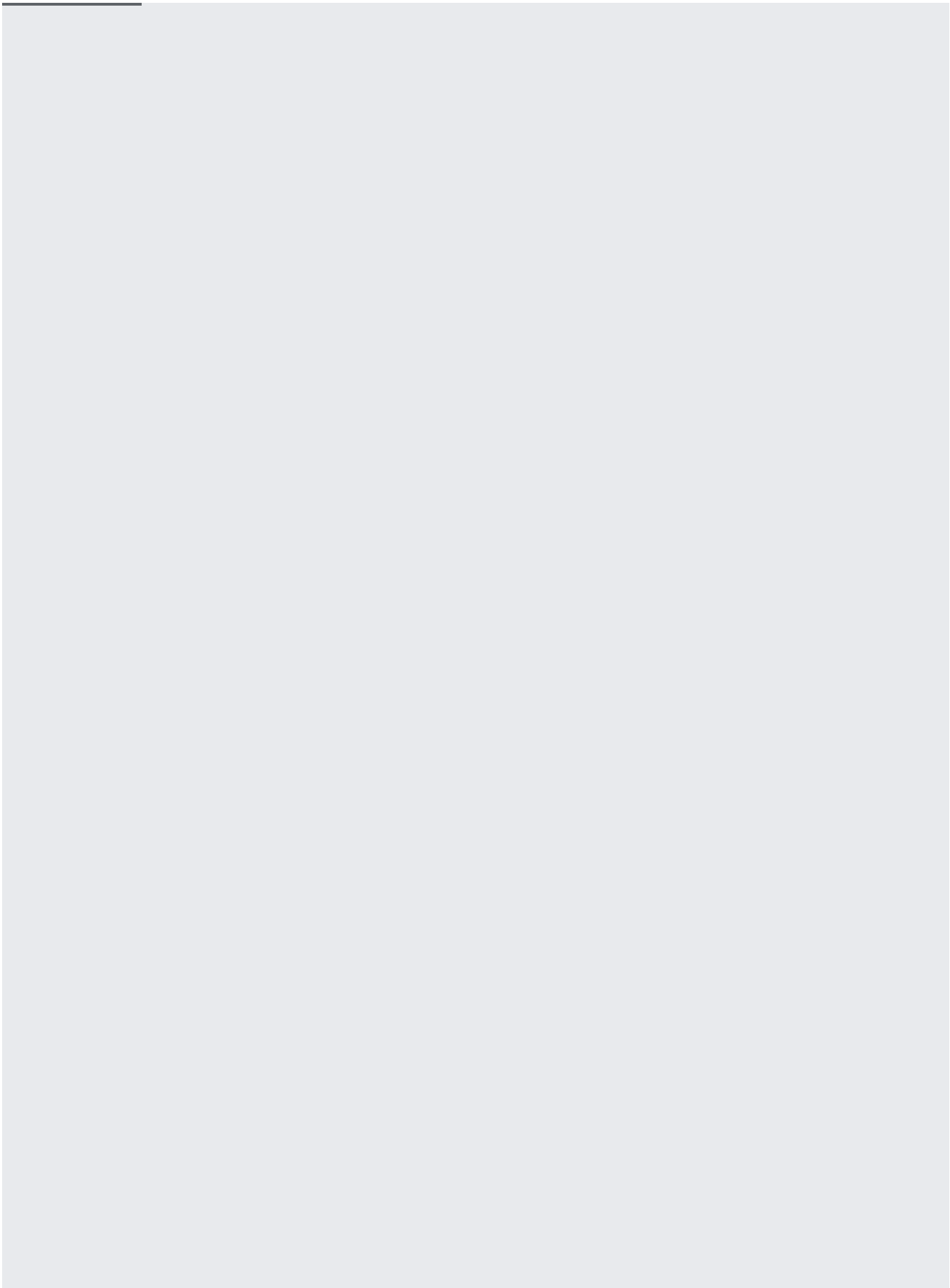


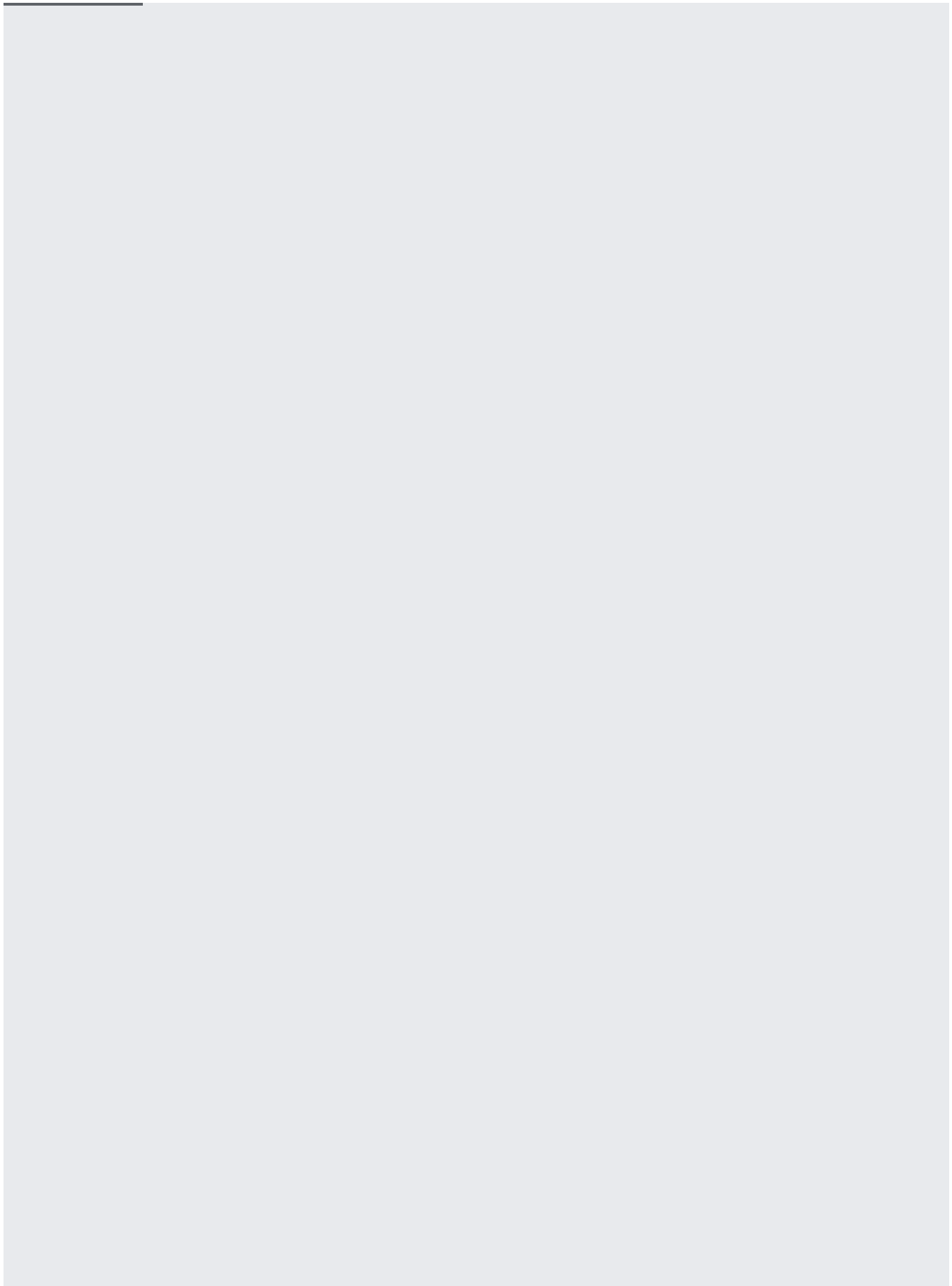


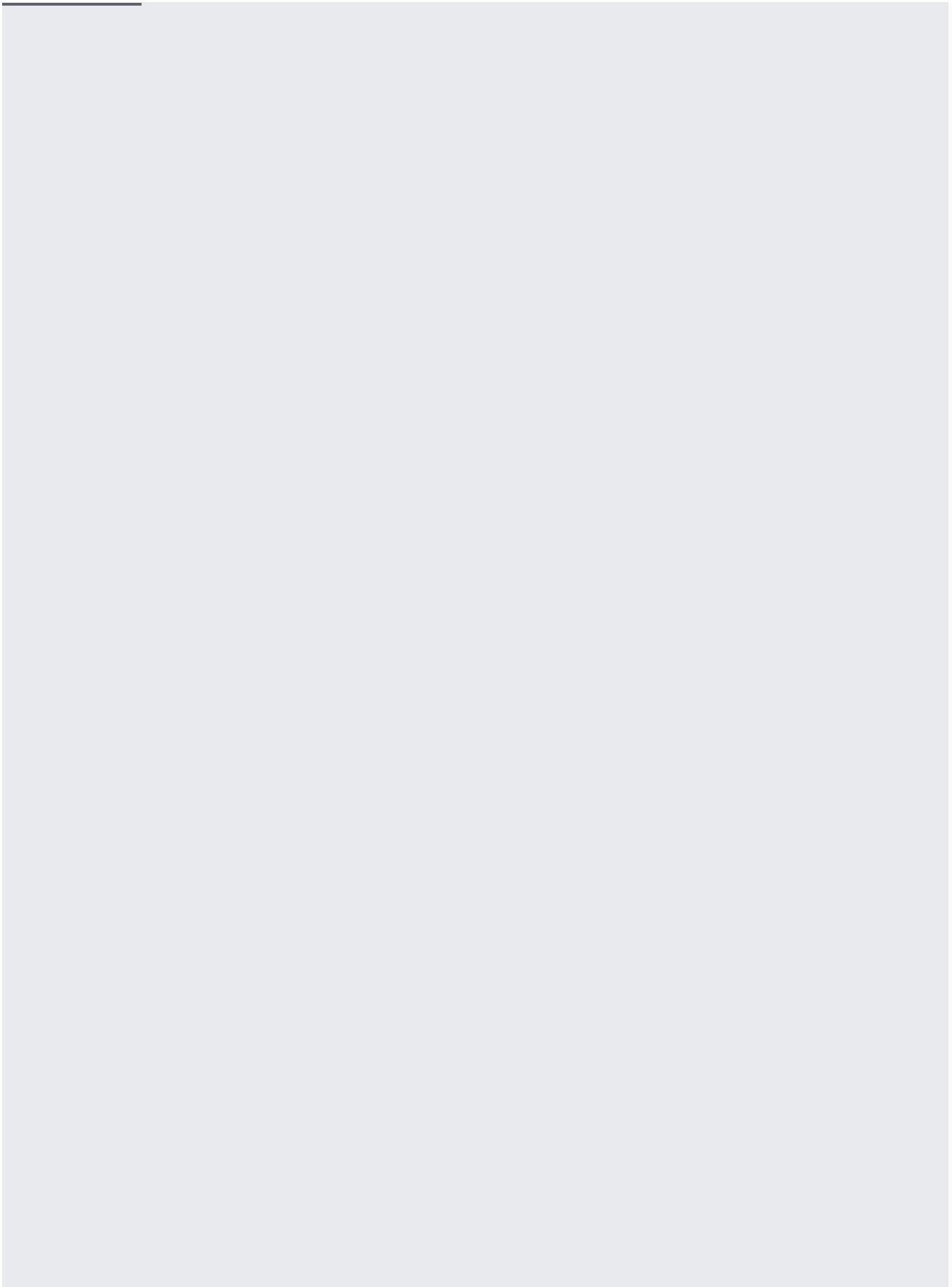


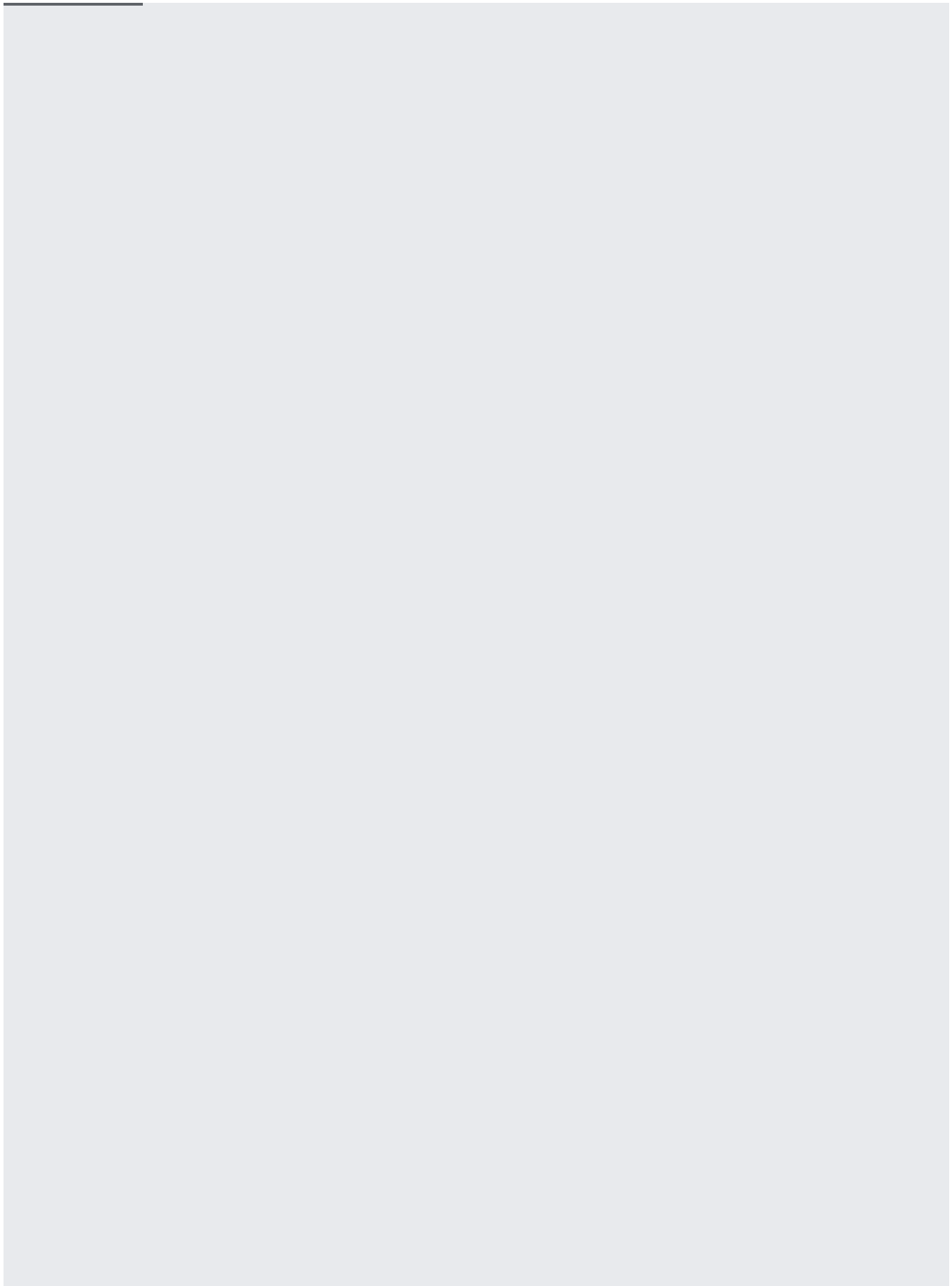


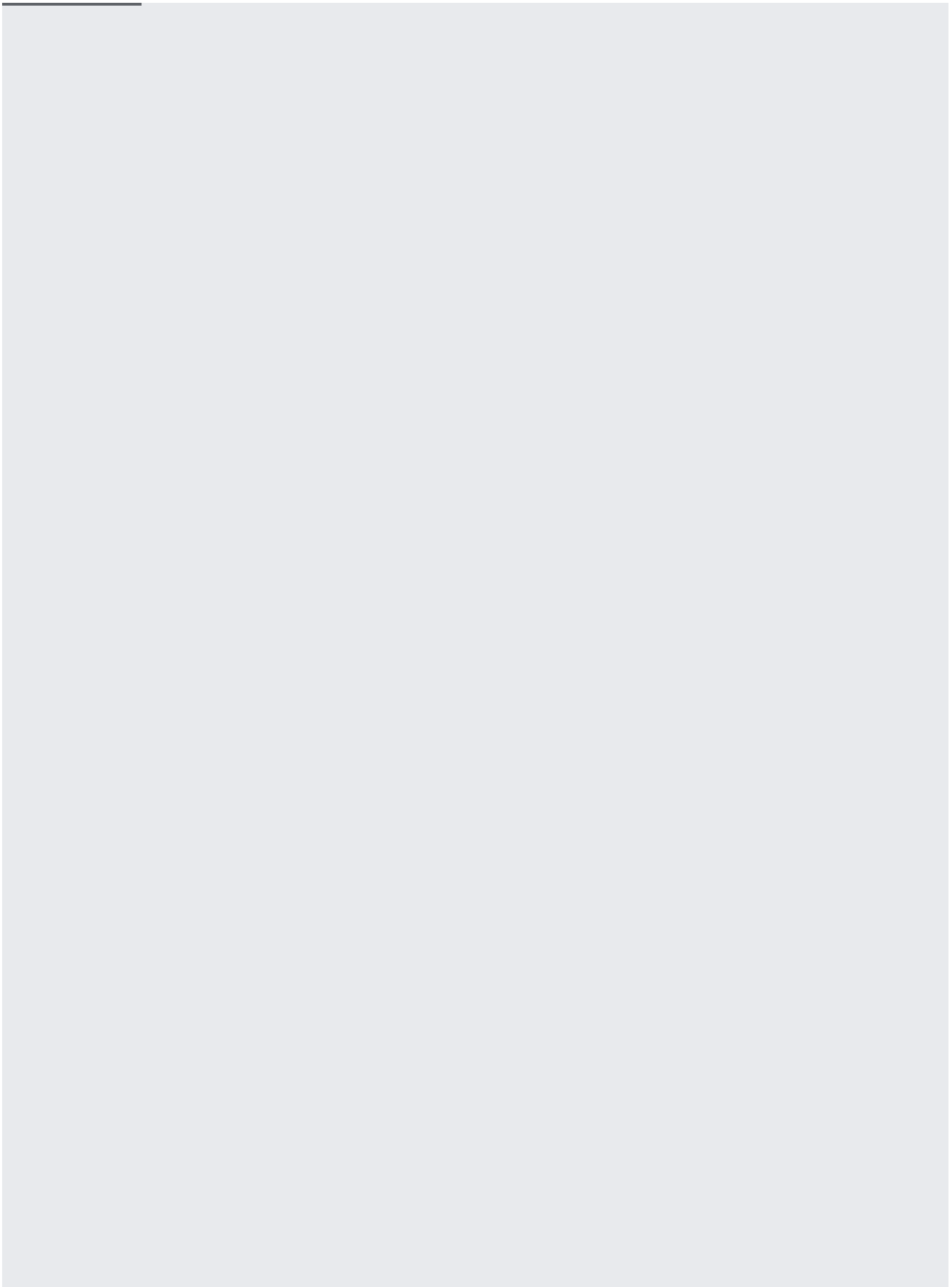


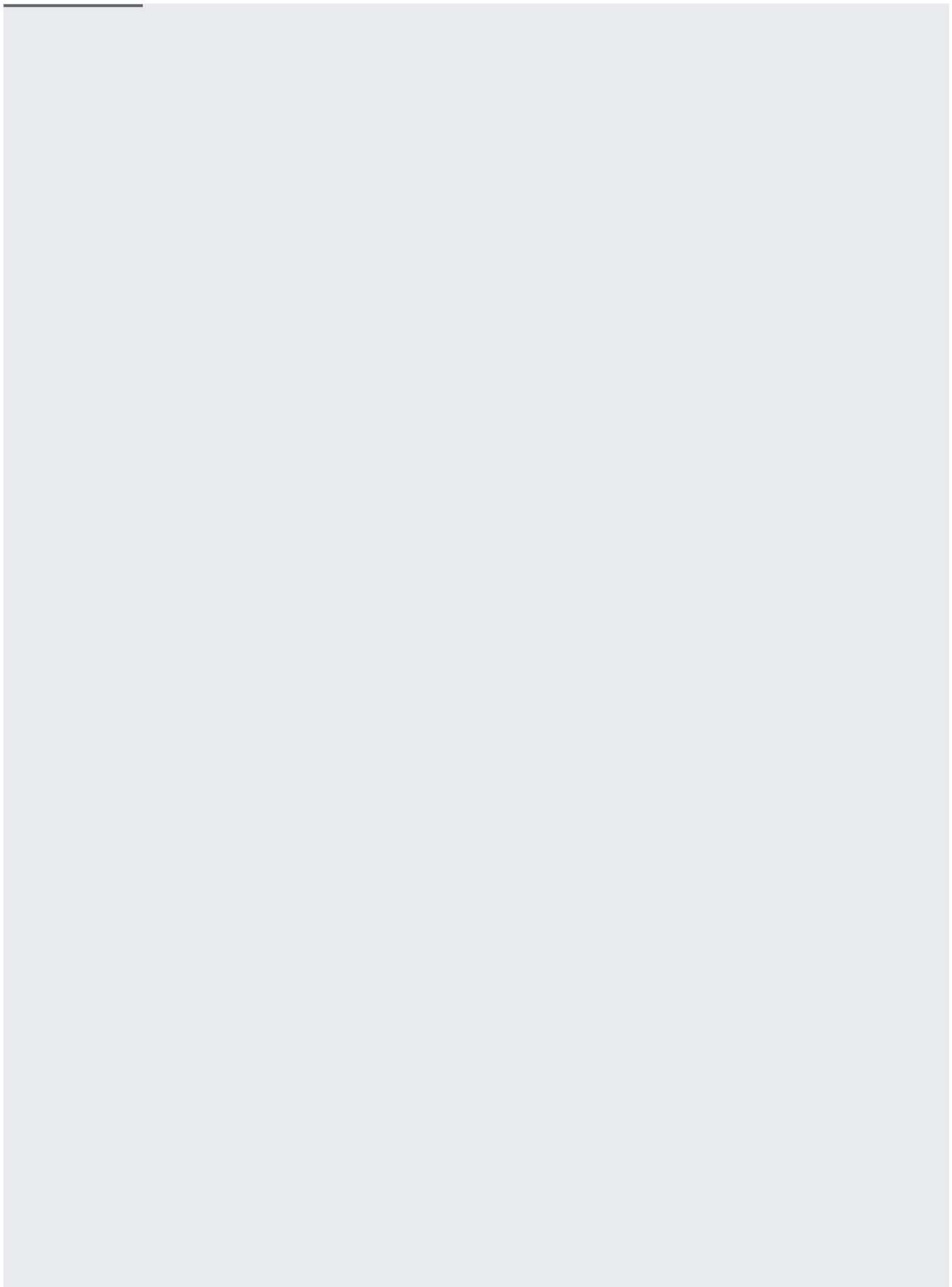


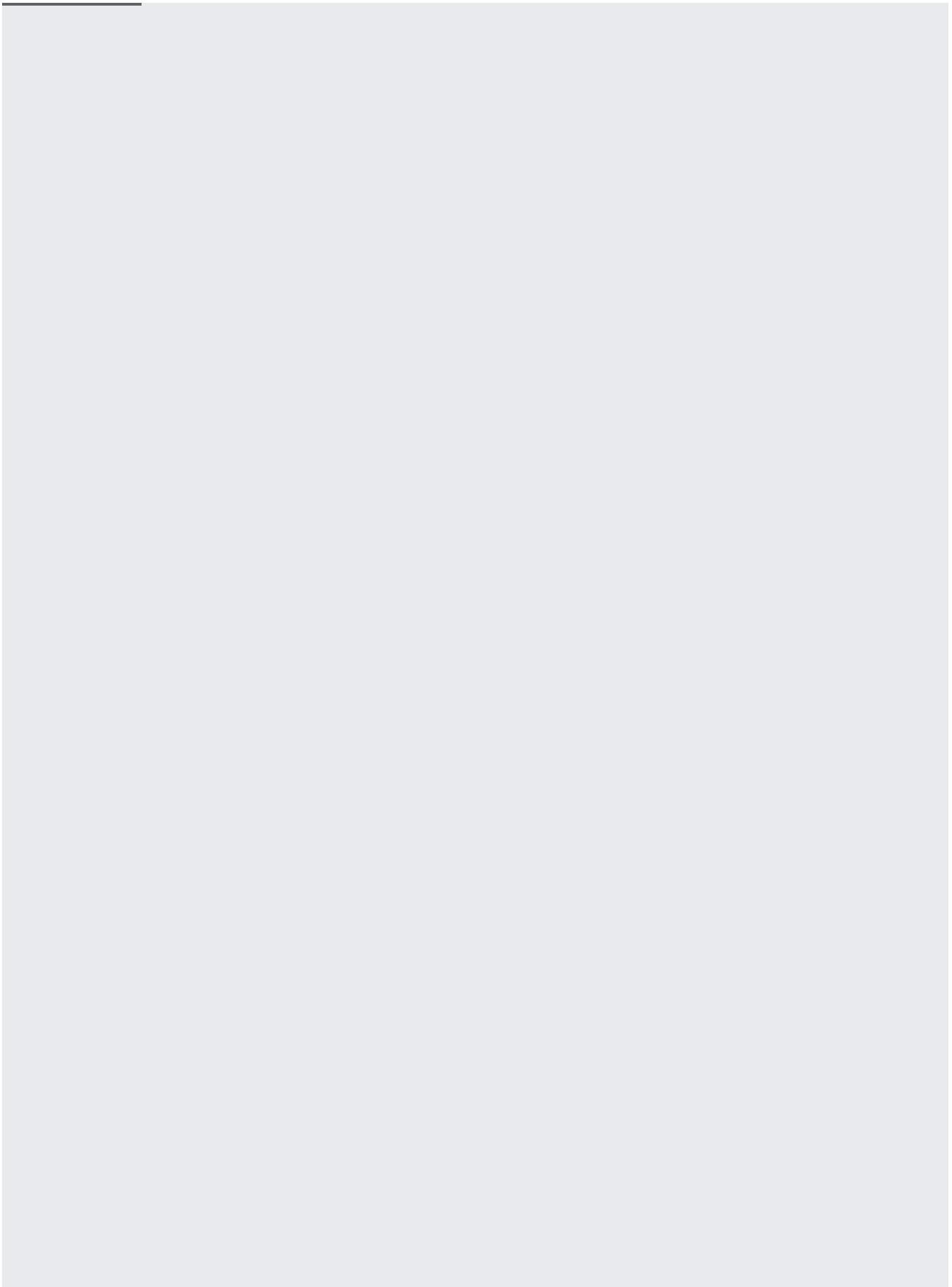






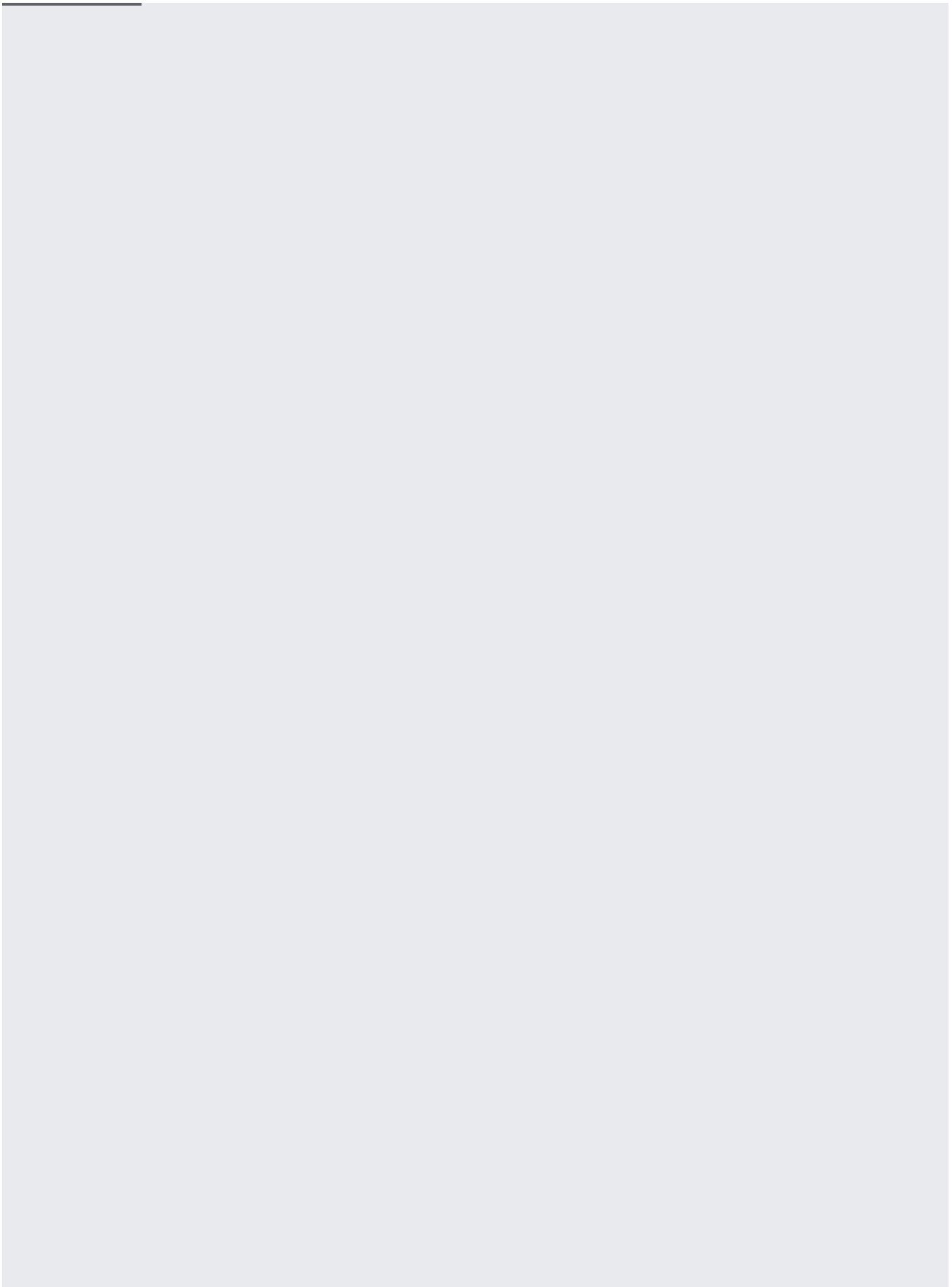


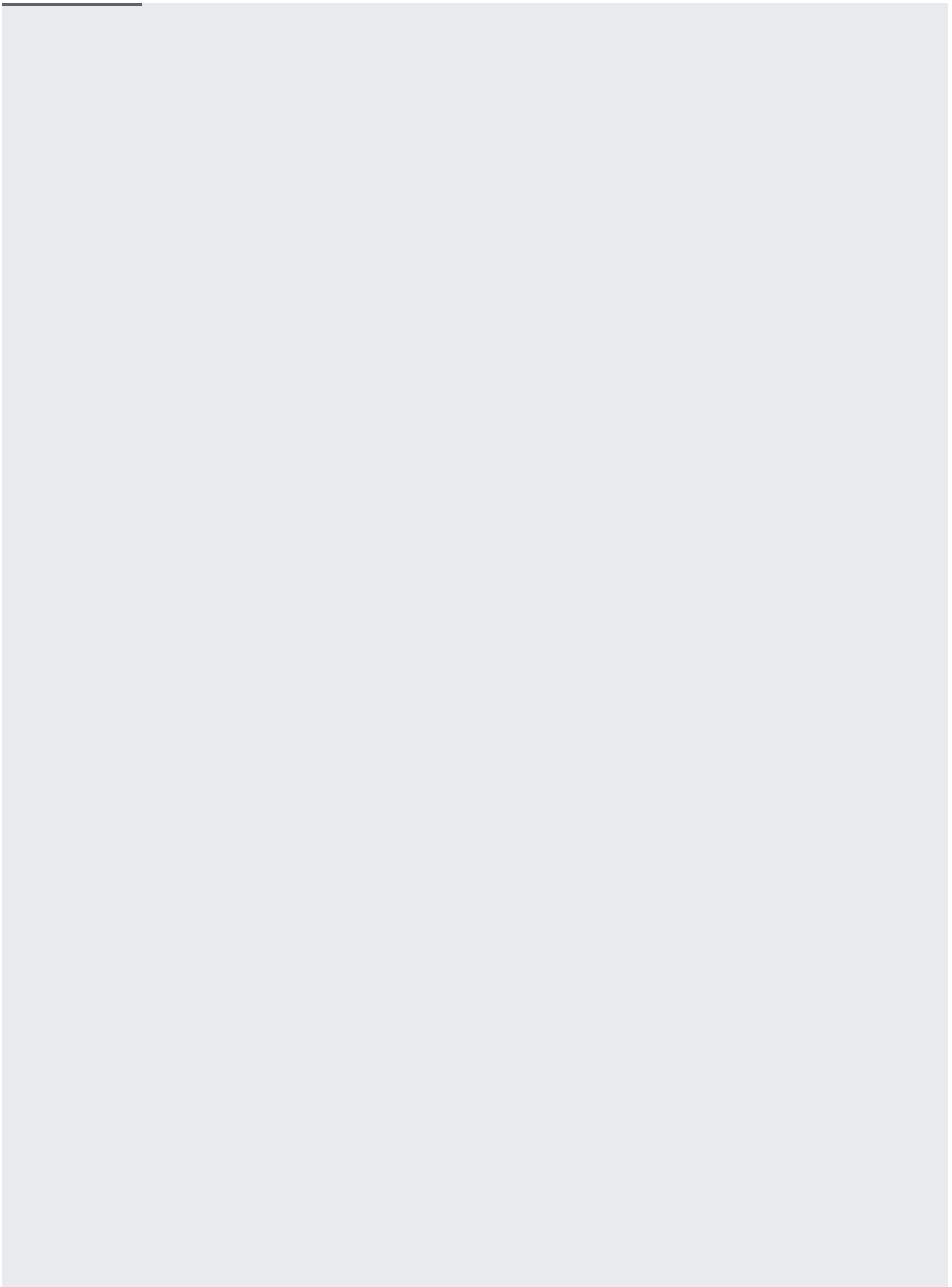


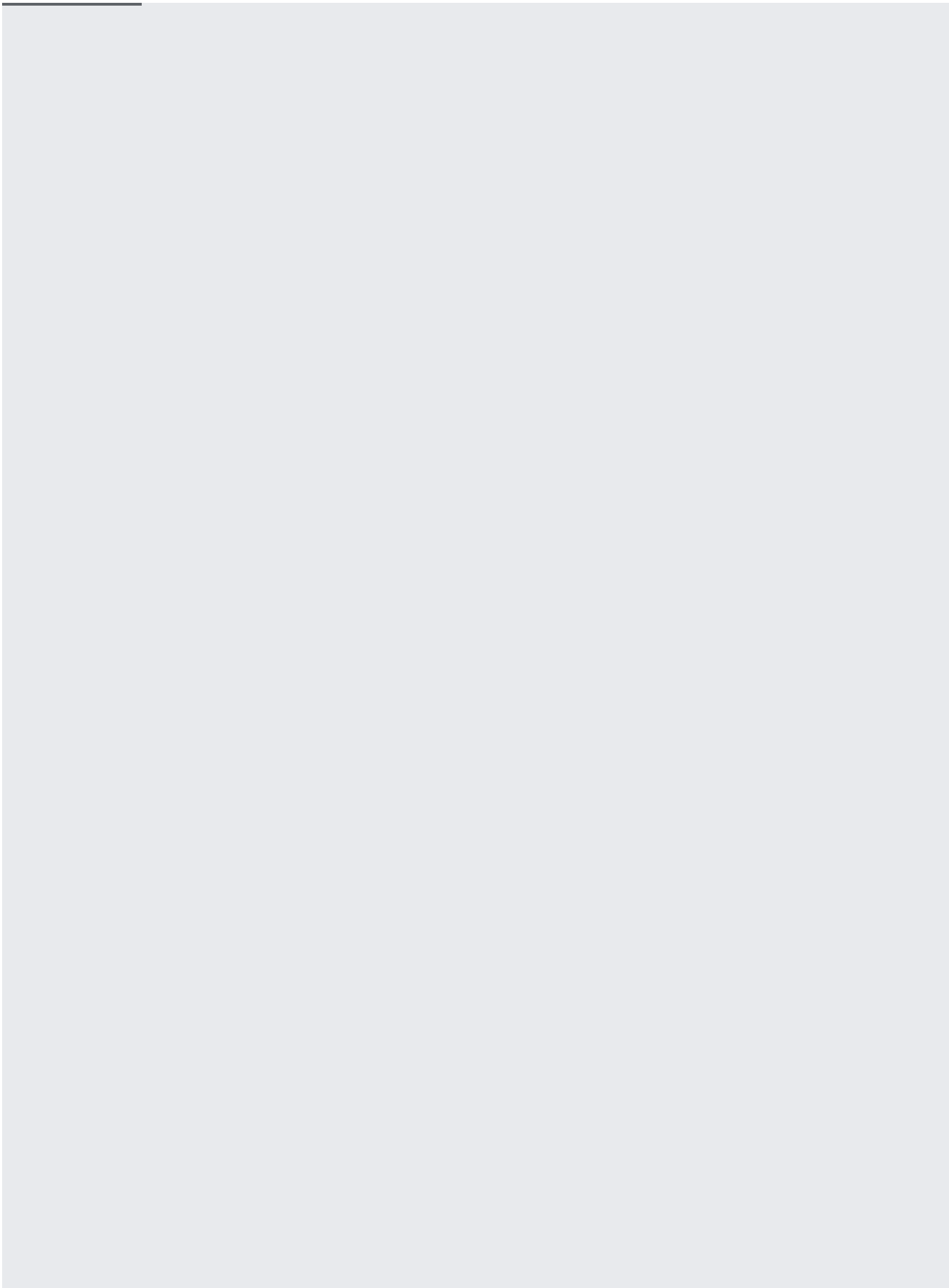


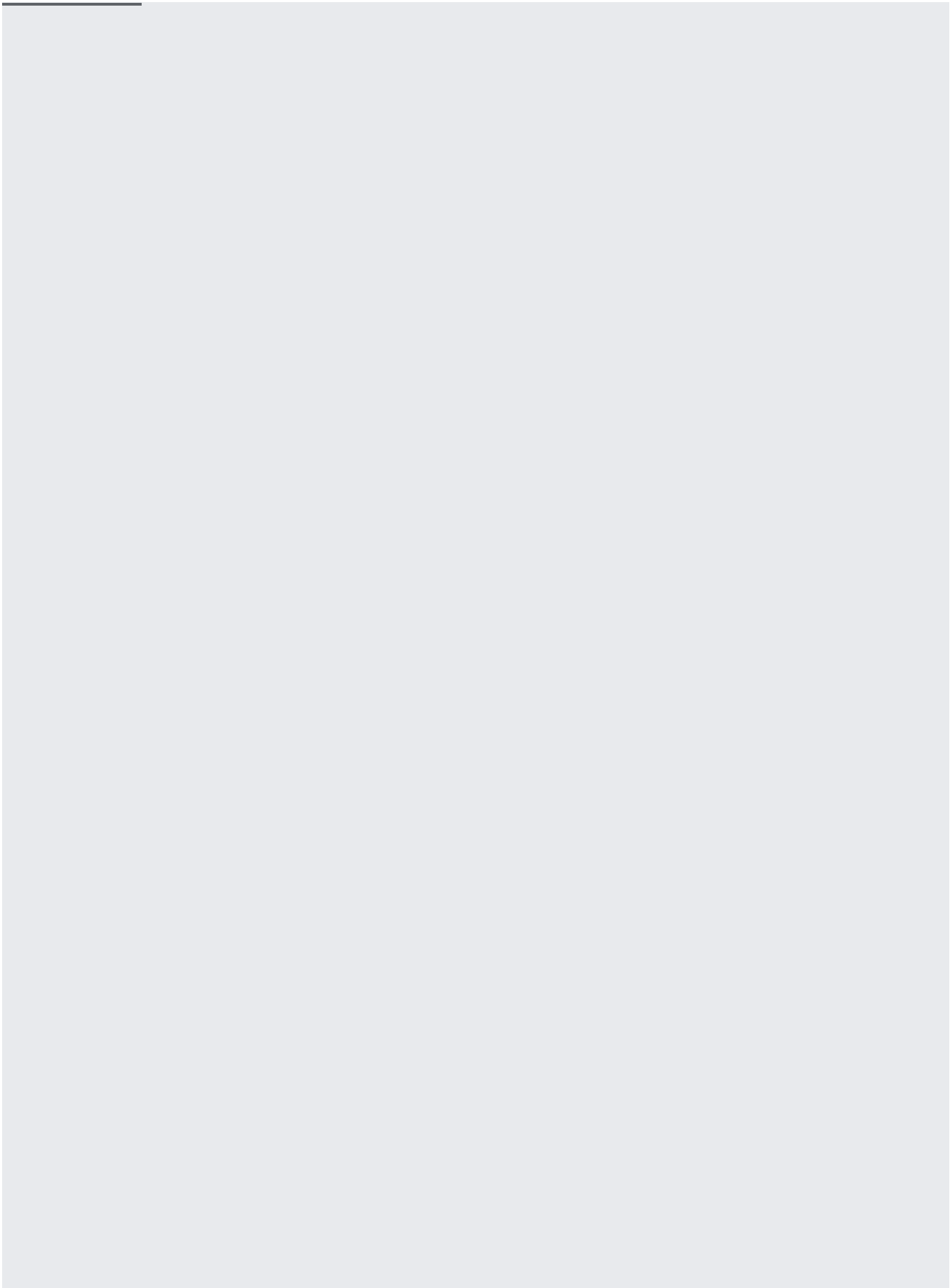
Warning: HMAC keys cannot be recovered once you delete them. If you want to keep an HMAC key but prevent it from being used, set its state (#update) to **INACTIVE**.

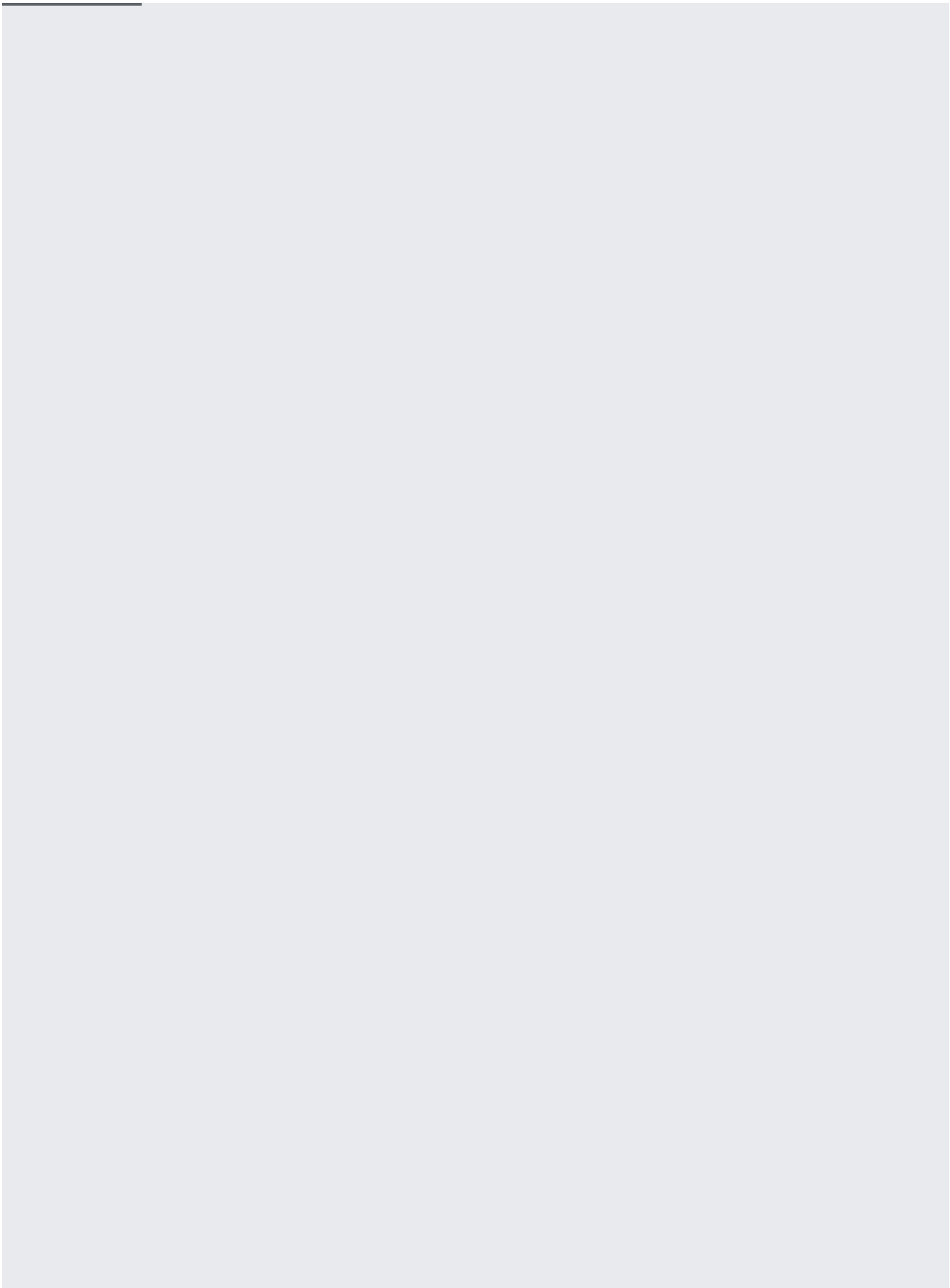
An HMAC key must be in an inactive state in order to delete it. To delete an inactive HMAC key:

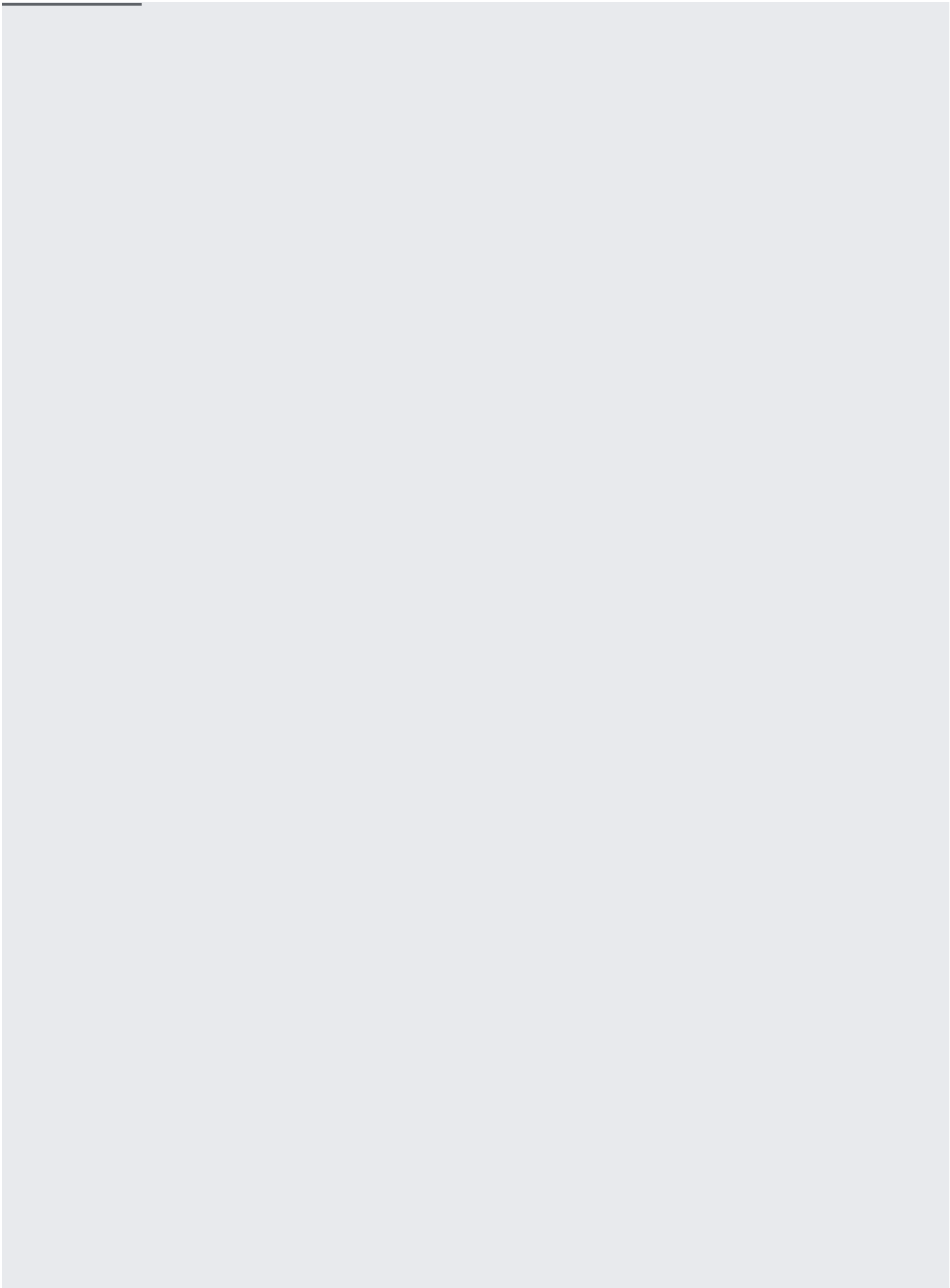












- Follow the [guidelines for migrating](/storage/docs/authentication/hmackeys#migration) (/storage/docs/authentication/hmackeys#migration) from user account HMAC keys to service account HMAC keys.
- [Use an HMAC key in an authenticated request](/storage/docs/migrating#authentication) (/storage/docs/migrating#authentication).